

Dental Practice Regulation 2003

Regulatory Impact Statement



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1. Introduction

1.1 The Dental Practice Act 2001

The proposed Regulation is made under the Dental Practice Act 2001 (the Act). The Regulation is to be made pursuant to the following sections of the Act:

- Section 19 (registration of dental auxiliaries)
- Sections 36 38 (offences for which notice of conviction of dental practitioner not required);
- Section 39 (notice of mental incapacity of registered dental practitioner);
- Section 98 (appeal against decision of the Tribunal on point of law);
- Section 108 (election of members of the Board);
- Section 158 (infection control standards);
- Section 158 (advertising); and
- Section 158 (general regulation making power).

The Act was assented by the Governor on 11 October 2001. The Act will commence on proclamation.

1.2 The Subordinate Legislation Act 1989

The proposed Regulation is defined as a "statutory rule" for the purposes of the Subordinate Legislation Act. Section 5 of the Act requires that:

Before any statutory rule is made, the responsible Minister is required to ensure that, as far as is reasonably practicable, a regulatory impact statement complying with Schedule 2 of the Act is to be prepared in connection with the substantive matters to be dealt with by the statutory rule.

1.3 Administration and Enforcement

The Regulation is to be administered and enforced by the NSW Dental Board, a statutory body established under the Dental Practice Act.

2 Objectives of the Regulation

The objective of the Regulation is to establish, in conjunction with the Act, a statutory framework that will provide minimum standards for the delivery of dental services by:

- Requiring the conscientious observance of infection control practices to ensure the safety of dental providers, other health care providers, health care consumers and the general public;
- Set minimum standards for the keeping of records by dentists;
- Set minimum standards for the advertising and promotion of dental services;
- Prescribe the restricted dental practices that may be undertaken by registered

dental auxiliaries; and

• Establish a regime for the election of elected members of the Dental Board.

3 Regulatory Options to Achieve Objectives

3.1 Identification of Options

There are three regulatory options:

- 1) Do nothing, commence the Act without a supporting regulation.
- 2) Make a Regulation that deals with machinery matters alone.
- 3) Make the proposed Regulation.

3.2 Option 1 - Do nothing

At present, some of the matters that are dealt with in the proposed Regulation, are also dealt with under other legislation, for example, advertising of dental services is also regulated by general consumer protection legislation.

However, the proposed Regulation is the only legislation that expressly stipulates performance standards for dental practice in the fundamental areas of infection control and record keeping. In the absence of specific legislative control, it would be difficult, if not impossible, for these matters to be administered and enforced under the general disciplinary provisions of the Act alone.

Another important consideration is that it is self-evident that to enable the Dental Board to maintain and raise standards of professional conduct, the required standards should be as precisely delineated as possible, and be published in a manner that helps to ensure that those whose performance they seek to regulate are more likely to be aware of the standards and their obligation to observe them.

The observance of basic infection control standards and the keeping of records are integral parts of every episode of health care, and the absence of any legislative controls may contribute to a lowering of standards with obvious potential to seriously compromise the health and safety of patients and dental care providers as well as the broader public.

The proposed Regulation also deals with a number of important matters of a machinery nature that are essential for the proper functioning of the Act. These matters include:

- Part 3 of the proposed Regulation, which deals with the conduct of elections for elected members of the Board;
- Part 4 of the proposed Regulation, which contains transitional provisions relating to members of the existing Board; and
- Provisions in Part 5 of the proposed Regulation, which cover matters such as setting the level of certain fees that may be charged by the Board and specifying those offences that dental care providers are not required to notify the Board of if convicted.

Adopting Option 1 would not enable the objectives and purpose of the principal Act to be achieved.

More significantly, this option clearly entails risk not only to dental care providers and their patients, but also to the wider community. This risk most obviously arises in relation to the transmission of infections within the clinical setting and from the clinical setting to the community.

3.3 Option 2 - Make a Regulation that deals with machinery matters alone.

Adopting this Option would result in a regulation that deals with important matters such as elections, fees and excluded offences but dose not address those matters that are of most importance from a public health perspective such as infection control standards and record keeping.

3.4 Option 3 - Make the proposed Regulation

This option would see the Regulation made as proposed and covering important machinery matters as well as important public health matters such as infection control and record keeping practices.

3.5 Preferred Option

For the reasons explained in this assessment Option 3 is the preferred Option.

4 The Proposed Regulation

4.1 Economic Aspects Of the Proposed Regulation

It will be apparent from the data contained in sections 7 and 8 of this Regulatory Impact Statement that the proposed Regulation addresses matters of significant economic importance.

The control of the transmission of infectious diseases in the community, particularly high cost diseases such as HIV/AIDS, hepatitis B and hepatitis C, has significant economic impacts in terms of

- saved treatment costs (pharmaceutical costs, bed day costs); and
- consequential costs to the community as a result of loss of productivity and the costs due to premature deaths.

Further, the annual cost of infections transmitted in public and private hospitals in Australia may be in excess of \$80 million.

The economic advantages potentially flowing from the enactment of a regulation setting minimum standards for the making and keeping of dental records are less tangible, but no less significant in terms of the public benefits derived from ensuring the safe and efficient delivery of health care in NSW.

