

**CORA**

**The Council of Regulating Authorities for Dental  
Technicians and Dental Prosthetists Australia and New  
Zealand Inc.**

**SUBMISSION**

**Part 1: DENTAL TECHNICIANS**

**Inquiry into Health Practitioner Regulation (Consequential  
Amendments) Bill 2010**

**COMMUNITY AFFAIRS LEGISLATION COMMITTEE**

**April 2010**

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CORA, The Council of Regulating Authorities for Dental Technicians and Dental Prosthetists Australia and New Zealand Inc. was formed in 1992. The membership of CORA consists of all Registration Authorities, Education Providers and National Associations in relation to dental prosthetics and dental technology in Australia and New Zealand. CORA is affiliated with the New Zealand Dental Council as a result of Trans Tasman Mutual Recognition.

This submission is prepared and submitted by and on behalf of the following:-

Registration Authorities.

Dental Technicians and Prosthetists Registration Board of the ACT  
Dental Technicians Registration Board of New South Wales  
Dental Council of New Zealand Dental Technicians Board.  
Dental Technicians and Dental Prosthetist Board of Queensland  
Dental Board of South Australia  
Dental Prosthetists Board of Tasmania  
Dental Practice Board of Victoria

Education Providers

Griffith University Queensland  
Meadowbank TAFE NSW  
Randwick TAFE NSW  
RMIT University Victoria  
Southbank Institute of TAFE Queensland  
TAFE SA Gilles Plains Campus  
University of Otago New Zealand

National Associations

Australian Dental Prosthetists Association  
New Zealand Institute of Dental Technologists

Graham Key  
Chair CORA  
2<sup>nd</sup> March 2010

## Submission in Support of Registering Dental Technicians

This Submission is based on the criteria for assessing the need for statutory regulation of partially regulated health occupations. In this case dental technicians are already registered in four states. Of the estimated 2654 technicians in Australia, 1842 were registered in 2007, leaving only 812; 550 of whom were previously registered in Victoria.

### CRITERION 1:

Is it appropriate for Health Ministers to exercise responsibility for regulating the occupation in question, or does the occupation more appropriately fall within the domain of another Ministry?

Yes to the Health Ministers and no to another Ministry, for the following reasons

Health Ministers would be the only Ministers that could exercise responsibility for dental technicians for the following reasons:

- Training for the profession is a nationally approved Diploma of Dental Technology HLT50507 contained within the Community Services and Health Industry Skills Council's Health Training Package HLT07
- Dental technicians provide treatment and advice in all aspects of the construction of artificial removable and fixed dentures, mouthguards, restorative or corrective dental appliances and other prosthetic appliances. Including, but not limited to crowns, bridges, indirect endodontic posts and cores, implant supported and stabilised overdentures, implant-fitted crowns and bridges and adhesively and implant retained maxillofacial prostheses to restore function to the human mouth.
- Although dental technicians may only perform technical work on the order of a dental specialist, dentist or dental prosthetist and not deal directly with a patient for the provision of any of these devices, they do deal directly with the public when taking tooth shades on referral of a dentist. This is a unit of competency for dental technicians in the health training package and requires all the knowledge of infection control as they are putting their hand in a patient's mouth. If unregistered practitioners are allowed to put their hands in patient's mouths then this is a direct risk to the public.
- Dental prosthetists are registered dental technicians who have successfully completed an Advanced Diploma in Dental Prosthetics HLT60407 including a two-year part time, or a one year full time, clinical training programme at a public hospital with a dental facility treating public patients. As dental prosthetists evolve from the ranks of dental technicians it is imperative that registration stays and that

bodies such as CORA ensure that the high standard of training for dental technicians is maintained in order to ensure the most competent technicians become clinically qualified dental prosthetists.

- Dental technicians are a part of a team of oral health professionals who collectively contribute to the oral health of the public. This “team” approach is best achieved/reinforced through having all members of the team within the health regulatory environment.
- Dental technicians are primary care practitioners who see patients with a referral from a registered dentist when taking shades for crowns, bridges or implants or from a dental prosthetist for dentures. They usually attend these patients without others present.

## CRITERION 2:

Do the activities of the occupation pose a significant risk of harm to the health and safety of the public?

