Submission
No 113

INQUIRY INTO DENTAL SERVICES IN NSW

Organisation: Rural Dental Action Group

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Theme:

Summary

SUBMISSION

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STANDING COMMITTEE ON SOCIAL ISSUES

INQUIRY INTO

DENTAL SERVICES IN NSW

The Director Standing Committee on Social Issues
Legislative Council
Parliament House
Macquarie Street
Sydney NSW 2000

SUBJECT:

Dental Services in NSW

On behalf of :
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EXECUTIVE SUMMARY

This submission is prepared on behalf of the Rural Dental Action Group (RDAG) to assist the Government to provide improved dental services in the interests of community health and well being.

The RDAG considers that greater understanding and co-operation is needed between State and Federal governments to co ordinate funding of educational programs and oral health provision.

As a voluntary community association we do not have access to the data we require to statistically assess the dental needs of the community. This submission contains recommendations that we consider must be provided to ensure an adequate, balanced, cost effective dental system that will meet community needs.

Recommendation:

1.) That a cost benefit analysis be made to compare the current cost of general health care resulting from NOT providing adequate dental services compared with the cost of providing adequate, timely dental treatment to include dental education on preventative care to all members of the NSW population.

This analysis must take into consideration the real and social costs to the community of the flow on effect neglected oral health has on the general health and well being and the resulting costs of diseases such as coronary heart disease, stroke, diabetes, pneumonia, arthritis, premature births and cancer caused by poor oral health.

We are of the opinion that the method best suited to achieving better outcomes and to encourage more dentists to practice in rural and remote Australia would be for dentists to be trained, at least partially, in these areas rather than totally metropolitan based training.

It is not so much an issue of quality of dental care but one of gaining access. The method of answering inquiries is ineffective.

People with no alternative source for dental care are less likely to criticize the services they receive for fear of access to the service being denied in future.

Recommendation:

2.) That staff in the Public Dental Clinics be trained to provide an atmosphere that encourages people, anonymously if preferred, to make comments/criticisms of their experiences and providing feedback on action taken.

The usual outcome is that teeth are extracted as the only treatment available adding to the cost to Government as the patient may well require dentures where a simple filling may have saved the tooth had access been available at the first sign of trouble.

Recommendation:

3.) That funding is provided for adequate staffing of Public Dental Clinics so they are able to allocate one morning per week to assessments and provide any treatment that week.

It appears that people with dental pain do not meet the criteria for treatment when a clinic is under resourced. In rural and remote Australia the ratio of dentists falls well short of the OECD standard.

Recommendations:

4)That strategies be developed to ensure the distribution of dentists in rural and remote NSW reach OECD standards

5) That any person presenting with dental pain be assessed and treated promptly.

Demand for dental services far exceeds the ability of public clinic service provision. Reports to the RDAG from people trying to access Public Dental Clinics is that they are told they are on a waiting list but their turn never comes.

Recommendation:

6.) That Public Dental Clinics be staffed to adequately provide annual dental check to every eligible member of the community.

The demand is not as high as it would be in a population well educated in the value of preventive dentistry and regular dental check ups.

Recommendation

7.) That the population be educated to seek an annual review

The difficulty of getting dental treatment for prison inmates is long standing. Whilst a person is incarcerated is an ideal time to provide appropriate dental treatment and dental education.

Recommendation:

8.) That Public Dental Clinics be incorporated into new gaols and be included into current gaols.

The RDAG is unaware of the number of Australians eligible for treatment in Public Dental Clinics who have private health insurance thus the impact is unknown. Many of those eligible for and in need of treatment at a Public Dental Clinic are unlikely to have private health insurance thus private health insurance rebates would have had little or no impact on waiting times at public dental clinics.

Members of the community such as Aboriginal people, nursing home residents, pregnant women, people living on low incomes, the unemployed, prison inmates and those living in remote area are at increased risk of oral health diseases.