To the extent that the Regulation incorporates explicit guidelines for, dentists in the maintenance of records, which is an area of practice often the subject of unfavourable comment in professional negligence claims and disciplinary proceedings, it continues to have positive economic benefits for the profession in terms of risk management and litigation risk generally.

5. Advertising of Dental Services

5.1 Proposed Regulation

The provisions of the proposed Regulation dealing with advertising are consistent with the consumer protection provisions of section 52 of the Trade Practices Act 1975 (Cth) and section 42 of the Fair Trading Act 1987 (NSW). Furthermore the proposed provisions are in similar terms to the equivalent provisions in the Dentists (General) Regulation 1996 (the 1996 Regulation).

In general terms the relevant provisions of the Trade Practices and Fair Trading Acts prohibit conduct, including advertising, in trade or commerce that is misleading and deceptive. The provision of dental services is activity in the course of trade or commerce and therefore any misleading or deceptive conduct by dental care providers, may breach either the Trade Practices Act or the Fair Trading Act.

Both the 1996 Regulation and the proposed Regulation prohibit advertising of dental services that is

- (a) false, misleading or deceptive,
- (b) creates an unjustified expectation of beneficial treatment, or
- (c) promotes the unnecessary or inappropriate use of dental services.

These are all variations on misleading and deceptive conduct.

However, clause 16 of the 1996 Regulation also prohibits advertising that claims or imply superiority for a dentist in the practice of dentistry, or is likely to bring the profession into disrepute. These restrictions are not in the nature of consumer protection provisions and have therefore not been carried over to the proposed regulation.

5.2 Preferred Option Advertising of Dental Services

In essence the provisions of the proposed Regulation simply reflect the requirements of the Trade Practices Act and the Fair Trading Act, although in a more expansive fashion.

In the absence of any regulatory controls on advertising of dental services, the Dental Board would have no specific powers to enable it to monitor and control advertising by dental care providers. The practical effect of this would be that consumers would have to rely upon their own resources to 'police' the advertising of dental services and treatments.

Furthermore the existence of advertising restrictions in the Dental Practice Regulation forcibly impresses upon dental care providers their obligations with respect to

appropriate advertising. It is by no means clear that dental care providers, and other health professionals, recognise the applicability of the Trade Practices and Fair Trading Acts to their professional practices and that in the absence of the proposed regulatory controls their advertising would be of an appropriate standard.

6 Dental Auxiliaries

6.1 The Dental Practice Act 2001

Part 3 (sections 19 to 30) of the Dental Practice Act 2001 provides for the registration of dental auxiliaries. Section 19(1) of the Act provides that dental auxiliaries comprise the following classes:

- dental therapists;
- dental hygienists; and
- such other classes of people as may be prescribed (no other classes are proposed to be prescribed under this regulation).

Section 19(3) of the Act provides that the regulations are to prescribe authorised activities for each class of dental auxiliary. An activity can only be prescribed as an authorised activity if it constitutes a restricted dental practice as defined in section 10AF of the Public Health Act. A dental auxiliary who undertakes a restricted dental practice that is not authorised by the regulations is guilty of an offence under section 10AF of the Public Health Act and may also be guilty of unsatisfactory professional conduct or professional misconduct under the Dental Practice Act 2001.

Section 33(1) of the Act provides that a registered dental auxiliary must not carry out a dental auxiliary activity unless the person carries out the activity subject to the practice oversight of a registered dentist in accordance with guidelines approved by the Director-General from time to time.

Section 33(2) of the Act provides that a registered dental therapist must not carry out dental auxiliary activities except as an officer or employee of, or pursuant to an agreement or other arrangement with, the Department of Health, a public health organisation or a body or organisation prescribed by the regulations for the purposes of this section. The Competition Principles Agreement review of the Dentists Act 1989 concluded that the current restriction on the employment of dental therapists to the public sector should be retained at this time.

6.2 Dental Therapists

In NSW all dental therapists are trained and employed in the public sector. There is one training school, the Westmead College of Dental Therapy, which has an annual intake of approximately 18 trainees with approximately 14 students graduating annually. All graduates from the last training year have been employed in dental therapy and the College indicates that all graduates from the current year will also be able to find employment with a number of area health services already attempting to recruit dental therapists from the pool of new graduates. A workforce study by the Department of Health indicates that in June 2003 there were 140 full time equivalent (FTE) dental therapist positions in NSW, although an FTE position may be filled by a

number of part time dental therapists¹. As dental therapists work exclusively in the public sector and do not charge for their services it is not possible to calculate the value of the services that they provide, however based on salary levels it is estimated that their value to the public sector is at least \$5.75 million per annum².

6.2.1 The Dentists Act 1989

Dental therapists are currently authorised to practice under section 57(4)(c) and (e) of the Dentists Act 1989.

For the purposes of section 57 (4) (c) and (e) of the Dentists Act 1989, the parts of the practice of dentistry that may be performed by dental therapists are set out in clauses 17 and 18 of the Dentists (General) Regulation 1996:

(a) the dental examination of preschool and school children,

(b) the cleaning and polishing of teeth and restorations,

(c) the topical application to teeth of sealants, medicaments and preventive coatings,

(d) the removal of dental calculus not involving surgical techniques requiring incisions,

(e) the application of topical anaesthetics,

(f) the giving of supraperiosteal or mandibular nerve block injections of local anaesthetics not involving, in either case, any other regional, intra-osseous or intra-ligamental anaesthesia,

(g) the extraction of deciduous or permanent teeth not involving either surgical techniques or incisions,

(h) the pulp capping of deciduous or permanent teeth and the pulpotomy of deciduous teeth,

(i) the restoration of deciduous or permanent teeth by the use of materials other than cast metals, gold foil or porcelain,

(j) intra-oral radiography,

(k) the taking of impressions, at the written request of a dentist, for use in study models, mouthguards and removable orthodontic appliances,

- (I) dental health education,
- (m) dietary counselling for dental purposes.

