



Submission on Budget 2013

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....there are profound and consequential disparities in the oral health of our citizens. Indeed, what amounts to a “silent epidemic” of dental and oral diseases is affecting some population groups. This burden of disease restricts activities in school, work and home, and often significantly diminishes the quality of life. Those who suffer the worst oral health are found among the poor of all ages, with poor children and poor older Americans particularly vulnerable.

...This report reiterates that general health risk factors common to many diseases, such as tobacco use and poor dietary practices, also affect oral and craniofacial health....

....Recently, research findings have pointed to possible associations between chronic oral infections and diabetes, heart and lung diseases, stroke, and low birth weight, premature births.

....A framework for action that integrates oral health into overall health is critical if we are to see further gains...

**David Satcher MD, PhD
Surgeon General**

Extract from *Oral Health in America: A Report of the Surgeon General*

EXECUTIVE SUMMARY

In this submission, we make specific recommendations to address the current crisis in oral health in Ireland, as follows.

RECOMMENDATIONS

Recommendation 1

Reinstate preventive and restorative care under the Dental Treatment Benefit Scheme (for PRSI payers). *Pages 5-7*

Recommendation 2

Reinstate preventive and restorative care in the Dental Treatment Services Scheme (for Medical Card holders). *Pages 8 - 13*

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Explore with the Irish Dental Association the potential participation of dentists in health promotion and chronic disease management. *Pages 14-15*

Recommendation 4

Engage with the IDA on the reconfiguration of the HSE's Public Dental Service (service for children and special needs patients) to ensure any changes proposed fully reflect the best interests of the patient. *Page 15*

Recommendation 5

Address the cost of doing business in Ireland. *Page 15*

Recommendation 6

Introduce a National Oral Health Policy that provides equitable access to a range of treatments required to achieve and maintain optimal oral health for all citizens. *Page 16*

Recommendation 7

Appoint a Chief Dental Officer to the Department of Health. *Page 16*

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Ensure adequate staffing in all HSE areas to ensure patients of the Public Dental Service have access to equitable services irrespective of geographical location. *Page 17*

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Reinstate the HSE Vocational Training Scheme in Dentistry. *Page 18*

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Divert a percentage of any taxes raised through consumption taxes on tobacco or high sugar / fat products towards an oral healthcare programme. *Page 18*

INTRODUCTION

The Irish Dental Association is the professional education, scientific and advocacy body for over 1,500 dentists in Ireland. Our mission is to promote the interests of the dental profession and to promote the well-being of our country's population through the attainment of optimum oral health.

We believe that the urgent messages on the importance of oral health from the Surgeon General in the US, quoted on page two of our submission, are even more timely in Ireland now after a series of savage cuts to dental care by the state.

The silent epidemic warned by the Surgeon General is set to become Ireland's screaming epidemic given the alarming deterioration in dental attendance and in the oral health of the increasing numbers of patients, particularly the young and poor. Many of these patients are presenting in need of emergency care and preventative care is sadly no longer a meaningful option given the damage they have suffered.

The *National Survey of Oral Health in Irish Adults 2000 – 2002*^[1] revealed considerable improvements in the level of oral health amongst Irish adults over the previous 20 years. This reflected the investment in the provision of oral health services during that period together with the benefits of fluoride and oral health promotion.

Unfortunately Budget 2010 introduced massive cuts to the States' two dental schemes and as a result, we are now beginning to see a rapid reversal of these advances. We do not believe the cuts to dental care make sense and will ultimately cost the state more in the long term. The failure by the Government to carry out any impact or cost-benefit analysis prior to the cuts may be explained by the lack of dental input at policy level.

For Budget 2013 we make the following recommendations:

^[1]Whelton, H., Crowley, E., O'Mullane, D., Woods, N., McGrath, C., Kelleher, V., Guiney, H., Byrtek, M., (2007), *Oral Health of Irish Adults 2000-2002*. Department of Health and Children, Dublin.

Recommendation 1

Reinstate preventive and restorative care under the Dental Treatment Benefit Scheme (for PRSI payers).

Over 2 million people are entitled to benefit under the Dental Treatment Benefit Scheme (DTBS). The Scheme is managed by the Treatment Benefit Section of the Department of Social Protection. Private dentists are contracted to provide the treatment in their own dental practice and are paid on a fee per item basis i.e. not on a capitation basis.

The Scheme has been in existence since the 1940s and is funded by the Social Insurance Fund. Up to Budget 2010, the Scheme provided basic dental treatment necessary to achieve and maintain good oral health.

In order to qualify for the benefit, taxpayers were obliged to pay the requisite number of PRSI contributions.¹ If you satisfied the PRSI conditions when you reached age 60, you remained qualified for life. The Scheme was one of the one tangible benefits taxpayers received in return for their contribution to the Social Insurance Fund.

In the Budget for 2010, the Scheme was restricted to one item; the annual oral examination.

Treatment available prior to 2010	Treatment Available 2010 Onwards
Annual oral examination	Annual oral examination
Biannual Scale and polish	No longer available
Extended gum cleaning	No longer available
Fillings	No longer available
Extractions	No longer available
Root Canal Treatment	No longer available
X-rays	No longer available
Dentures	No longer available
Denture repairs	No longer available
Miscellaneous items	No longer available

Public Health Implications

These cuts removed all preventive, restorative and emergency treatments from the Scheme. The removal of the benefits effectively privatized dental care for over 2 million people who had up to then received state subsidization for dentistry. Attendance levels among PRSI patients decreased immediately and are continuing to decline further.

¹ Under Age 21 & Age 21 to 24 - 39 paid PRSI contributions since first starting work.
Age 25 to 65 - 260 paid PRSI contributions since first starting work.

Dentists are seeing more patients delay treatments ultimately resulting in more complex and costly treatment becoming necessary.

Financial Implications For Patients

Currently, over 2 million PRSI contributors and their dependant spouses remain eligible for the free dental examination. Some €9 million was spent on the DTBS 2011. This represents €5 spent by the state for every taxpayer who is entitled to treatment, a poor return for the increasing number of health contributions workers make.