People living in small rural centres are further disadvantaged as they have to travel significant distances to access clinics as well as the fact that dentists accepting vouchers are often located in towns many kilometres away that are not serviced by public transport.

Recommendations:

9.) That some form of mobile dental service be introduced to provide services for remote communities that were serviced by dental trains or vans in the past.

10.) That people living on low incomes have access to a free dental service due to the high cost of dental care.

In many rural areas funded positions for Public Dental Officers remain unfilled. This is in part due to a scarcity of dentists, ethical dilemmas faced in public dentistry, lack of career opportunities, adequate remuneration and lack of opportunity to utilize the full range of their skills.

Recommendation:

11.) That the State Government award for dentists working in Public Dental Clinics be examined and upgraded to provide adequate remuneration for their training, skills and responsibility.

The delays for accessing dental services have returned to a similar length to those that the Commonwealth Dental Health Program was established to address.

Recommendation:

12.) That the NSW Government seeks Federal Government assistance to fund and staff the Public Dental Service.

Workforce levels are insufficient to cater for the demand for treatment. In many rural areas funded positions for dental officers remain unfilled. Many towns do not even have a visiting dentist in private practice.

This is in part due to a scarcity of dentists, ethical dilemmas faced in public dentistry, lack of career opportunities, adequate remuneration and lack of opportunity to utilize the full range of their skills.

In rural Public Dental Clinics there are currently very limited preventative treatments and initiatives being offered, particularly to adults as staffing levels are pressed to cope with emergency cases.

A large amount of prevention lies in education of each individual in the care and maintenance of their own teeth. Education is often given opportunistically when people seek care for a dental problem. Dental therapists and hygienists are under utilised.

Recommendations:

13) Encouraging rural students to train in dentistry.
14) Establishing a rural dental training centre or centres where dental students undertake all or part of their training.
15) Encouraging and supporting ongoing education for the rural dental workforce.
16) Having ongoing opportunities for research and promotion for dentists working within the public dental system in both rural and metropolitan areas.
17) Employing dental hygienists and therapists in greater numbers in both public and private dental systems
18) Negotiating with dentists in private practice in large rural centres to supervise dental students on a roster basis.

Dental therapists and hygienists are particularly valuable in this educative role and could be utilized to a greater degree in both the public and private dental systems.

Recommendation:

19.)That more emphasis be given to health promotion through improved use of dental therapists and dental hygienists in both the private and public systems.

It should be the right of individual communities to decide the introduction of fluoride into town water supplies.

Recommendation:

20.) That funding be provided to local councils to provide fluoride tablets free to parents of children who live where fluoride is not available in drinking water if that is their choice.

BACKGROUND

The Rural Dental Action Group was established in Orange on 13th August, 2004 at a well attended public meeting to:

(a) Identify, and find solutions to problems being encountered by members of the community in accessing services provided by the Public Dental Clinics throughout rural Australia.
(b) To inform all levels of Government of our findings and ensure Government commitments are met and adequate services are provided in future.
(c) Lobby all levels of Government to ensure the University intake numbers are increased to train sufficient number of dentists to adequately provide service to eligible members of the community through the public and private services.
(d) To incorporate greater use of dental therapists and hygienists

The RDAG was formed due to the widespread community concern about the lack of access, which eligible citizens have to Public Dental Clinics for basic dental care.

The Rural Dental Action Group is a creditable community based group supported by endorsements from:

- Members of branches of the Combined Pensioner and Superannuation Association in Bathurst, Molong, Young, Cobar and Dubbo
- The Association for the Promotion of Oral Health
- The Australian Dental Association
- Mid North Coast Area Health Service
- The Illawarra Dental Health Action Group

The Rural Dental Action Group was also represented at the 2005 CWA Annual Conference where a resolution on rural dental health was adopted.

The Rural Dental Action Group Executive have discussed the issues of dental care provision with a wide range of members of the community who access both private and public dental systems, dentists and other service professionals and dental educators over the last 9 months. Through this process we have gained a great deal of knowledge about oral health and the needs of the community in relation to dental care.