A dental therapist may only undertake the above practices under the supervision of the Chief Dental Officer of the Department of Health or a dentist authorised by the Chief Dental Officer to supervise treatment by dental therapists.

6.2.2 Proposed regulation dental therapists

The draft regulation provides that for the purposes of section 19(3) of the Dental Practice Act 2001, the following activities (as far as they involve dental treatment of preschool and school children) are authorised activities:

- (a) dental examination,
- (b) the cleaning and polishing of teeth and restorations,
- (c) the topical application to teeth of sealants, medicaments and preventive

¹ Information provided by the Department of Health's Oral Health Branch.

² Assuming an average full time salary of \$41,000 per annum (the reported range is approximately \$35,000 and \$49,710) and the reported 140 FTE positions.

coatings,

(d) the removal of dental calculus not involving surgical techniques requiring incisions,

(e) the application of topical anaesthetics,

(f) the giving of supraperiosteal or mandibular nerve block injections of local anaesthetics not involving, in either case, any other regional, intra-osseous or intra-ligamental anaesthesia,

(g) the extraction of deciduous or permanent teeth not involving either surgical techniques or incisions,

(h) the pulp capping of deciduous or permanent teeth and the pulpotomy of deciduous teeth,

(i) the restoration of deciduous or permanent teeth by the use of materials other than cast metals, gold foil or porcelain,

(j) intra-oral radiography, and

(k) the taking of impressions, at the written request of a dentist, for use in study models, mouthguards and removable orthodontic appliances,

6.2.3 Practice oversight guidelines

Unlike the Dentists Act 1989 the Dental Practice Act 2001 does not deal with the supervision or oversight of dental therapists by regulation. The Dental Practice Act takes a more flexible and responsive approach and provides that dental therapists may only undertake approved practices in accordance with practice oversight guidelines approved by the Director-General of Health. The draft practice oversight guidelines form Appendix 1 to this regulatory impact statement.

In essence the guidelines establish processes for practice oversight by a registered dentist. The emphasis is on dental therapists ensuring that they operate within their competencies while providing guidance as to when they should refer the patient to a dentist for assessment or treatment. Practice oversight is the responsibility of the Chief Dental Officer or an authorised delegate.

6.3 Dental Hygienists

Dental hygienists generally perform a supporting role to dentists, performing tasks such as removal of sutures and orthodontic archwires, bands and attachments, dental health education and dietary counselling for dental purposes. There are 240 dental hygienists whose names are on the list kept by the Dental Board of NSW. As dental hygienists operate as employees of dental practices they do not charge separately for their services. It is therefore difficult to calculate with any precision their value in the market, however an estimate of \$ 7.1 million has been made³.

6.3.1 The Dentists Act 1989

Dental hygienists are currently authorised to practice under section 57(4)(f) of the Dentists Act 1989.

For the purposes of section 57 (4) (f) of the Dentists Act 1989, the parts of the practice

³ Assuming an average full time salary of \$33,000 per annum (range of \$31,250 to \$34,000) and approximately 90% FTE employment.

of dentistry that may be performed by dental hygienists are set out in clauses 19 and 20 of the Dentists (General) Regulation 1996:

- (a) pre-operative and post-operative instruction,
- (b) the irrigation of the mouth,
- (c) the insertion and removal of surgical packs,
- (d) the application and removal of rubber dam,
- (e) the polishing of restorations,
- (f) simple prophylaxis,

(g) the topical application of coatings, sealants, fluoride solutions and preventive medicaments,

(h) the scaling of supra-gingival and sub-gingival calculus deposits from the teeth,

- (i) root planing,
- (j) the removal of sutures,
- (k) the selection of orthodontic bands,
- (I) the removal of orthodontic archwires, bands and attachments,
- (m) intra-oral radiography,
- (n) the taking of simple impressions for study casts,
- (o) the recording of periodontal disease,
- (p) dental health education,
- (q) dietary counselling for dental purposes.

A dental hygienist may only undertake the above practices if:

(a) the treatment to be carried out does not involve the cutting of oral or dental tissue, and

(b) the treatment to be carried out by the dental hygienist is in accordance with a written treatment plan prepared by a supervising dentist, and

(c) the treatment must be supervised by a dentist who is on the premises at the time at which the treatment is carried out, or by the Chief Dental Officer of the Department of Health or a dentist authorised by the Chief Dental Officer to supervise treatment by dental hygienists.