The Scheme is funded by the Social Insurance Fund which taxpayers contribute to throughout their working lives. The Scheme represented one of the main tangible benefits taxpayers received from their contribution to the Fund. Persons who qualified for treatment at 65 were then entitled to treatment for life. It is grossly unfair that workers who spent their entire working lives contributing to the Social Insurance Fund are now denied the benefit.

Without state support patients are now faced with the full cost of private dental treatment, while continuing to pay the same rate of PRSI and new health levies. The removal of the benefit acts as a disincentive for some patients who may simply not be in a position to afford private dentistry and are therefore unable to maintain their oral health.

Due to the inequalities in healthcare, these cuts are most harsh on the least well-off members of the working population. An ESRI study in 2004 found that there was a markedly lower likelihood of attendance at dental clinics by lower income groups. The changes to the DTBS will inevitably widen this divide in terms of dental health between the less well-off and those who can afford to be treated privately.

Financial Implications For Dentists

This drastic decrease in the expenditure on a Scheme had an immediate negative impact on the income of dentists. In response to the withdrawal of income, dentists have reduced their working hours and reduced staff numbers. We estimate there have been approximately 1,500 job losses in the dental profession since April 2010.

Value for Money

It is worth pointing out that the fees paid to dentists participating in the scheme offered excellent value for money. For example the current fee for the oral examination paid under the DTBS is €33 (this fee includes any necessary x-rays). Research conducted by the National Consumer Agency in April 2010 shows the average private fee for an oral examination is €44 (exclusive of any x-rays). See Appendix One also for a further note on dentists' fees.

Cost Benefit Analysis

Independent cost benefit analysis conducted by Dr Brenda Gannon, of National University of Ireland, Galway shows the DTBS provides the state with a **return of 2.85 times the cost.**

€m	
Total cost to Exchequer (2008)	68.4

Dr Gannon estimated the **total societal benefit of the scheme at €194.45 million** (see Economic evaluation of Dental Treatment Benefit Scheme, Gannon B, 2009, in appendix two).

Benefits	€m
Improved general health from good dental health	14.35
Tax foregone	53.6
Social welfare payments	3.9
Private replacement costs	111.8
Medical card utilization	9.6
Oral cancer treatment costs	1.2
Total Benefits	194.45

Specific recommendations

As part of a gradual restoration of key preventive treatments, we are suggesting that the six monthly scale and polish is restored together with other preventive treatments such as gum treatments and a limited amount of fillings, as resources allow.

We would also suggest that consideration should be given to the introduction of co-payment charges for certain treatment items as a way of limiting state expenditure while promoting attendance for key preventive treatments.

Recommendation 2

Reinstate preventive and restorative care in the Dental Treatment Services Scheme (for Medical Card holders).

Currently, 1.3 million people are entitled to dental treatment under the Medical Card Dental Scheme.

According to Section 67 of the Health Act, 1970, the HSE is obliged to provide dental treatment and dental appliances to persons with full and limited liability under their medical card. Since 1994 the HSE has fulfilled this obligation through the operation of the Dental Treatment Services Scheme. The Scheme is managed by the HSE. Private dentists are contracted to provide the treatment in their own practice and are paid on a fee per item basis i.e. not on a capitation basis.

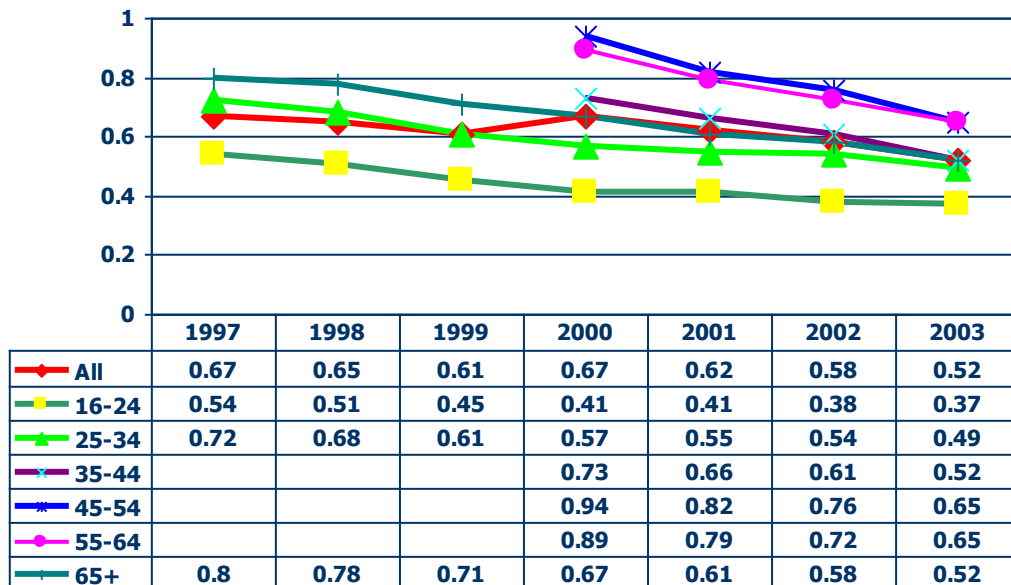
According to a study conducted by the Oral Health Services Research Centre (OHSRC) in UCC, the DTSS was introduced in 1994 in order to address an anomaly highlighted by the results of the National Survey of Adult Health (1989/90) *“there was evidence of a lower level of oral health among some sections of the community such as medical cardholders....Consequently, optimal strategies should be identified to specifically target such groups.”*²

Proven Improvements in Oral Health

The treatment available under the scheme consisted of routine dental treatment which allowed medical card holders maintain and improve their oral health. An examination of the Scheme in 2003 by the OHSRC revealed significant improvements in oral health since the introduction of the Scheme in 1994. The study showed a steady downward trend in the number of extractions for all age groups.