This submission is based on this knowledge, community opinion and opinions of long standing community representatives who have sound understanding of rural community needs and ways to best service these needs. As a voluntary community based association we do not have access to the data we require to statistically assess the dental needs of the community.

Any data collected on numbers of people waiting to access care would be of interest.

This submission contains recommendations that we consider must be provided to ensure an adequate, balanced, cost effective dental system that will best meet community needs. We look forward to the results of this Inquiry.

We are hopeful that this inquiry process including our own submission will assist the NSW Government to;

1) Acknowledge the deficit in current Public Dental Service provision
2) Define the nature and scale of these deficits

3) Make and implement recommendations for change, which bring about an increase in dentists and other oral health professionals in both private and public systems throughout NSW to adequately meet the needs of the community.

In addressing the Terms of Reference for this Inquiry we forward this submission and request to give evidence at a public hearing in support of it.

The Terms of Reference will be shown in ***Bold Italic*** print followed by our comments.

TERMS OF REFERENCE

INQUIRY INTO DENTAL SERVICES IN NSW
That the Standing Committee on Social Issues inquire into and report on dental services in New South Wales, and in particular:

a) the quality of care received in dental services

It is not so much an issue of quality of dental care but one of gaining access.

The method of answering inquiries via call centres where people are obliged to leave their details is ineffective as many people indicate their calls are not returned.

The current method to gain access to clinics appears to be assessment by the telephone with 'emergencies' only being serviced.

The usual outcome is that teeth are extracted as the only treatment available, adding to the cost to Government as the patient may well require dentures where a simple filling may have saved the tooth had access been available at the first sign of trouble.

No formal studies have been done with regard to quality of dental services either private or public of which we are aware.

Recommendation:
1.) That a cost benefit analysis be made to compare the current cost of general health care resulting from NOT providing adequate dental services compared with the cost of providing adequate, timely dental treatment to include dental education on preventative care to all members of the NSW population.

Anecdotal reports of experience in Public Dental Clinics to the RDAG follow:

"The treatment that my children have received has been very good." Mother of 2 children under 10 years of age.
"He was a bit rough." several people made similar comments about their experience of treatment at their local Public Dental Clinic
"I called to make an appointment for my daughter and left a message but my call was not returned." Similar comments to this have been voiced by numerous people.
"I've been on the waiting list for 9months/18months/2years/3years."

People with no alternative source for dental care are less likely to criticize the services they receive for fear of access to the service being denied in future.

The part of the Public Dental Service about which we have heard most comment is the difficulty of obtaining appointments. Experience shows that attending the clinic in person or having a referral from a doctor can increase the possibility of being assessed by a dentist. On occasion it may also facilitate prompt treatment.

With regard to private dental services the RDAG is not aware of any formal assessment of the quality of services provided other that that maintained by the Dental Board.

Anecdotal reports suggest that most people are grateful for the services that they receive from their private dentist although some concerns are expressed about cost and the time taken to obtain an appointment.

Recommendation:

2.) That staff in the Public Dental Clinics be trained in providing an atmosphere that encourages people, anonymously-if preferred, to make comments/criticisms of their experiences and giving feedback on action taken.

b) the demand for dental services including issues relating to waiting times for treatment in public services

Demand for dental services far exceeds the ability of public clinics service provision.

Reports to the RDAG from people trying to access Public Dental Clinics is that they are told they are on a waiting list but their turn never comes. It appears stalling processes are in place because Public Dental Clinics often only have the resources to deal with emergencies and it has not been possible for people to ascertain how long before they can be treated.

We sympathise with front line staff who are in an untenable position attempting to share limited services to a large population.

Many rural Public Dental Clinics are so under-resourced that they are only able to provide emergency dental services for adults seeking treatment. This has partly to do with difficulty recruiting and retaining dental staff.