6.3.2 Proposed regulation dental hygienists

The proposed regulation provides that for the purposes of section 19(3) of the Dental Practice Act 2001, the parts of the practice of dentistry that may be performed by a dental hygienist are the following:

- (a) the irrigation of the mouth,
- (b) the insertion and removal of surgical packs,
- (c) the application and removal of rubber dams,
- (d) the polishing of restorations,
- (e) simple prophylaxis,

(f) the topical application of coatings, sealants, fluoride solutions and preventive medicaments,

(g) the scaling of supra-gingival and sub-gingival calculus deposits from the teeth,

(h) root planing,

- (i) the removal of sutures,
- (j) the selection of orthodontic bands,
- (k) the removal of orthodontic archwires, bands and attachments,
- (I) intra-oral radiography, and
- (m) the taking of simple impressions for study casts.

6.3.3 Practice oversight guidelines

Unlike the Dentists Act 1989 the Dental Practice Act 2001 does not deal with the supervision or oversight of dental auxiliaries by regulation. The Dental Practice Act takes a more flexible and responsive approach and provides that dental therapists may only undertake approved practices in accordance with practice oversight guidelines approved by the Director-General of Health. The draft practice oversight guidelines form Appendix 1 to this regulatory impact statement.

In essence the guidelines provide that dental hygienists may generally only practise in accordance with a treatment plan and with the oversighting dentist on site and available for advice and consultation. In the public sector supervision is provided by the Chief dental Officer or an authorised delegate. In the private sector the employing dentist or another registered dentist provides oversight.

6.4 Preferred Option Dental Auxiliaries

To a very large extent the proposed regulation with respect to the professional activities of registered dental auxiliaries replicates the position that currently applies under the Dentists Act 1989 and the Dentists (General) Regulation 1996. The proposed regulation therefore imposes no additional costs, or generates any additional benefits, over the current situation.

However, the implementation of the recommendations of the Competition Principles Agreement review of the Dentists Act 1989 has seen the replacement of the wholesale restriction on dental practice with a targeted range of restrictions on specific practices, which are listed in the Public Health Act as *restricted dental practices*. This reform has seen a relaxing of the restrictions in a number of areas or oral care and the restrictions on the practices of dental auxiliaries have similarly been relaxed.

7 Infection Control

7.1 Previous reviews and assessments of infection control policies

In 1994/95, the Department of Health undertook a comprehensive review of infection control procedures and guidelines. The review was initiated in response to reported cases of transmission of the human immuno-deficiency virus (HIV) and the hepatitis C virus (HCV) in private health care settings. That review indicated a need for a more regulated environment for infection control, and for a single policy to operate in the public and private health care systems.

The public health system is bound by the Department's Infection Control Policy, which was updated during the 1994/95 review to accord with international best practice and has most recently been updated and reissued as Departmental Circular 2002-45. The Policy provides a framework to enable health care facilities to provide and maintain a safe environment for patients, health care workers, volunteers and carers. In particular, it sets out the responsibilities of health care workers in regard to the handling of sharps; sterilising instruments; handwashing; the use of gloves, gowns and

facemasks; and the management of contaminated wastes.

As a result of that review it was considered necessary to make infection control standards binding on the private sector, including health care workers operating in private rooms, and also private hospitals, day procedure centres and nursing homes.

Infection control standards were subsequently introduced by way of Regulations under the Medical Practice Act 1992, the Nurses Act 1991, the Physiotherapists Registration Act 1945, the Dentists Act 1989, the Podiatrists Act 1989, and the Dental Technicians Registration Act 1975. The Department's policy was applied by way of licence condition to all licensed private hospitals, day procedure centres and nursing homes.

The conclusions of the assessment, and the cost-benefit analysis undertaken as part of it, were that the standards would minimise the transmission of serious blood borne viruses and other infections caused by bacteria or parasites in health care settings.

7.2 Costs and Benefits

In general terms, the benefits were estimated in terms of the extra resources available to the community through:

- prevented treatment costs;
- higher productivity through prevented illness and premature death;
- prevented pain and suffering of the victim and his or her family and friends; and
- a reduced potential for legal action as a result of a clinically acquired infection.

The estimated savings in treatment (medication only) costs for HIV/AIDS, HBC and HCV, on the basis of preventing one case of HIV infection, one case of HCV infection and two cases of HBV each year, were approximately \$147,994. The value of this saving over five years was \$606,805, and over 25 years \$1.7 million (at a discount of 7 per cent). Treatment costs have changed since that review and it is now estimated that combination drug therapy for HIV infection costs approximately \$15,000 per person per year. However infected people now have a longer life expectancy and it is estimated that overall treatment costs have therefore increased. It is clear that there remain substantial savings in treatment costs associated with preventing the spread of infectious diseases.

Additionally, the intangible benefits which flow from preventing infection transmission were also to be taken into account. These include:

- the averted pain and suffering of victims,
- the accompanying stress and anxiety of their family and friends,
- the wider public interest in being able to access a safe health care environment, and to have confidence in the quality of care provided in all health care settings and circumstances.

7.3 Current Prevalence of Infection

Disease	1998	1999	2000	2001	2002
HIV	410	384	359	348	386
AIDS	170	107	115	62	73
Hepatitis B	2,960	3,469	3,949	4,548	3,550
Hepatitis C	7,266	7,724	7,565	8,072	6,705

Table 1 Notifications For HIV, AIDS, HBV, and HCV In NSW 1998 – 2002

Source: The health of the people of New South Wales — Report of the Chief Health Officer, 2002. Sydney: NSW Department of Health, 2002, Page 280. NSW Notifiable Diseases Database and NSW HIV Database (2002 figures only)

7.3.1 Hepatitis C

Hepatitis C was first identified in 1990. It is transmitted mainly by contact with an infected person's blood. Today, most new infections are acquired through sharing contaminated needles and syringes. No vaccine against HCV has been developed.