² O’Mullane and Whelton, 1992

Steady Decrease in the Mean Number of Extractions



The OHSRC's analysis also revealed:

- A downward trend from the year 2000 in the number of restorations (fillings) per patient;
- A downward trend from the year 2000 in the number of dentures per patient;
- A declining DMFT (Decayed, Missing, Filled Teeth) in all age groups with a steady decline in the 65+;
- A declining DT (Decayed Teeth) in all age groups; suggesting the level of untreated decay is falling;
- An increase in tooth retention in all age groups, particularly those aged 65+.

Budget 2010

In the Budget for 2010, the budget for the Scheme was capped at the level of expenditure in 2008 (€63 million) despite the surge in medical card holders.

It is particularly reprehensible to report that some thirty months after unilaterally introducing these radical cuts in the entitlements of medical card holders, the HSE has still not organized a public information campaign to advise eligible medical card holders of their entitlements when visiting their dentist. Neither has the HSE made any arrangement to organise care and treatment where it refuses to authorise general practitioners to provide badly needed dental care. Finally, it is shameful and unacceptable that the Department of Health has not arranged to undertake any assessment of the impact of these cuts on the oral health of medical card holders affected by these savage cuts.

The decision by the HSE to restrict access to dental care in April 2010 fundamentally altered the scheme from a demand-led scheme to a budget-led scheme. Given the

increase in the number of medical card holders, we estimate that at least €80 million is required to adequately fund the DTSS in 2013 even on the basis of the existing limited range of entitlements being offered.

Treatment available prior to 2010	Treatment Available 2010 Onwards
Biannual Scale and Polish	Suspended
Extended gum cleaning	Suspended
X-rays	Suspended
Fillings	2 per annum in an 'emergency situation'
Root Canal Treatment	In 'emergency circumstances' only
Dentures	In 'emergency circumstances' only
Denture repairs	In 'emergency circumstances' only
Miscellaneous items	In 'emergency circumstances' only
Extractions	Unlimited number provided!

The rationale behind a scheme that places a limit on fillings (i.e. saving a tooth) while allowing an unlimited number of extractions are extremely worrying. On a pure financial basis, the state will ultimately have to pay not only for the extraction but for the cost of a denture in the future. For the patient it means a lifetime of embarrassment, decreased nutrition and loss of wellbeing.

Rate of Decrease in Dental Treatment for Medical Card Holders

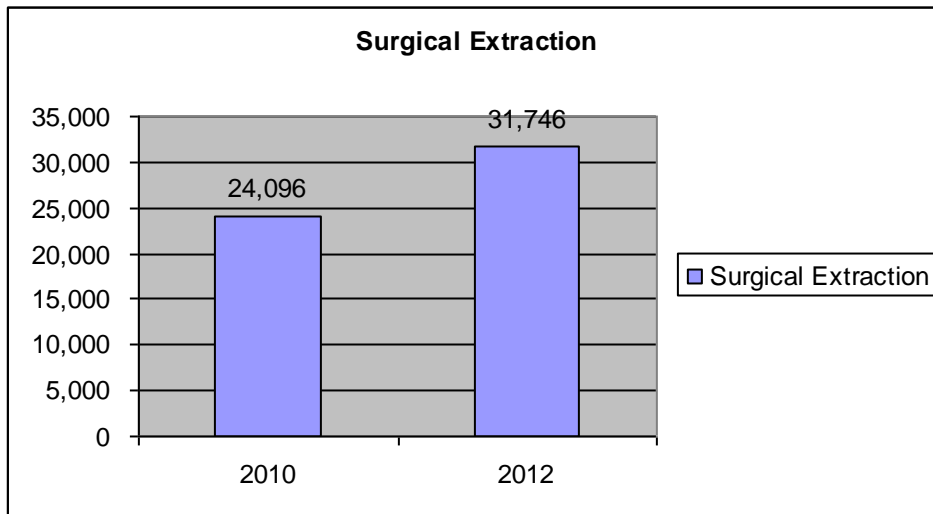
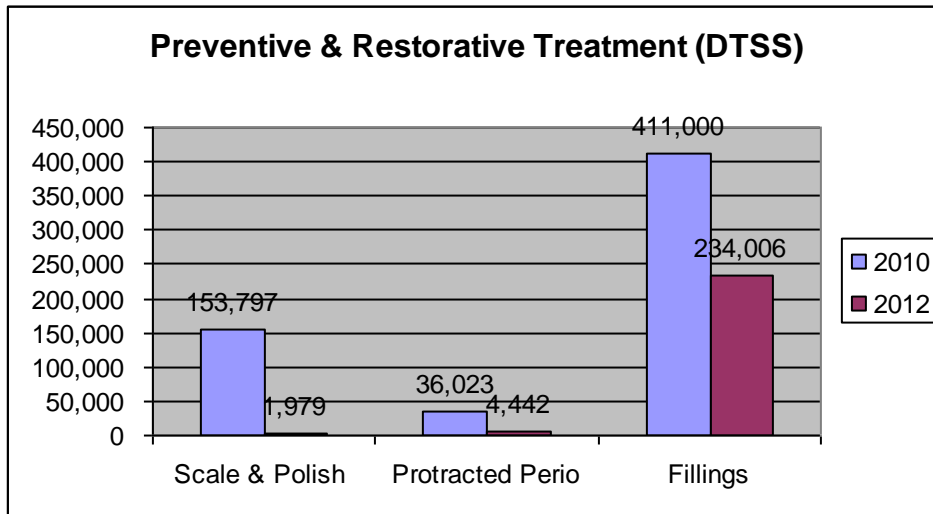
New analysis undertaken by the Irish Dental Association of the number of treatments provided in 2012 compared to 2010 shows:

- a stark decrease in the number of preventive and restorative treatments while
- emergency treatments such as extractions and surgical extractions are increasing!

Treatment Type	Number of Treatments Year to July 2010	Number of Treatments Year to July 2012	Rate of Decline
X-rays	22,966	85	99.6%
Scaling & Polishing	153,797	1,979	98.7%
Protracted Periodontal Treatment	36,023	4,442	87.7%
Fillings	411,000	234,006	43.1%

Meanwhile the rate of increase in tooth extractions is rising rapidly as shown by the table below.