Recommendation:

3.) That funding be provided for adequate staffing of Public Dental Clinics so they are able to allocate one morning per week to assessments and provide treatment in that week.

Rural communities' dental needs are not fully met due to a scarcity of dentists in both public and private dental systems.

This was well described by Jonathon Pearlman and Gerard Ryle in their article "The Dental Divide", Sydney Morning Herald 16/2/05. They quote that the OECD average ratio of dentists per head of population is 56 per 100,000. They also point out that the distribution of dentists varies markedly across NSW.

In South East Sydney the ratio is equivalent to 82 per 100,000 head of population. In Far Western NSW the ratio is equivalent to 10 per 100,000 head of population. The statistics given in this article show that all rural and many metropolitan areas fall well short of the OECD average number of dentists per head of population.

Approximately 35% of the population is eligible to use Public Dental Clinics. However, far less than 35% of dentists work within the public dental system.

Recommendation:

4.) That strategies be developed to ensure the distribution of dentists in rural and remote NSW reach OECD standards

The definition of "emergency" treatment is at times narrowly defined to include only facial swelling, broken bones or teeth and patients requiring cancer treatments.

It appears that people with dental pain do not meet the criteria for treatment when a clinic is under resourced. This raises ethical issues for the staff in Public Dental Clinics, as part of a dentist's training is to relieve pain whereever possible.

Recommendation:

5) That any person presenting with dental pain be assessed and treated promptly.

It also leaves many patients to seek help from the medical system such as hospital emergency departments or a General Practitioner, who are not trained or equipped to give appropriate treatment. The use of antibiotics for a dental abbesses, that would be best treated by an extraction leads to an inappropriate use of this medications ultimately reducing their effectiveness in other life threatening illnesses. Pain relief medication has risks and side effects including overdose, habituation and constipation.

The population eligible to access Public Dental Clinics has a full range of dental problems. However when a clinic is chronically short staffed the range of treatments are limited to those which can be provided in the shortest time to the greatest number of people with the greatest need.

This often means extracting teeth that may have been repairable if more dentists with sufficient time were available. A situation is created where dentists working in the public system are not getting enough opportunities to use the full range of skills or perform more satisfying aspects of their work making positions in the public dental system less attractive to dentists to work in.

Much of the population is reticent to visit a dentist unless they have dental pain. This situation is not ideal as maintenance, preventative work and education by dentists cannot be given.

A yearly or second yearly routine visit for each member of the community would provide such an opportunity. In a free enterprise system the demand for services drives the provision. In dentistry the provision lags well behind the demand especially in rural areas.

The demand is not as high as it would be in a population well educated in the value of preventive dentistry and regular dental check ups.

Recommendations:

6.) That Public Dental Clinics be staffed to adequately provide an annual dental check to every eligible member of the community.

7.) That the population be educated to seek an annual review.

Within the population of NSW there are members of the community who are at increased risk. These include Aboriginal people, nursing home residents, pregnant women, people living on low incomes, the unemployed, prison inmates and those living in remote areas. Aboriginal people have particular difficulty accessing services for a variety of reasons, these include transport, cost of service and cultural issues.

The demands of pregnancy often lead to dental problems, which, if not addressed can cause complications. Dental decay during pregnancy has been linked to premature births, which have a high cost both socially and economically.

The difficulty of getting dental treatment for prison inmates is long standing. Whilst a person is incarcerated is an ideal time to provide appropriate dental treatment and dental education.

Recommendation:

8.) That Public Dental Clinics be incorporated into new gaols and be included into current gaols.

People in nursing homes often have significant dental problems but due to mobility, motivation or planning limitations may have great difficulty accessing appropriate dental care.

It is extremely difficult for a person who has broken or absent teeth or halitosis to obtain employment.

Recommendations:

9.) That some form of mobile dental service be introduced to provide services to remote communities that were serviced by dental trains or vans in the past.