Most significantly in the health care setting, most persons have no symptoms when first infected, those who do show symptoms may experience transient anorexia, malaise, abdominal discomfort and jaundice. Therefore the risk to dental care providers is in caring for patients who have been infected but who do not display symptoms and have not yet been diagnosed. This risk is minimised if standard infection control precautions are adopted for all patients – regardless of known or presumed infection status.

Hepatitis C is a notifiable disease, and is the most commonly reported infectious disease in NSW, and continues to represent a large burden of illness on the community, 8,072 cases were reported in 2001 and 6,705 reported in 2002.

Studies in the United States⁴ report that between 1984 and 1995 the annual number of HCV infections has ranged from an estimated 180,000 in 1984 to an estimated 28,000 in 1995. Of these, an estimated 2%-4% occurred among health care personnel who were occupationally exposed to blood. If this rate of infection is transposed to the 2001 NSW rates of infection, between 160 and 320 health care personnel are occupationally exposed to HCV in NSW per annum.

Several case reports have documented transmission of HCV infection from anti-HCVpositive patients to health care personnel as a result of accidental needle sticks or cuts with sharp instruments⁵. In follow-up studies of health care personnel who sustained

⁴ Polish LB. Tong MJ. Co RL. et al; Risk Factors for Hepatitis C virus infection among health care personnel in a community hospital. AMJ infection Control 1993; 21: 196-200.

Cooper BW. Krussell A. Tilton RC et al: Seroprevalence of antibodies to hepatitis C virus in high risk hospital personnel. Infect Control Hosp Epidemiology 1992:13:82-85. Reported in Department of Health and Human Services (DHHS) and Centers for Disease Control and Prevention (CDC). Draft Guideline for Infection Control in Health Care Personnel, 1997.

⁵ Herbert AM. Walker DM. Kavies KJ. et al. Occupationally acquired hepatitis C virus infection; Lancet 1992, 339:305; Tsude K. Fujiyama S, Sato S. at al: Two cases of accidental transmission of hepatitis C to medical staff. Hepato-Gastrointestinal 1992; 39:73-75; Zuckerman J. Clewley G, Griffiths P. at al. Prevalence of hepatitis C antibodies in clinical health care workers. Lancet 1994; 343:1618-1620.

percutaneous exposures to blood from anti-HCV-positive patients, the incidence of anti-HCV seroconversion averaged 1.8%.

In a study in which HCV RNA polymerase chain reaction methods were used to measure HCV infection, the incidence of HCV infection was 10%⁶. There is currently no data on the incidence of HCV infection occupationally acquired in NSW, primarily because there is no centralised reporting mechanism for obtaining data on seroconversion following occupational exposure and exposure category data are not routinely collected.

The incubation period for hepatitis C is between 2 weeks and 6 months, most commonly 6-9 weeks, and among persons who develop HCV antibodies following exposure to HCV, approximately 75% develop chronic infection and therefore remain infectious and at risk of long-term sequelae including possible death from liver damage, with consequential costs to the wider community.⁷ There is currently no vaccine or prophylactic treatment for Hepatitis C

7.3.2 Hepatitis B

Hepatitis B is currently the only serious blood borne virus for which vaccination is available. The risk of becoming infected with HBV is virtually eliminated by vaccination. The Department strongly recommends that all non-immune health care workers whose work involves exposure to blood and body substances, be offered a course of HBV vaccination.

Reports from the United States of America on the transmission of HBV to patients of a surgeon infected with HBV highlight the increased risks for patients associated with invasive procedures. HBV is known to have been transmitted during invasive procedures from 34 health care providers to at least 350 patients in the United States and elsewhere since the early 1970s.⁸

Five of the 11 infected surgeons who resumed performing surgery after they had received the diagnosis subsequently transmitted HBV to additional patients. In contrast, there has been only one report of transmission of HIV virus from an infected clinician to patients since the AIDS epidemic began.⁹

Hepatitis B virus is the blood borne virus that, due to the availability of a safe and costeffective vaccine, is most easily guarded against.

7.3.3 Human Immunodeficiency Virus

Health care workers, including dental care providers, continue to be at risk of

⁶ Mitusi T, Iwano K, Masuko K. et al. Hepatitis C virus infection in medical personnel after needlestick accident; Hepatology 1992: 16:1109-1114.

⁷ (National Centre in HIV Epidemiology and Clinical Research. ANCAHRD Hepatitis C Projections Working Group: Estimates and Projections of the Hepatitis C Virus Epidemic in Australia. 2002).

⁸ Bell DM, Shapiro CN, Gooch BF. Preventing HIV transmission to patients during invasive procedures;

J Public Health Dent 1993:170-3. Referred to in NEJM 199e. Editorial. The Infected Health Care Provider, 334: 594-595

⁹ NEJM 1996, 334: 594-595, referring to Update: transmission of HIV infection during invasive dental procedures — Florida. MMWR Morb Wkly Rpe, 1991; 40: 377-81

occupational exposure to HIV. Exposures occur most commonly through needle sticks or cuts from sharp instruments (percutaneous exposures) infected with contaminated blood, or through contact of the eye, nose or mouth (the mucous membranes), or skin, with a patient's blood.