Treatment Type	Number of Treatments of Year to July 2010	Number of Treatments of Year to July 2012	Rate of Increase
Surgical Extractions	24,096	31,746	31.7%
Examinations	203,727	239,387	17.5%
Extractions	71,722	72,493	1.1%



Increase in demand for DTSS

While the expenditure on the Scheme has been capped, the number of eligible medical card holders has increased by nearly 20%.

Year	Total Expenditure	% Difference
2009	€87 million	
2011	€51 million	41.4% Decrease

Year	No. of eligible persons	% Difference
2009	1,112,738	
2011	1,304,675	17.25% Increase

Public Health Implications

Medical card patients have lower oral health levels, a greater need for treatment and a lower access rate to the care and treatment. Therefore it is extremely worrying that preventive and restorative treatment has been removed from the Scheme. The withholding of these types of treatments goes against everything a dental student is taught at dental school. It is also disconcerting that the Government has failed to actually inform medical card holders of the changes and has failed to give any warnings with regard to the implications for their oral health. The Irish Dental Association deals with queries on a daily basis from patients who are trying to figure out what they are entitled to. Patients and even treating dentists are unsure of what is provided and the availability of treatment is extremely subjective – a patient in Kerry may receive dentures; while his / her counterpart in Donegal may have to endure life without teeth and not knowing where to turn for help. A lot of the savings achieved by the HSE heretofore is simply due to the confusion surrounding the scheme.

In 2011 the Association surveyed the impact of these cutbacks on our patients. We found that:

- 99.5% of dentists reported that the cutbacks are causing patients to leave decay and gum disease untreated;
- 82% of dentists reported an increase in patients presenting in pain;
- 74% of dentists reported an increase in gum disease;
- 74% of dentists reported an increase in patients presenting with loose teeth;
- 56% of dentists reported an increase in patients presenting with broken dentures;
- 11.5% of dentists reported that patients are aware of their entitlements under the DTSS.

Clearly these cuts are resulting in the deterioration of oral health for the Irish nation. Can Ireland afford this?

Financial Implications for Dentists

The income for dentists participating in the Scheme has been drastically affected. Dentists with a high reliance in the scheme have reported a 90% decrease in income.

In response to the decrease in income:

- 64% of dentists decreased the number of staff in the practice
- 74% of dentists reduced the working hours of staff

We estimate there have been 1,500 job losses in the dental profession since April 2010.

Cost Benefit Analysis

These cuts do not make economic sense. The current 'patch and forget' service provides no long-term benefit. Every case of delayed treatment will eventually require more complex treatment at a greater cost.

The price of an extraction is not just the €39.50 the HSE pays the dentist to take out a tooth. Patients who undergo multiple extractions lose supporting bone and tissue causing them to appear older beyond their years and confining them to a lifetime of denture-wearing; possibly at a greater cost than the treatment required to save the teeth in the first instance.

An Ombudsman's Perspective

In 2011 the Ombudsman investigated a refusal by the HSE to provide dental treatment to a medical card holder and surmised that it is *"a sad reflection on a system where a person with decaying teeth, who has no resources to fund private treatment, has to put up with decaying teeth until his annual entitlements recommence"*.

Specific recommendations

As part of a gradual restoration of key preventive treatments, we are suggesting that an entitlement to an biannual scale and polish is restored along with other gum treatments and an increase in the number of fillings, as resources allow.

We would also suggest that consideration should be given to the introduction of co-payment charges for certain treatment items as a way of limiting state expenditure while promoting attendance for key preventive treatments.

Recommendation 3

Explore with the Irish Dental Association the potential participation of dentists in health promotion and chronic disease management.

The mouth is a gateway to the body and can be used as an early warning system for health practitioners. Oral diseases share common risk factors with chronic diseases, such as diabetes and heart disease. Oral diseases impact on general health and systemic diseases show symptoms in the oral structures.

As oral health is an integral part of general health and well-being, it must be integrated in general prevention and health promotion at national and EU level. Tackling oral diseases separately from general diseases is neither medically effective nor cost-efficient. Prevention and early treatment will substantially reduce the overall costs of oral diseases for the State and the patient.

The *Platform for Better Oral Health in Europe* recently issued the following key policy recommendations:

- Recognise the common risk factors for oral disease and other chronic diseases;
- Develop the role of oral health professionals in generic health promotion to address risk factors such as cigarette smoking, poor diet, high alcohol consumption, and sedentary lifestyles.

The Irish Dental Association's recommendation is that dentists can play an important role in chronic disease management and we urge the Government to explore this potential.

According to the Central Statistic Office, 43% of adults visit a dentist once a year. The highest incidence of visits occur in the age groups 34 to 44 (48% attendance rate) and 45 to 54 (47% attendance rate).³

Dentists are therefore well-placed in the community to fulfill this role of chronic disease management. They have regular contact with patients and are usually the first to see the effects of tobacco in the mouth. Dentists are therefore in an ideal position to reinforce the anti-tobacco message, as well as being able to motivate and support smokers willing to quit.

Dentists can also play a valuable role in health promotion campaigns with respect to the following conditions: osteoporosis, diabetes, renal disease as well as the fact that dentists are often in a position to detect symptoms of many other general health conditions, drug use and a variety of disorders when examining patients.

³ Central Statistics Office, Quarterly National Household Survey, 2010 Health Module

Mouth Cancer Awareness Day is a voluntary initiative where dentists provide advice free of charge in an effort to raise awareness of mouth cancer. It is striking that 13 cases of mouth cancer were discovered in Mouth Cancer Awareness Day 2011. The results for 2012 are currently being collected.

Recommendation 4

[Engage with the IDA on the reconfiguration of the HSE's Public Dental Service \(service for children and special needs patients\) to ensure any changes proposed fully reflect the best interests of the patient.](#)

The HSE Public Dental Service is the main provider of dental services for children and for adults and children with special needs. The service is delivered by dentists who are employees of the HSE. The ethos of the Public Dental Service is the prevention of oral disease and the promotion of good oral health.