10.) That people living on low incomes have access to a free dental service due to the high cost of dental care.

c) the funding and availability of dental services, including the impact of private health insurance

The funding of Public Dental Services is from State Government Health Departments. The position of Rural Dental Officer is funded at a rate of approximately $100,000 per year. Dentists working in private practice are likely to earn much higher incomes for the same hours.

A dentist starting their own practice may have set up costs of $150,000. However in rural communities previously established dental practices often have the facilities to take on another dentist.

In many rural areas funded positions for Public Dental Officers remain unfilled. This is in part due to a scarcity of dentists, ethical dilemmas faced in public dentistry, lack of career opportunities, adequate remuneration and lack of opportunity to utilize the full range of their skills.

Recommendation:

11.) That the State Government award for dentists working in Public Dental Clinics be examined and upgraded to provide adequate remuneration for their training, skills and responsibility.

The RDAG is unaware of the number of Australians eligible for treatment in public dental clinics who have private health insurance thus the impact is unknown.

However, many of those eligible for and in need of treatment, at a Public Dental Clinic are unlikely to have private health insurance due to the cost of maintaining the insurance and the difficulties of paying "up front" for services.

Some private health insurance arrangements allow for the insurer to be billed at the time of service. However there is still a proportion of the cost, which must be paid by the service recipient.

For people living on a pension saving money is often prohibitively difficult. Therefore even with private health insurance the cost of dental services is still out of reach for many in this position.

The RDAG suspect that the people in most need probably don't have private health insurance thus private health insurance rebates would have had little or no impact on waiting times at public dental clinics.

d) access to public dental services, including issues relevant to people living in rural and regional areas of New South Wales

The RDAG was formed due to the widespread community concern about the lack of access, which eligible citizens have to Public Dental Clinics for basic dental care.

We look forward to the results of this Inquiry as any data collected on numbers of people waiting to access care would be of interest. However it is likely that data collected by the Public Dental Clinics themselves is an underestimation as so many people have told us that when phoning to make an appointment they've been asked to leave a message but have never received a return call.

When people do get a chance to make an appointment they are often placed on a waiting list. The long delays in being given a specific time for treatment and the unwillingness of staff to say how many others are ahead on the list, leave people despairing of ever receiving treatment.

People living in small rural centres are further disadvantaged as they have to travel significant distances to access clinics as well as the fact that dentists accepting vouchers are often located in towns many kilometres away that are not serviced by public transport.

Access to dental services for children in larger rural centres seems to be good and we have heard a number of grateful reports about this.

For adults on the other hand the service is limited to severe emergencies. People with dental pain, dental infection, dental caries or misalignment are not able, in most cases to access the Public Dental System.

In a response to our letter to the Federal Minister for Health, The Hon Tony Abbott, his Department noted that the Commonwealth Dental Health Program (1994-1996) treated 1.5 million dental patients through the State Public Dental Clinics. This was an attempt to reduce delays experienced in accessing public dental services. The cost was $254 million to the Australian Government.

The delays for accessing dental services have returned to a similar length to those that the Commonwealth Dental Health Program was established to address.

Recommendation:

12.) That the NSW Government seeks Federal Government assistance to fund and staff the Public Dental Service.

e) the dental services workforce including issues relating to the training of dental clinicians and specialists

In rural areas the dental workforce levels are insufficient to cater for the demand for treatment. This is true for both the public and private dental services in most areas.

A large proportion of rural dentists are over 50years of age and are likely to retire within 10 years.

Funding for the education of new dentists is a Federal Government responsibility. The Federal Minister for Education allocates numbers of training positions and the funding for these positions.

In NSW the only Faculty of Dentistry is at Sydney University. Traditionally, the majority of city trained professionals have been unwilling to move to and work in rural areas. Having all dental training positions in city areas has a detrimental affect on the rural dental workforce.

Dental (and other) students raised and trained in metropolitan areas tend to spend their working lives in metropolitan areas. Conversely, the School of Pharmacy at Charles Sturt University Wagga Wagga established to address the shortage of pharmacists in rural NSW has been very successful in retaining graduates in rural areas.