Yes, for the following reasons:

- Dental technicians construct appliances that are inserted into human mouths. Any failure on the part of dental technicians to observe proper infection control procedures could lead to adverse health outcomes such as hepatitis C for the public and for the dental technician and other health workers involved. They do deal directly with the public when taking tooth shades on referral of a dentist. This is a unit of competency for dental technicians in the health training package and requires all the knowledge of infection control as they are putting their hand in a patient's mouth.
- Any breakdown of infection control protocols between the patient, clinician and dental technician could lead to serious adverse health outcomes for the public and also for dental laboratory staff or when they are seeing a patient directly when taking tooth shades. Registration of dental technicians facilitates enforcement of compliance with infection control procedures.
- The Therapeutic Goods Act 1989 (the Act)<sup>1</sup> provides the legislative basis for uniform national controls over therapeutic goods, including dental products. Unless specifically excluded or exempt, therapeutic goods may not be supplied in Australia unless the product is included in the Australian Register of Therapeutic Goods (ARTG). It is an offence under the Act to use and/or import a product that is not on the ARTG. Registration of dental technicians facilitates the use of an audit trail and system of accountability that would not otherwise be possible if unregistered persons manufactured (or imported) dental prostheses made from materials that were not included in the ARTG.
- It is the dental technician who complies with this Act and is trained in the use of safe and appropriate materials that can be incorporated in an appliance that is being constructed for a dental patient.
- A wide range of dental materials used to manufacture dental prostheses are classified by the Therapeutic Goods Administration into five categories: [*materials used to manufacture prostheses are underlined*],
  1. Class I (low risk), - dental impression materials, artificial teeth, hand-held dental mirror, dental patient chair, dental curing light;
  2. Class IIa (low-medium risk), - dental filling materials and pins, dental alloys, ceramics and polymers, powered dental drill, X-ray film, orthodontic wire, fissure sealants, dental aspirator tips;
  3. Class IIb (medium-high risk), - diagnostic X-ray sources, non-absorbable sutures, permanent implants;

4. Class III (high risk), and
  5. Active Implantable Medical Device (high risk);
- The following scenarios illustrate the sort of serious or permanent harm to the public that could be caused by dental technicians:
    - (1) Dental Technicians are primary care practitioners who see patients with a referral from a registered dentist when taking shades for crowns, bridges or implants or from a dental prosthetist for dentures. They usually attend these patients without others present and place their hands in patients mouths.
    - (2) Manufacture of maxillofacial prostheses – the inappropriate selection of non-medical grade silicones and pigments, and incorrect processing of the materials can lead to:
      - a. Microscopic porosity of the fitting surface of the prosthesis caused by incorrect material selection and processing, which when exposed to the oral-nasal cavity, will result in retention of detrimental biofilms that cannot be removed by normal cleaning by the patient. This can lead to bacterial infections, stomatitis, risk of aspergillus, pseudomonas pathogenic nasal organisms and colonisation by gram negative organisms within the porosity. In the case of immune-compromised patients, this can be fatal.
      - b. Incorrect selection of non-medical grade intrinsic and extrinsic pigments based on elements such as cadmium or lead, when exposed to the intra-oral / maxillofacial environment, can leach out leading to a range of pathologies from allergic reactions to poisoning of the patient.
    - (3) Porosity and greater than 40 micron marginal seals in crown marginal areas can cause serious and permanent damage to the periodontium, potentially leading to bone resorption around the roots of the teeth or implants<sup>2,3</sup>. This can ultimately lead to the loss of the implant or tooth. Unless the dentist has a microscope present in the dental surgery, they would be unable to detect masked porosity or open marginal seals between 40 to 100 microns with the naked eye.

The dentist is totally dependent on the quality of the prosthesis supplied by the dental technician.
    - (4) The oral environment is moist and ranges in pH from 2.5 to 7.0. Any metals or alloys placed in this environment are subject to a potential galvanic process and potential tarnish and corrosion. If inappropriate alloys are used in prostheses, they will corrode and release ions into the oral environment that can have serious harm for the patient<sup>4,5</sup>. The dentist is dependent on the integrity of the dental technician to use an appropriate alloy. Tissues in contact with tarnish and corrosion become inflamed and can result in serious or permanent damage to the periodontal structures.

- (5) Mechanical properties of alloys are critical in the design and long-term success of fixed bridges, both implant supported and on natural abutments. Dentists are dependent on the integrity of the dental technician to use an appropriate alloy and to apply the correct design features to the case. When embedded in porcelain or acrylic, dentists cannot evaluate the substructure. Failure in this regard can lead to flexing of the bridge, resulting in stress transfer to the implants or abutments leading to loss of osseointegration of implants and loss of bone support for the natural abutments. This may lead to permanent loss of the implants or abutments and the bridge, thereby requiring costly treatment to restore the patient's function and/or aesthetics at a lower level than was the case previously<sup>6</sup>.
- (6) Cast posts and cores are custom manufactured by dental technicians from appropriate dental alloys. These are then permanently "implanted" / cemented into the root canals of the teeth where there is potential access and direct entry to the underlying biological structures. Inappropriate alloys used in the manufacture of prostheses will corrode and release potentially toxic ions into the internal supporting biological environment and the rest of the body, which can lead to serious consequences for the patient.
- Dentists are wholly dependent on the integrity of the manufacturer of the post and core to use an appropriate alloy.