Good oral health in childhood is the foundation for continuing good oral health throughout life. Further restrictions on dental services to children as an expedient measure to cut costs are unacceptable, and are simply pushing the problem into the future, when it will be more costly and complex to treat. If anything, in our strained financial circumstances, we should be investing more in preventing decay from an early age, which will ultimately lead to savings for the state.

The HSE is currently in the process of reconfiguring the Public Dental Service. The Irish Dental Association would urge the Government to ensure that any changes proposed are in the best interests of the patients who rely on this service.

In particular, we are concerned that this reconfiguration is taking place in circumstances where the oral health of children has not addressed in the most recent oral health policy (1994 which is now out of date).

Recommendation 5

[Address the cost of doing business in Ireland.](#)

The majority of dentists practising in Ireland are self-employed. We believe the Government should address the cost of doing business in Ireland.

Local Authority Rates

The Government should examine the negative effect of exorbitant commercial rates on business.

Utility Charges

The Government should tackle the high price of energy costs in Ireland.

Cost of Employment

The Irish Dental Association is opposed to the Department of Social Protection's proposals to introduce mandatory sick pay, or increase employer's PRSI, and indeed to introduce mandatory pension provision. We believe such measures would act as severe inhibitor to employment in the dental sector.

Regulatory Costs

The Irish Dental Association is, of course, supportive of proper regulation however the increasing cost of regulatory fees is having a severe negative effect on dental practices. The following is a list of regulatory costs which a dental practice must discharge:

- Dental Council Registration Fees
- Professional Indemnity
- Radiological Protection Society of Ireland Fees
- Waste Management Fees
- Data Protection Registration Fees

The Irish Dental Association has made a significant contribution to improving regulation in the dental sector. The Association collaborated with the Dental Council on introducing a fee display policy in dental practices. In 2012, the Association established the Dental Complaints Resolution Service which deals with complaints relating to dentistry. The Association made this contribution in a genuine effort to improve the dental experience for patients.

Recommendation 6

Introduce a National Oral Health Policy that provides equitable access to a range of treatments required to achieve and maintain optimal oral health for all citizens.

The National Oral Health Policy has not been updated since 1994 despite the huge changes in the Government dental schemes. Any Oral Health Policy the Department of Health is operating under is obsolete and should be reviewed. The Irish Dental Association is willing to take part in a consultation programme with the Department of Health to review the National Oral Health Policy.

Recommendation 7

Appoint a Chief Dental Officer to the Department of Health.

The post of Chief Dental Officer in the Department of Health has been vacant for almost a decade. We ask the Government to fulfill its commitment of appointing a Chief Dental Officer. The Irish Dental Association is willing to take part in a consultation programme with the Department of Health to review the role of the Chief Dental Officer.

Recommendation 8

Ensure adequate staffing in all HSE areas to ensure patients of the Public Dental Service have access to equitable services irrespective of geographical location.

Dental services to children up to 16 years are provided by the Public Dental Service of the HSE. The service is expected to target children at key stages in their development when children are given dental examinations and any follow-up treatment required at these stages. When required, emergency dental treatment should be available to all children up to 16 years.

Services for Children

Repeated restrictions in recruitment in the HSE, including the Moratorium on Recruitment, have led clinic closures and suspension of screening services for school-aged children. As a result the provision of care in the Public Dental Service has been likened to a postcode lottery where the level of care your child receives depends on where they live. In many instances, the focus has shifted from prevention to pain management.

Services for Patients with Special Needs

Many patients with special needs already face lengthy waiting lists for dental treatment and, if they are suffering, they may be unable to express their pain. The recent cuts in the number of dentists working in this area have been devastating. We are all aware of the harsh economic times we are in but the non-replacement of front line clinical dental staff in the HSE is leading to pain, distress, medical complications and the unnecessary loss of teeth for many of our children and vulnerable adult patients. In some areas of the country these patients are facing a wait of up to three years for treatment under general anaesthetic.

Orthodontic Services

The HSE Orthodontic Service is under similar pressure due to the restrictions on recruitment. In some HSE areas there is no clinical manager (Consultant Orthodontist) in charge of the service. Waiting lists for both screening and treatment continue to be a major concern for the public in this service.

The HSE Public Dental Service plays a key role in the assessment and referral of children for orthodontic treatment as identified under agreed eligibility criteria. Care for schoolchildren is stretched further by the reliance on this overstretched and understaffed service to assist in pre, during and post-orthodontic treatment.

Recommendation 9

Reinstate the HSE Vocational Training Scheme in Dentistry.

The HSE paused the Vocational Training Scheme in Dentistry in 2010. As a result there is no vocational training scheme for Irish graduates. The scheme offered graduates an opportunity to practise under the guidance of experienced dentists in the HSE and in private practice.

The scheme also provided the HSE with a cost effective way of treating patients. The Irish Dental Association calls on the Government to reinstate the scheme.

Recommendation 10

Divert a percentage of any taxes raised through consumption taxes on tobacco or high sugar / fat products are diverted towards an oral healthcare programme.

Due to the clear association between the consumption of tobacco products and the development of numerous oral health diseases an allocation of the existing tax revenue could be allocated to fund the dental services.

The introduction of a 'sugar' or 'fat' tax is currently being considered by the Department of Health. The Association is not persuaded of the merits of such a tax. However, in the event that such a tax is introduced, we would ask that a percentage is diverted towards an oral health programme.

CONCLUSION

Dentists witness the effect of the cuts to dental care on a daily basis and are extremely worried that the nation's oral health will revert to 1950s levels. Patient attendance levels have decreased substantially; medical card holders do not know what they are entitled to receive, taxpayers are worried about the cost of 100% private dental care.

On an economic basis, the cuts to dental care do not make financial sense and will end up costing the State more in the long-term.

We are calling on the Government to consider the recommendations we have set out in this submission.

Appendix One

A Note on Dental Fees

Dentists have to ensure that their costs are covered and in ensuring they seek a fair price for their service this is their primary consideration. However, unlike medical care, dental practices are offered no supports from the state. So, whereas the state spends €3.6billion annually building, staffing and equipping hospital medicine within the HSE and offers individual doctors in general practice extensive grants and allowances to maintain and develop their surgeries, no such assistance is provided for dental care. Ever wonder how much medical costs for patients would be if the state withdrew its supports for hospitals and general practice?