Some local dentists have indicated their willingness to supervise students in public clinics on a roster basis. This would also provide more services to the community eligible to dental care through public clinics.

Recommendations:

13.) Encouraging rural students to train in dentistry.

14.) Establishing a rural dental training centre or centres where dental students undertake all or part of their training.

15.) Encouraging and supporting ongoing education for the rural dental workforce.

16.) Having ongoing opportunities for research and promotion for dentists working within the public dental system in both rural and metropolitan areas.

17.) Employing dental hygienists and therapists in greater numbers in both public and private dental systems

18.) Negotiating with dentists in private practice in large rural centres to supervise dental students on a roster basis.

f) preventive dental treatments and initiatives, including fluoridation and the optimum method of delivering such services

In rural Public Dental Clinics there are currently very limited preventative treatments and initiatives being offered, particularly to adults as staffing levels are pressed to cope with emergency cases.

As a large percentage of the population only seeks dental treatment in an emergency creative measures need to be developed to educate the public about the importance of teeth brushing, flossing and dental checks. Pregnant women and new mothers/parents and primary aged school children are ideal target groups in which to encourage good dental health.

A large amount of prevention lies in the education of each individual in the care and maintenance of their own teeth. Education is often given opportunistically only when people seek care for a dental problem.

A yearly dental check up for each member of the community would provide a solid foundation for preventative care.

Dental therapists and hygienists are particularly valuable in this educative role and could be utilized to a greater degree in both the public and private dental systems.

Recommendation:

19.) That more emphasis be given to health promotion through improved use of dental therapists and dental hygienists in both the private and public systems.

It should be the right of individual communities to decide the introduction of fluoride into town water supplies rather than imposition.

Whilst oral health professionals advise they see marked reductions in decay levels where fluoride is present in drinking water other factors may well contribute to this outcome as statistics available appear to be inconclusive.

Members of the community have a right of choice and those who chose to use fluoride

treatment could be supplied with the appropriate medication, free of charge, to exercise this choice. This may not be ideal for urban communities but would fulfill the need for rural household that do not have access to town water supplies enabling them to exercise their choice.

It is possible that the majority of the population in rural communities would not benefit from the introduction of fluoride into town water supplies. In many cases they are serviced by their own private water supplies or the size of some townships deem it not to be economically viable for councils to erect the necessary equipment to include fluoride.

Recommendation:

20.) That funding be provided to local councils to provide fluoride tablets free to parents of children who live where fluoride is not available in drinking water if that is their choice.

g) any other relevant matter.

g.1 The mouth is the gateway to the body.

In the past our education and research has tended to view the mouth and the rest of the body as very separate entities. Funding for medical and dental care has been similarly disparate. Hence we have a medical system, which will treat anyone who presents for any problem to the emergency department free of charge. The exception is a dental problem, which will be referred from an emergency department to a private dentist or for those under 18 or holders of a health care card to a Public Dental Clinic, which may well not have the resources to give appropriate treatment.

*It is time to acknowledge that if one, figuratively speaking, selected a blood cell from any part of the body and tagged it, it would eventually arrive in the gums and alveolar bone structures of the mouth. It follows that the same blood cell would continue on its perambulation of the circulatory system, carrying what ever it has picked up along the way. There seems to be almost, a tacit agreement in some circles that some how this doesn't matter and that dental disease is separate from the rest of the body and of minor significance. The mouth *is* part of the body and if malfunctioning or subject to disease, can cause just as much collateral damage in the rest of the system as a kidney or the pancreas. There is much research on the subject. Here are some samples.

g.1.1 Coronary Heart Disease

Matilla et al, in a seven year study on 214 persons with proven CHD (Coronary Heart Disease) in a 'total dental index' (an assigned score measuring the severity of dental infection) concluded that dental ill health is a measurable risk *factor.(Loesche* 2000). A dental longitudinal study on 1147 male veterans over 18 years by the US dept of veterans affairs 1968-1986, showed that those with a high score for dental disease, had almost twice the incidence of CHD. *(Loesche* 2000).