### **CRITERION 3:**

**Do existing regulatory or other mechanisms fail to address health and safety issues?**

Yes, but only in the presently unregulated jurisdictions.

- In all states with registration for dental technicians the infection control standards for dental technicians are outlined in the Act or regulations of that State. In regulated jurisdictions such as New South Wales, the Infection control standards for Dental Technicians are outlined in legislation (Schedule 3 to the Dental Technicians Registration Regulation 2008). Registration of dental technicians provides the means by which practitioners can be held accountable for their actions.
- The clinicians cannot provide this protection as they see the finished product only after manufacture and therefore are unable to tell whether any appliance meets the requirements on materials in Australia and if the public is at risk. Many dental appliances cannot be autoclaved and if they have porosity from poor quality or manufacturing techniques then chemical disinfection cannot ensure patient safety.

- Apart from when dental technicians deal directly with patients when taking tooth shades, dentists and dental prosthetists are unable to provide a satisfactory gate-keeping role, (ie as protector of public health) as the root causes of disease and infection, carried through the use of inappropriate materials and alloys in dental appliances, are not visible to the naked eye.
- Adequate regulation is a definite value to health outcomes as it ensures a reporting procedure, controlled record keeping and a means to identify all practitioners.

#### **CRITERION 4:**

Is regulation possible to implement for the occupation in question?

Yes, for the following reasons:

- Dental technicians are regulated by legislation in four jurisdictions throughout Australia (NSW, ACT, QLD & SA) and in New Zealand. Representations have been made over several years for the governments of Victoria, Tasmania and Western Australia to reintroduce regulation of the profession in the public interest and to introduce a form of accountability from the use of TGA registered materials, appropriate manufacturing standards, right through to the insertion in the mouth.
- The majority of Dental technicians are regulated in Australia and New Zealand. Registration has been introduced in the UK, and as a consequence is now being considered in many EU countries, as a means to better monitor oral health outcomes from the point of manufacture to insertion in the mouth. The list of current jurisdictions where registration is in place, see Attachment 2
- Entry to the Advanced Diploma of Dental Prosthetics course is incumbent upon the applicant being a registered dental technician and able to demonstrate competency in a defined string of compulsory units delivered in the Diploma of Dental Technology (or equivalent).

#### **CRITERION 5:**

Is regulation practical to implement for the occupation in question?

Yes, for the following reasons:

- As indicated above, dental technicians are regulated by legislation in four jurisdictions throughout Australia (NSW, ACT, QLD & SA) and in



New Zealand. As previously stated all Prosthetists are Technicians with post graduate training to cover their clinical scope of practice.

- As dental technicians were regulated in the other Australian jurisdictions, and as the vocational educational qualifications for both dental technicians and dental prosthetists are nationally endorsed and contained within the Community Services and Health Industry Skills Council's Health Training Package HLT07, regulation of the profession nationally is not only practical but highly desirable in the public interests and for the good governance of the overall dental profession
- All members of the various Australian dental professions signed a document in the office of the Australian Dental Council in Victoria in support of maintaining registration for dental technicians around Australia. Registration of dental technicians has unanimous support of all dental practitioners. (Attach. Joint Submission January 2007)

### **CRITERION 6:**

**Do the benefits to the public of regulation clearly outweigh the potential negative impact of such regulation?**

Yes, for the following reasons:

- Most members of the public would not be aware that the overwhelming majority of dentures and other appliances supplied and fitted by dental professionals are in fact manufactured by dental technicians off site, and that dental technicians are responsible for the choice of appropriate materials and alloys that are used in those appliances.
- Dental technicians have a similar role to pharmacists in that they work under prescription. The difference is that goods manufactured by dental technicians are placed inside a person's mouth.
- Most members of the public would not be aware that there have been significant changes to the training curriculum for dentists, such that very little time is now devoted to the study of materials science relative to removable and fixed prosthesis or the manufacture of prostheses. In short, the more recent dentistry graduates have become dependent upon the expertise of registered dental technicians to manufacture appliances skilfully and in accordance with TGA requirements. Dentists have limited training in dental technology and have only basic education in relation to the materials used. The role of dentists as gatekeepers of standards of quality of artificial and restorative dental appliances has diminished significantly over time.

- However, were oral health care consumers to be aware of those facts, the benefits to them of regulation would include the following:
  - Assurance that the dental appliances that their dentists, orthodontists, specialists etc place in their mouth have been constructed in laboratories that are staffed by qualified, registered technicians and that the materials and alloys used in those devices will not cause infections, disease or other adverse health outcomes;
  - Recourse to a registration authority with powers to investigate complaints and invoke disciplinary proceedings in appropriate circumstances;
  - Provision of a mechanism for government (through the registration authority) to promulgate infection control standards and TGA requirements to dental technicians and a means to ensure compliance therewith;
  - The holistic regulatory approach to the independent but symbiotic members of the dental profession, who collectively contribute to improving the oral health of the public, is supported through the regulation of each profession. Poor and unregulated dental technical work could prove expensive in terms of pathological potential.
  