Given that dentists have to rely entirely on generating attendance and income to cover costs (and most of these costs are fixed or state controlled), it is no surprise in these difficult times that with falling attendances dental practices are closing and we estimate there have been 1,500 redundancies in the sector in the past couple of years. Again this won't be noticed in the same way as the closure of a high profile multinational but the effects are just as real. Equally, entire classes of dental graduates are forced to emigrate for the lack of viable opportunities (and not because of any professional control on numbers which simply does not exist). Yet evidence also shows that dentists are continuing to reduce or freeze their fees in a highly open and competitive market.

Against such a background, the dental profession has not sought to curse the darkness or to exact some form of retribution. Instead, the profession has sought to enhance confidence in the high quality of care the profession continues to provide. In the last couple of years, the profession has introduced transparent display of fees, has introduced a new dental complaints resolution system, has developed a major public awareness campaign in regard to mouth cancer and has developed a range of other important initiatives to assist and support patients at practice level and nationally. All of these initiatives have been arranged in spite of rather than with the support of the state.

By contrast the HSE and Department of Social Protection are continuing with their policy of withdrawing €100m annually in price supports to patients previously entitled to dental treatments under the medical card and PRSI schemes. These cuts continue in spite of the fact that more than eight out of ten citizens remain entitled to dental benefits and promises by this Government to reverse these cuts.

Dentists have shown remarkable innovation in seeking to promote the highest standards of care in the interests of patients and have sought to maintain competitive prices in the face of unrelenting and unprecedented pressures and an indifferent Government.

Appendix Two

Economic evaluation of Dental Treatment Benefit Scheme Dr. Brenda Gannon (2009)

1. INTRODUCTION

As resources are reduced in health services, more questions are likely to be asked on the costs and benefits of treatments. The current proposal to remove the DTBS from public finances is based on the argument that it will save €68.4 million. A comprehensive assessment is required by the Irish Dental Association to assess the true costs of removing this subsidy to people who pay insurance contributions with the expectation that they will receive free check-ups and reduced cost dental care.

The DTBS is run by the Department of Social and Family Affairs. All employees (and their spouses) who make the required number of PRSI contributions receive subsidised dental treatment. In 2008 about 1.5 million people (+ approx. 400,000 dependent spouses) – 45% of adults - were entitled to claim benefit (Irish Dental Association, 2009)

On average an employee pays €20 a week in PRSI contributions, rising to €53 a week for higher earners. The expectation is that they will receive dental care in return. This includes one examination and two elementary cleanings annually. In addition, up to 15 per cent discount is available to cover basic filling requirements.

Currently, 1,587,456 adults are eligible for the DTBS and 1,785,450 treatments were provided in 2008.

2. ASSUMPTIONS AND LIMITATIONS IN ANALYSIS

In any cost-benefit analysis a number of assumptions must be made on the some of the costs and benefits. Transparency is a key requirement for complete understanding of the results.

This report is based on the following assumptions:

- Assume 10% improvement in dental health with checkups etc. for DTBS patients
- Number of adults eligible for treatment is 1,587,456 (50 % - Source: IDA)
- Assume 30 per cent of dentists income is from DTBS

Similarly, a number of limitations will mean that a precise figure for net benefit is difficult to achieve. Therefore we provide a range of scenarios. The limitations include:

- Data not available at individual level – only averages assumed
- Assumptions taken about replacement of DTBS with private care
- Cost-benefit ratio can vary depending on assumptions made – hence transparency critical

3. ECONOMIC EVALUATION

The basic tasks of any economic evaluation are to identify, measure, value and compare all costs and consequences. Although the theoretical price of a resource is its opportunity cost, the pragmatic approach to costing is to use existing market prices. The widespread use of charges (the amount paid to the provider by a third party payer) instead of the identification of real costs is a typical example, since it is not certain that these charges reflect actual costs. Costs arise from the use of resources within the health sector, resources used by patients and families and resources used in other sectors. Oscarson *et al.* (1998) found that in the Swedish dental care sector, charges did not cover costs and hence are not sufficient as an alternative to a more detailed cost evaluation.

Kumar *et al.* (2006) assessed the various methods available to evaluate economics of health care and to place in context how these methods may be used within dentistry. Economic evaluation is the comparative analysis of alternative courses of action in terms of their costs and consequences (Drummond *et al.* (1997)). Four standard methods exist for full economic evaluation.

- (1) Cost minimization analysis is used to compare two interventions that have same expected outcomes. The costs are assessed and least costly is identified. This method is limited as few procedures/interventions will have the same outcomes.
- (2) Cost effectiveness analysis is used when outcomes vary but are expressed as common units. Costs are measured and effectiveness is defined in appropriate units, e.g. per life saved. It cannot be used where units of outcome vary, e.g. a treatment for reduction in caries had different outcomes to treatment for oral cancer.
- (3) Cost-utility analysis is a step further where outcomes are expressed as utility measures. These are cardinal values assigned to health states and are a measure that an individual holds for certain states of health or disease. Frequently, this is expressed as QALY (Quality Adjusted Life Year). This analysis is common when comparing two interventions for a disease.
- (4) Cost-benefit analysis is considered to be a more flexible method. It places monetary values on treatment costs (inputs) and consequence costs (outcomes). The results can be expressed in terms of a ratio of costs to benefits or the net benefit (loss) due to treatment. It is an absolute cost of treatment.

In economics of dentistry, most studies have concentrates on cost-benefit analysis.

Identification of Costs

Direct Costs – health services costs, other related services, costs incurred by patients and families. These are generally primary costs of the health care programme. Health service costs include staff costs and consumables, capital costs, overheads. Patient costs include out of pocket expenses, labour costs for caregivers, patients lost earnings.

Indirect costs include loss of productivity and costs borne by society. They are secondary costs that relate to paid and unpaid productive work.