A health professional follow-up study on 44,119 men between 45 and 75 years, showed that periodontal disease and tooth loss increase the CHD risk.

CHD is at 8% without periodontal disease
- Is at 17% with a loss of 20% alveolar bone.
- Is at 36% with a 60% alveolar bone loss. *(Okuda, Ebihara* 1998)

ABS studies show that cardiovascular disease is on the increase. (17% in 89/90 to 21% in 1995). Research, as already indicated is showing a relationship between cardiac and cardiovascular disease and oral disease.
Cardiovascular and stroke mortality rates are higher amongst the socio-economically disadvantaged- the very groups that rely on public dental health. (AIHW priority areas 1998). Cardiovascular disease and stroke are the largest cause of death overall in Australia.

g.1.2 Cerebral Vascular Accidents (stroke)

In 1989 *Syrjanen* et al showed that dental infection is statistically associated with CVAs. In 1996 *Beck* and colleagues demonstrated that US veterans who had lost bone around their teeth (from dental disease) in their thirties, were 2.8 times more likely to be diagnosed with a CVA than those with little or no bone loss around their teeth. *(Loesche* 2000)
In 1997 *Grau* and colleagues found poor dental health to be independently associated with Cerebral Vascular Ischaemia.

Biologically the link between dental disease and cardiovascular disease is as a result of bacteria or their products, producing host responses that contribute to increased levels of cytokines and inflammatory mediators that may affect the endothelial lining of vessel walls causing narrowing and hardening of membranes and blood vessels.
In other words dental circulation is part of the circulation system of the body. If there are dental/oral problems, these will transmit elsewhere!

g.1.3 Diabetes

Diabetes is the 6th leading cause of death in Australia.(ABS 2000).
Albrecht et al (1989) showed that diabetics have a higher prevalence of periodontal disease than non diabetics. This was also cited by *Kawamura, Fukuda, Kawabata, Iwamoto* 1998. Approximately *95%* of American diabetics also have periodontal disease. It also appears that severe periodontal disease can increase the risk of developing diabetes (ADHA Surgeon General's Report May 2000).

In addition, *Thorstensson* et al have shown that among diabetics requiring insulin, those with severe periodontal disease are more likely to have strokes than diabetics without periodontal disease. *(Loesche* 2000).

Similarly a longitudinal study of diabetics with the same requirement for insulin found that those with advanced periodontal disease were significantly

more likely to develop angina, heart failure, myocardial infarction or stroke than individuals with a milder form of periodontal disease.

A particular study of Pima Indians who have a predisposition to diabetes mellitis, found that those with periodontal disease were 2.7 times at greater risk of myocardial infarction, than those without.

Whether diabetes aggravates periodontal disease or whether periodontal disease contributes to diabetes, is almost irrelevant in Australia. Because of the gross under funding of the public dental service, one thing is clear. If you are a card holder or from a socio-economic group that relies on the public health service and you are diagnosed with diabetes you will be treated. Where as if you also have periodontal disease, your chances of getting that treated are close to nil.

g.1.4 Pneumonia

Those over *65* are at greater risk of pneumonia than any other age group and is the leading cause of death of those in nursing homes. Research shows a link between oral cavities, plaque and pneumonia. These problems serve as a pathway for infection for respiratory disease. The immune system is often less efficient in the elderly. *Okuda* et al in 1998 showed bacteria caused by oral conditions is aspirated into the lungs, causing pneumonia. This was also cited by *Yoneyema* et al, who reported that good oral care in nursing homes reduced the incidence of pneumonia.

Once again, a careful look at nursing home policies in Australia do not seem to consider oral/dental care as being important.

g.1.4 Arthritis

Recent research demonstrates a recognisable link between poor dental health and arthritis. As at June 2000, approximately 3.1 million Australians were affected by some form of arthritis. That is near enough to 16.5% of the population. Nearly *5%* of Australians are taking medication for arthritis and 2% of the population are disabled or handicapped by arthritis.