Most exposures do not result in infection. The risk of infection varies with the type of exposure and factors such as:

- The amount of blood involved in the exposure.
- The amount of virus in the patient's blood at the time of exposure.
- Whether post exposure treatment was taken.

The most effective precautions against transmission are those provided for in the regulatory provisions:

- Avoid direct exposure to patients' blood or other body substances;
- The use of protective gowns and aprons;
- The use of gloves during any procedure where direct contact with a patient's blood or other body substances is anticipated;
- The use of masks and protective eye wear;
- The use of medical devices with safety features designed to prevent injuries;
- Disposing of used needles in appropriate sharps containers;
- Prohibiting the direct handling of needles and sharps except in accordance with proper procedures; and
- The proper management of clinical wastes and contaminated materials.

7.3.4 Occupational Exposure to HIV, HCV and HBV In Australia

A project to monitor the occupational exposure to blood and body fluids among health care workers at 48 sites (47 hospitals and 1 nursing association) in Australia during the period 1 January to 30 June 1997¹⁰ reported as follows;

Exposure by type

• •	Percutaneous exposures Non-percutaneous exposures Unknown exposures	1,003 213 4
Tota	I	1,220
Ехро	sures reported by staff	
•	Exposures reported by nurses	61%
٠	Exposures reported by doctors	21%
٠	Exposures reported by laboratory staff	3%
•	All other staff	15%

¹⁰ MacDonald M. Watt p et al. National Monitoring of Occupational Exposure To Blood and Body Fluid Among Health Care Workers, Summary of results 1 January to 30 June 1997, project coordinated by the National Centre in HIV Epidemiology and Clinical Research on behalf of the State and Territory Coordinators and participating sites.

Location of exposure

•	in a patient room,	33%
•	In the operating room,	23%
•	In the emergency department,	9%
•	In a labour ward	4%
•	In a procedure or treatment room	4%
•	In intensive care	3%
•	In other areas	24%

For 68% of exposures, the source was tested for HIV, HCV or HBV infection. The prevalence of HIV and HCV antibody and HBV surface antigen were 1.2%, 5.7% and 2.8% respectively.

The project reports that none of the health care workers who reported exposures indicated any seroconversion to HIV, HBV HCV at three months post-exposure.

However, the risk of occupationally acquired infection is real. There have been at least 5 reported cases in Australia of health care workers who have acquired HIV infection in the workplace.¹¹

This compares with 52 documented cases and 111 possible cases of occupationally acquired HIV infection among health care workers in the United States reported to the Centers for Disease Control in the United States as at December 1996.

Table 2- Health Care Workers with Documented Occupationally Acquired HIVInfection - USA

Type of occupational exposure	Number
Needlestick or cuts	45
Eye nose or mouth and/or skin	5
Both injury and mucous membrane	1
Unknown	1
TOTAL	52
Type of fluid involved in exposure	Number
Blood	47
Concentrated virus in a laboratory	3
Visibly bloody fluid	1

Source; CDC Occupational Exposure to HIV. Information for Health Care Workers

7.3.5 Transmissible infections generally

In addition to HCV, HBV and HIV, a number of other infectious diseases are transmitted in the health care environment. These range from gastrointestinal infections; hepatitis A; herpes simplex; tuberculosis; measles and mumps; and meningococcal disease to diphtheria, whooping cough and scabies.

However, the common infections acquired in clinical settings remain:

¹¹ AHSR 1995. Vol 3. No 20. reported in the Summary of Results. MacDonald M. Watt P et al. Note 9

- Urinary tract infections.
- Infections at the site of surgery.
- Infections at the site of the insertion of an intravenous line.
- Infections due to resistant strains of staphylococcus.

The transmission of all of these infections, and their attendant treatment and consequential costs, is preventable by diligent adherence to standard infection control precautions for all patients and transmission based precautions for patients known or suspected to be infected by pathogens spread by airborne or droplet transmission or by contact with dry skin or contaminated surfaces or any combination of those routes.

7.4 The Australian Health Care Study — Nosocomial Infection Rates & Costs In Australian Hospitals

Since the 1994/95 review and Assessment were completed, the Final Report of the Taskforce on Quality in Australian Health Care has become available.¹² This Report was the culmination of the Australian Hospital Care Study originally commissioned and funded by the Commonwealth Department of Human Services and Health, as part of a Professional Indemnity Review set up in 1991.

Following the release of the preliminary results of the AHC Study, the Taskforce was established to consider strategies to address the implications of the results of the Study for the Australian health care system.

The Study aimed to establish the preventability of adverse events occurring in hospitals. Just over half of all adverse events identified were considered to be "potentially preventable".

The Study examined the medical records of over 14,000 patient admissions to 28 public and private hospitals in NSW and South Australia in 1992. Around one-sixth, or 16%, of hospital admissions during the year of the Study were assessed as involving an adverse event.

In just over half of the adverse events, the resulting disability lasted less than one month, and in 30% the disability resolved in less than 12 months. However, the remaining 20% resulted in various degrees of permanent disability or even death. For 0.8% of the total records studied, the adverse event resulted in death, with 0.5% being judged as preventable.