Identification of benefits

The benefits of an intervention are usually health improvements. Firstly there are health effects, e.g. cases treated, cases prevented or lives saved. Secondly, economic benefits can be direct, e.g. savings in future health care costs because the programme makes a person healthier. Or benefits may be indirect if individuals are unable to work. Intangible benefits include the monetary value in reduction of pain. Thirdly, benefits can be at a societal level.

The real cost of health care intervention is the opportunity cost – what is the loss of health outcomes if an intervention is forfeited. The aim of economic evaluation is to ensure the benefits of a programme is greater than the opportunity cost of a programme.

4. COSTS AND BENEFITS

In any cost benefit analysis the underlying data must be of good quality and assumptions must be transparent and appropriate.

If any doubt occurs, a sensitivity analysis must be performed. In this study of costs and benefits of DTBS, we set out each costs, benefits and related assumptions.

COSTS

Table 1 Costs of DTBS

	€
Total cost to Exchequer	68,375,556.01

BENEFITS

1. Improved Dental Health

The main aim of government intervention in dental health is to improve overall dental health in the population and to allow access to everyone for oral examinations and basic treatments.

Poor dental health can lead to chronic conditions that prevent people from normal activities such as chewing and speaking. Periodontal disease is disease of the gums and other tissues that attach to or anchor teeth to the jaw and is caused by bacteria. It is used as a benchmark for poor dental health. Periodontal disease is associated with a range of medical conditions including coronary heart disease, stroke, peripheral vascular disease and pancreatic cancer. Evidence of linkages between other medical conditions and periodontal disease is limited. Hence indirect costs may be conservative if other diseases are caused to some extent by poor dental health.

In terms of benefits, we assess how much value of improved dental health can be attributed toward the DTBS. The methodology is as follows:

- Cost per capita of heart disease is €391
- On average costs of stroke are assumed to be 31% of heart disease costs (Saka et al. UK)
- On average costs of peripheral heart disease are assumed 38% of heart disease costs (Econtech, Australia)
- On average costs of pancreatic cancer are assumed 2.5% of heart disease costs (Econtech Australia)

Using these percentages, we obtain costs of each disease at €121.20, €148.58 and €9.78 respectively. Subsequently, population costs for age 18+ are €2,148,171,742. Econtech estimated the proportion of each disease that could be attributed to periodontal disease. There were 12%, 15%, 18% and 21% for heart disease, stroke, peripheral heart disease and pancreatic cancer respectively. The total indirect costs from associated illnesses are €300,806,673.

- By assuming that regular checkups can lead to 10 per cent improvement in dental health, the estimated benefit for the population is €30,080,667.27.
- The proportion of the population eligible for DTBS is 50 per cent, hence total estimated benefits in terms of improved dental health are €14,905,997.53

2. Tax Revenue

Currently, the number of dentists assigned to the DTBS is 1,371. Revenue generated from tax is therefore significant. Withdrawal of the scheme would potentially lead to redundancies dentists and associated staff. The overall number of dentists that would be impacted is estimated at 664. If we assume that 30 per cent of dentists' income is derived from DTBS, then the number of full time equivalents (FTE) that would loose employment is 199. For this analysis however, we assume for now that there is no unemployment but large reductions in income. On average, a sole dentist who earns €320,000 could attribute €105,000 to DTBS. It is likely that taxable income lost would be €40,000 at top tax rate, resulting in €20,000 lost revenue, between tax and PRSI. The total estimated tax contribution lost from dentists is therefore €27,420,000.00.

Similarly, the removal of DTBS would affect employment for related staff. Figures are based on the information available in the Manual of Dental Practice (2008). It is estimated that 62 technicians and 319 assistants would become redundant. If we assume that no hygienist's loose employment, in the short run, then tax revenue lost amounts to €3,595,019.39. The tax take is based on an average income of €80,000 and we assume that their income from DTBS is approximately 50 per cent. If we assume that all their income is lost, then tax revenue lost is €7,190,038.79.

For technicians, it is more likely they become unemployed. Based on a ratio of dentists to technicians, we estimate 62 will lose employment. This is based on the fact that less people are looking for cosmetic work, given current economic pressures. If we assume lost revenue is €25,000 then tax lost from remaining technicians is €3,102,211.02 and from unemployed technicians is €1,551,105.51.

Similarly, for assistants, a proportion may become unemployed. Based on the dentist to assistant ratio, we estimate approximately €9,572,536.85 tax revenue from remaining assistants and €4,786,268.43 from unemployed assistants.

Overall, total tax revenue foregone would amount to approximately €53,622,160.59.

In addition to tax foregone, the public finances may have to pay social welfare unemployment benefits to redundant staff. We assume on average each unemployed person would receive €200 for 52 weeks. Assuming the proportion of unemployed assistants and technicians would be one third, then the total estimated opportunity cost is €3,963,739.33.

3. Replacement of DTBS with private dental care

Finally, we assess how much people would have to pay, should the DTBS cease and should they replace expenditure from their own private income. The average cost per procedure is estimated from the total income for each procedure divided by the number of procedures. While costs vary from patient to patient, this is our best estimate. Table 2 sets out the public finance costs for each procedure, along with private costs. The latter are taken from the Revenue Profile of Dentists and if not available the cost is assumed the same as the public cost.

Table 2 Public and private costs per procedure

	Cost to Public Finances	Cost to Private Patient
	€	€
Oral examination	34	40
Clean	35	50
Filling	35	65
Extraction	27	55
Other extraction	68.7	68.7
Root	42.32	42.32
X-ray	25.59	30
Acrylic denture	165.87	420
Other acrylic	28.91	325
Reclines	67.07	225
Miscellaneous dentures	17.68	55
Miscellaneous items	14.7	14.7
Alternatives	34.08	34.08

The total estimated private cost is €111,835,977.44. In the scenario where we assume the half of the DTBS visits will be moved into private dental care, then the estimated cost would amount to €55,917,988.72.

4. Medical Card Utilization

The proportion of DTBS participants that are also medical card holders is approximately one third. Hence, the number of medical card holders is about 512,000. Assuming that all of these will decide to use their medical card to avail of treatment, then the cost to the state will continue. On average a visit to the dentist costs the public finances €56 per capita, giving a total cost of €9.6 million. This estimate is likely an underestimate, given that treatments on the DTBS scheme often cover more than that covered by the basic medical card.