The overall cost to Australia was nearing $9 billion in 2000. As the population rises, so too will the incidence of arthritis.

The cause of rheumatoid arthritis is as yet unknown. However, research has shown that oral bacteria can cause chronic infectious disease in the articular cavity (the joints) and induce an immune response. This was demonstrated by *Okuda* et at in 1998. Ongoing oral health care is important as medications for arthritis can cause gingivitis, which in turn can lead to the destruction of underlying bone in the tempero-mandibular joint and increases the chance of periodontal disease *(Triester and Glick* 1999).

The ADHA Surgeon General's Report of May 2000 stated that mothers with periodontal disease were seven (7) times more likely to give birth to a premature child (born before 37 weeks gestation).

Data from the National Centre for Health statistics, lists major risk factors for pre-term births as: rural, poor minorities, smoking, alcohol and low maternal weight. All factors that have direct relationships with groups who rely on the Australian public dental health system. *Jeffcoat* et al(2001) in dealing with 1313 pregnant women, showed a significant association between the presence of periodontitis at 21-24 weeks gestation and subsequent pre term *birth.(Jeffcoat, Geurs, Reddy, Cliver, Goldenberg and Hauth,* 2001). This study provides evidence that pre-existing periodontal disease in the second trimester of pregnancy increases the odds of pre-term births from 4.5 to7 fold.

Biologically, the link between pre-term birth and maternal periodontal disease has not yet been scientifically presented. However, it is not unreasonable to suggest that endotoxins resulting from periodontal disease, stimulate the production of cytokines and prostaglandins that are known to stimulate labour *(Jeffcoat* et at 2001).

In addition, *Okuda and Ebihara* (1998) stated that the endotoxin *P.intermedia,* produced in oral bacteria, is a causative agent for premature delivery, emphasising the need for extra care with oral health during pregnancy.

g.1.6 Cancer

Is high on the list of causing death in Australia. Early detection of oral and pharyngeal cancer reduces illness and death. Older people are at increased risk of these conditions. If detected early, oral cancer can be treated successfully 90% of the time (ADHA Surgeon General's Report). However, older people who have lost their teeth are at greater risk in getting oral cancer, and are the least likely to seek dental care. Late detection often involves lymph node metastases (Scully *and Porter* 2000).

If a check up is unobtainable, as is the case with the public dental system, then what percentage of elderly people will succumb to oral cancer?

g.2 Summary, any other matters

The casual observer might be forgiven for believing that the aforesaid is just a litany of examples of how poor dental health seems to be blamed for everything that goes wrong with the human body!But on closer scrutiny one can't help seeing that although a particular disease may or may not be ***"caused'*** by poor dental health, there is none the less an inescapable link that gives reason for concern. Eventually, when the particular oral disease gets bad enough, the medical world sits up and takes notice. But why do they wait until then? It is a bit like never pumping up the tyres on one's car until they are flat. By which time the car is unusable and could well be a costly and painful experience.

Politicians have taken upon themselves to decide whether dental health is important or not. They have been doing it for years. And would seem to have come down on the side of the negative. Too expensive they say. But a cardiac specialist will not operate if one's teeth are not fixed and the medicare payments rise disproportionably once any of the aforementioned conditions (aided and abetted by ones teeth) occur.

Prevention is far cheaper than cure. Number crunchers don't worry about the long-term consequences of ignoring dental health. All they are interested in, is the next budget. It will be up to the Australian public to make their feelings felt and up to those aware of the dental crisis to educate the country of the consequences of turning a blind eye to our Dental Sword of Damocles.

All the above research details from* to the end have been sourced from NCOSS. *Lindy **Egan**,* Student of Behavioural Health Science at Sydney University, Cumberland Campus, did the original research for NCOSS.