- There is virtually no benefit to the public in deregistering dental technicians. Apart from shade-taking and shade-alteration procedures, as they do not deal directly with the public, any cost savings gained by using unskilled and unqualified dental personnel are passed directly to the benefit of the clinician and are certainly not passed onto the unsuspecting public.
  
- With registration the public and the clinician can be assured that any product going into the mouth is safe and constructed with the most appropriate materials.

## **Conclusion:**

Registration of dental technicians is vital for the health and safety of the public, for the quality of dental appliances and for the education of this important profession.

Apart from when dental technicians deal directly with patients when taking tooth shades, dental technology is an integral element of the dental profession and, as such, dental technicians should be registered in all jurisdictions under the proposed "National Registration and Accreditation Scheme".

For public safety dental technicians should be included in the first round of the NRAS process as a part of "Dental Practitioners". All other dental practitioners are to be included and to delay the incorporation of one class of practitioners is not in the public interest. There are further implications in any delay in regards to efficiency and sound economic management of process.

Unlike other partially regulated groups, dental technology will be incorporated under a planned group "Dental Practitioners" and will not require the creation of a new Board.

Any delay in implementation will be detrimental to the scheme, in that partial regulation may still exist in some areas.

The wellbeing of workers in non regulated jurisdictions is of concern. At present there is no guarantee that non registered persons working as dental technicians, generally in dental laboratories, are being paid fair and reasonable wages.

There are often no awards to cover these workers and this can be addressed by the Registration of dental technicians and appropriate regulation.

## **Recommendation:-**

**That dental technicians be registered in all jurisdictions, and further that they should be included in the first round of the proposed National Registration and Accreditation Scheme under "*Dental Care*" with all other dental practitioners. Both the Queensland and ACT Health Ministers have expressed support for Dental Technicians being registered.**

## **Attachment**

List of Countries and or States having registration for Dental Technicians as of September 2008

- Great Britain
- France
- Japan
- New Zealand
- South Africa
- Nigeria
- Namibia
- Zambia
- Bermuda
- United States of America
  - States with compulsory registration are:
    - Virginia
    - Florida
    - Kentucky
    - Illinois
    - Texas
    - Oregon
    - Massachusetts
  - Canada
    - Provinces with compulsory registration are:
      - Nova Scotia
      - British Columbia
      - Saskatchewan
      - Prince Edward Island

**SUBMISSION**

**Part 2: DENTAL PROSTHETISTS**

**Inquiry into Health Practitioner Regulation (Consequential  
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**COMMUNITY AFFAIRS LEGISLATION COMMITTEE**

**April 2010**

**Dental Prosthetists** are totally independent practitioners who deal to the public in removable dentures and flexible mouthguards.

At present, in all states other than Victoria and South Australia, dental prosthetists have had an independent registration board.

The new Dental Board of Australia has only one dental prosthetist to represent the whole of Australia. While CORA is confident that with the current chair, John Lockwood, dental prosthetists will be treated fairly. It only requires a different Chair with a different agenda for dental prosthetists to be greatly disadvantaged.

The Australian Dental Council will be the new accrediting authority for courses involving dental prosthetists. CORA will relinquish this role because the scheme will only allow one authority to be funded by each Board and CORA will lose funding from July.

As of writing this submission, dental prosthetists, who are professionally represented by the Australian Dental Prosthetists Association Ltd, have no representation on the Australian Dental Council despite an application in 2009 and there is also no representation for training organisations who currently teach dental prosthetics despite the Australian Dental Vocational Education Providers Group (ADVEPG) also requesting membership in 2009.

## **Conclusion:**

Dental Prosthetists need:

Section 1:

Increased representation on the new Dental Board of Australia,  
or

A separate Registration Board with dental technicians should they become part of National Registration.

Section 2:

The Australian Dental Prosthetists Association Ltd gain membership to the Australian Dental Council as all other dental professional Associations are already members.

and

The Australian Dental Vocational Education Providers Group (ADVEPG) also gain members to the Australian Dental Council because all other dental education providers

These two groups have been vital members of CORA for eighteen years.

## List of References

1. Health Training Packages 2002 and 2007. Unit of competency – Taking Tooth Shades
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4. Martignoni M. and Schonenberg, A., 1990, Precision Fixed Prosthodontics: Clinical and Laboratory Aspects, Quintessence Pub Co.
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6. Darvell, B.W., 2004, Material Science for Dentistry, 7<sup>th</sup> Ed., B.W. Darvell, Hong Kong.
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