Furthermore, with increasing unemployment, it is more likely now that eligibility for medical card will increase and for DTBS will decrease. In this event, costs for dental care will increase further.

5. Oral cancer care treatment

Oral cancer is far too often detected in late stage development -- the primary reason for the high death rate. Oral cancer can have potentially disfiguring effects on patients, seriously compromising their quality of life. Early detection of abnormalities can make a large difference in life expectancy; oral cancer is 90% curable when found early. Unfortunately, 70% of oral cancers are diagnosed in the late stages, and 43% of those diagnosed will die within five years (www.oralcancerselfexam.com).

The incidence of oral cancer was found to be €8,000 per year per person in Greece. If we apply this rate to Ireland, we can assume 150 people are diagnosed each year. The cost of treating these patients amounts to about €8,000 per year (). The total cost is approximately €1.2 million. In the absence of basic dental treatment, this cost could be even higher. The advantage of the DTBS scheme, is that dentists can check for signs and symptoms of oral cancer. This contributes towards the reduction in treatment costs for oral cancer if cases are detected early or if good dental health reduces the chance of diagnosis.

Table 3 Monetary Benefits of DTBS

	€m
Improved general health from good dental health	14.35
Tax foregone	53.6
Social welfare payments	3.9
Private replacement costs	111.8
Medical card utilization	9.6
Oral cancer treatment costs	1.2
Total Benefits	194.45

Total monetary benefits are estimated at €194.45 million.

5. COST/BENEFIT RATIO

The decision rule for cost-benefit analysis is if the sum of benefits of an activity is greater than the sum of costs, then on efficiency grounds the activity should be undertaken. The decision rule assumes that the activity that has a net benefit can be done. However, if there are limited funds choices have to be made as to whether or not the activity should proceed even if the net benefit is positive.

The cost benefit analysis for DTBS shows a net benefit of €111,988,579.55 and the ratio of benefits to costs is 2.64. This means the return on investment is 2.64 times the cost to public finances.

Table 4 Societal Costs and benefits

Total societal cost	€68,375,556
Total societal benefit	€195,085,208.23
Net benefit	€126,709,652.22
Benefit/Cost Ratio	2.85

Further benefits from DTBS (to exchequer)

Dental tourism

Patients may travel abroad for affordable dental care for treatment which is generally expensive in their own country. If there are extensive waiting lists, patients are more likely to travel to a country where they can get top quality care at a low cost.

Loss on investment in dentists and graduates emigrate

In terms of education the NHS in England estimates that it costs £170,000 from education and NHS budgets to train a new dentist. Since this is mostly at the taxpayers expense, the NHS states that the taxpayer is entitled to a return on this investment. They advocate that charges should be simple, fair and provide incentives for patients towards good patient care.

It is likely that when dental tourism and returns to education are included the benefits are even higher than suggested earlier, so we could view the cost-benefit ratio as a conservative estimate.

6. SENSITIVITY ANALYSIS

The base case scenario presented above assumed that if the DTBS is removed, then individuals will not seek private dental care and dentists will not get their work replaced by private work.

It is more likely however, that some individuals will seek private dental care, hence keeping the private dental market and in some cases replacing some of the DTBS work for dentists. We assume three different scenarios, (1) $\frac{1}{4}$ of work is replaced (2) $\frac{1}{2}$ of work is replaced and (3) $\frac{3}{4}$ of work is replaced.

These assumptions then change the benefits in terms of revenue and health improvements. The resulting net benefits are (1) €119.6 million (2) €109.1 million and (3) 95.0 million respectively. The benefit to cost ratios are (1) 2.75 (2) 2.59 and (3) 2.39. In all cases the ratio exceeds the value of 2, meaning that benefits are at least twice the costs to the exchequer. Another way of viewing this, is to say that this is the opportunity cost to the overall finances. Removal of DTBS may result in twice the cost eventually, and in terms of resource allocation, the costs are inevitable.

7. INTERNATIONAL COMPARISONS

In other countries, the financing of dental care varies. For example, in New Zealand and Australia specific groups are targeted. In England, France (based on social insurance) and Sweden universal care is provided. In Germany care is provided to those with social health insurance, 88 per cent of the population. Public expenditure on dental care varies between countries ranging from 5.7% in France to 6.9% in Germany (Ettet, S. *et al.*, 2009).

Comprehensive care is provided in England, Sweden and Germany, whereas in Australia emergency is the main type of dental care.

Patients contribute towards costs but again this varies. In France, 70 per cent of costs is provided under social insurance, the remainder paid by the patient. In Sweden, free care is provided up to about €300. In Germany, patients pay a quarterly fee of €10 if they received care during that time. In countries where dental care is not publicly funded, private health insurance gives coverage but again this varies.

Inequalities are perceived to exist in most countries, but moreso in Australia, New Zealand and Germany. Health care including dental care, should be both efficient and equitable. A survey of dentists in Ireland showed that 61% dentists believe the DTBS provides equity of access for patients who are PRSI eligible. Indeed, Grignon *et al.* (2008) found that access to preventative care is the most pro rich type of dental care utilization, and income related inequity in preventative dental care utilization is 3 times larger than what is measured for specialist services utilization in Canada.

Despite the increased interest in dentistry the number of completed Cost-benefit analysis is few. In a small study in Sweden, Oscarson *et al.* (2007) found that the net social benefit for caries preventative care was positive, hence benefits exceeded costs.

8. CONCLUSION

The cost benefit analysis for DTBS shows an average net benefit of €126.8 million and the ratio of benefits to costs is approximately 2.85. This means the return on investment is about 2.85 times the cost to public finances.

This estimate is likely to vary depending on assumptions about the proportion of patients that will decide to avail of private care. We estimate the net benefits to vary between €95 million and €119 million.

The analysis is based on data available at an aggregate level. Individual level data would enable us to attain a more precise measure of efficiency.

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