Nearly half of all of the adverse events were associated with an operation, 15% related to system problems such as inadequate training or supervision or inadequate communication, and about 13% were diagnostic errors. Approximately 75% of the adverse events occurred in an acute hospital, with around 8% occurring in a doctor's office.

The Study identified 1.7 million bed days as being attributable to highly preventable

¹² The Final Report of the Taskforce on Quality in Australian Health Care, prepared for the Australian Health Ministers Advisory Council, June 1996.

adverse events. Based on the National Costing Study average cost of \$510 per bed day, an annual cost of approximately \$867M per annum could be attributed to highly preventable adverse events.

The clinical situation in which the adverse events occurred was also analysed. Of a total of 5,748 adverse events, 547 or 9.5% were categorised as caused by "infection". On this basis, a minimum annual cost of \$82.3 million may be attributable to nosocomial infections occurring in hospitals in NSW and South Australia.

It is reasonable to assume that the identification of infections as an adverse event by the Study is likely to be conservative. The Study only involved the examination of hospital records. Many infections contracted in hospitals would not have developed until after the patient was discharged from hospital, or might not have been reported and/or linked (or recorded as linked) to the period of hospitalisation. It is therefore possible that the true cost of nosocomial infections is likely to be higher than the Study estimates disclose.

7.5 Effect of Infection Control Regulation

There is currently no data which indicates the empirical effect of the original enactment of the Infection Control Regulation. The drop in the incidence of HIV infections and instances of AIDS is encouraging, but over the same period there have been substantial increases in the rates of HCV and HBV infection. There remains no recorded case of HIV clinician-patient transmission in Australia.

The type of complaints made to the Health Care Complaints Commissioner show a reasonably static number of complaints relating to "Hygiene" and infection control over the 5 years to 2001/02:

ITTPE	1997/	1998/	1999/	2000/	2001/
	98	99	00	01	02
Hygiene	6	12	11	8	11
Infection control	30	29	38	44	28
TOTAL complaints for year	1,870	2,052	2,425	2,888	2,673

Table 3 — Complaints to Health Care Complaints Commissioner By Type

Source: HCCC Annual Reports 1998-2002

7.6 Current issues in Infection Control

Two recent developments reported by the Centers for Disease Control in the United States warrant recording for the warning they provide to health authorities and health practitioners in Australia about the resurgence of communicable diseases, and thus the necessity to be vigilant in maintaining standards of infection control:

Tuberculosis

A recent editorial and article in the New England Journal of Medicine¹³ report data that indicates drug resistant tuberculosis in 35 countries or regions. The results of a WHO study suggest that a serious threat to global tuberculosis control efforts now exists.

Many of the outbreaks have occurred in hospitals, correctional facilities and other congregant-living facilities. Transmission has occurred among residents and staff. The Increasing Incidence of TB in developed countries where rates of incidence and transmission have been low since the 1950s, should alert all dental care providers to the continuing need for vigilant adherence to infection control.

More than 425 new or reactivated cases of tuberculosis were reported in NSW in 2001. It is not known how many of these cases are presenting as drug-resistant tuberculosis.

Currently the NSW experience is that these cases occur outside of clinical settings, and most cases occur in persons born overseas. However, those facts should not detract from the need for continued vigilance, especially given the overseas experience and the WHO warnings.

Multiple-Antibiotic-Resistant Pathogens

The spread of multidrug-resistant TB highlights the spread of drug-resistant disease generally. Antibiotic-resistance is widespread.¹⁴ The 1990s have brought a worldwide resurgence of bacterial and viral diseases. An important factor in this phenomenon is the acquisition of antibiotic-resistant genes by virtually all major bacterial pathogens.

The causes of this have been variously identified as disturbances of ecosystems, the tremendous increase in the populations at risk because of immunocompromise, the increased frequency of invasive medical interventions, the prolonged survival of many patients with chronic debilitating disease, and the tremendously increased mobility of human populations.

The current antibiotic-resistance crisis differs from those previously identified because several different organisms are involved and because there are no immediate solutions on the horizon.

Infections with organisms that are resistant to antibiotics lead to-

- longer hospitalisation periods,
- higher treatment costs, and
- increased costs and expenses to the community generally, for example, productivity days lost due in illness.

The higher treatment costs involved may be considerable, for example valve replacement for patients with antibiotic resistant enterococcal endocarditis and lung resection in those with pulmonary tuberculosis. If an even more virulent organism such

¹³ NEJM. 4/6/98. 338:23; The Global threat of Drug Resistant Tuberculosis. Editorial. Pablos -Mendez et al.

World Health Organisation-International Union against Tuberculosis and Lung Diseases Working Group on anti-Tuberculosis Drug Resistance Surveillance.

¹⁴ NEJM 1994;33O:12~.7-1 251, Special Report. Multiple-Antibiotic-Resistant Pathogenic Bacteria — A Report on the Rockefeller University Workshop.

as methicillin-resistant Staphylococcus aureus acquires resistance to vancomycin, the consequences would be devastating because alternative drug treatments are few, or non-existent.

Recent reports of increases in multiresistant Acinetobacter baumannii (MRAB) colonisation in intensive care unit (ICU) and burns unit patients and the first reported case of Vancomycin resistant Staphylococcus Aureus (VRSA) in NSW have demonstrated the need for a coordinated statewide approach to address MROs. The NSW Department of Health has identified monitoring, prevention and management of MROs as a priority area for the state infection control program.

Many studies show that enforcement of basic infection control measures such as those required under the Regulation, particularly in hospitals, often in combination with reductions in antibiotic use, can decrease the rates of drug-resistance.

The widespread prevalence of resistant bacteria is more often due to the dissemination of a single clone or strain with a new resistant trait. It is easier for an already resistant strain to spread than, for resistance to emerge again in different strains. This is a factor that infection control measures can influence.

Antibiotic resistance in the community is a growing threat, particularly in developing countries and in high risk settings in the developed world, such as hospitals and day-care centres.

As in many other areas of community life, the most effective preventative measures are the most simple and cost effective. Infection control measures, such as handwashing and the careful use of antibiotics, are the cornerstones of the preventative strategies.

Infection control measures may from time to time appear time-consuming and expensive but even more so is the spread of progressively more resistant bacteria.

Reprocessing Infection Control Critical Incidents

Ensuring that procedures for the cleaning, disinfection and sterilization of instruments and equipment are incorporated in the Dental Practice Regulations provide practical measures to reduce the opportunity for transmission of healthcare associated infections related to failures of sterilization and disinfection.

Severe Acute Respiratory Syndrome (SARS)

Severe Acute Respiratory Syndrome (SARS) is an illness characterised by atypical pneumonia caused by a novel coronavirus. The World Health Organisation issued a global alert about SARS on 12 March 2003. The outbreak was originally detected in Guangdong province in Southern China, and has since spread to over 25 countries around the world. Early detection of cases and containment of infection by isolation and infection control has been the most effective method of SARS control when SARS is introduced into a country. In the process of detection of and management of cases, vigilant infection control measures are required to prevent any transmission of SARS.

The information provided by the World Health Organisation to date is that;

- In the incubation period SARS is not transmitted from person to person;
- In the prodromal period of fever and non specific symptoms infectivity starts;

- When respiratory symptoms develop there is a higher level of infectivity;
- High levels of transmission come from very severe cases, "super spreaders" who are extremely unwell;
- Droplet and direct contact appear to be the predominant mode of transmission, although airborne, indirect contact through fomites and oral faecal transmission remain a possibility;
- Introduction of infection control measures to prevent airborne, droplet and contact transmission has reduced transmission rates; and
- Health care workers and close contacts of cases are at greatest risk.

Evidence to date indicates that employing transmission based precautions for microorganisms transmitted by the airborne, droplet and contact routes is crucial to the prevention of spread of the SARS virus.

7.7 Conclusions

Infection control is concerned with the prevention of the spread of diseases in the community, not merely with the treatment of individual patients. Infection control objectives should be an integral part of all public and private health care services.

These objectives should include:

- Educating personnel about the principles of infection control and stressing individual responsibility for infection control:
- Identifying work-related infection risks and instituting appropriate preventative measures; and
- Containing costs by preventing the transmission of infectious diseases that result in absenteeism, illness and disability.

Almost any transmissible infection may occur in the community at large, or within discrete health care settings, and can affect dental service providers, other health care workers and patients alike.

The use of standard precautions, including appropriate hand washing and barrier precautions to prevent contact with blood and other body fluids and using techniques and devices that reduce percutaneous injury will reduce the risk of transmission of blood borne pathogens.

Standard precautions constitute minimum requirements and incorporate basic precautions such as:

- Requirements for hand washing and the wearing of gloves when handling blood or body substances. Impermeable gowns or aprons must he worn for certain types of procedures.
- Safe working practices for the handling and disposal of sharp instruments such as needles.
- Conditions for the management of contaminated waste, which must be segregated and contained at the source of generation.
- Conditions for the use of multi-dose vials or ampoules, and specific practices to be adopted for anaesthetic procedures and invasive procedures.
- Requirements for cleaning, disinfecting and sterilising instruments and equipment according to whether they come into contact with intact skin, normally

non-sterile tissue or normally sterile tissue.

These standard precautions are best utilised as part of a comprehensive infection control designed to prevent the transmission of all infectious diseases in the health care environment.

The Guidelines contained in Schedule 2 of the proposed Regulation provide minimum, safe and cost-effective, infection control standards. Because the Guidelines have been in place for many years (in the Dentists (General) Regulation 1996) the initial establishment costs of disseminating the Guidelines, and educating dental care providers as to their content, has been expended. It should not be necessary to re-incur these costs, beyond maintaining the educative processes.

Any costs incurred monitoring and enforcing compliance of the Preferred Option are significantly outweighed by the benefits to community in maintaining appropriate preventative public health strategies, resulting in significant net gains in terms of health outcomes, and public health generally.

8. Dental Records

As provided for in Section 158(q) of the Dental Practice Act, the making and keeping of records may be the subject of regulation. Any contravention of a regulation so made could constitute unsatisfactory professional conduct as defined in the Act.

As drafted, clause 30 of the proposed regulation contains explicit requirements as to the form and content of dental records and the length of time that records must be retained.

The primary reasons for regulating for the minimum content and retention of records are:

- Poor record keeping is frequently a factor in serious adverse events.
- Poor records feature in professional disciplinary hearings, and compromise the defence of professional malpractice claims.
- Changes in dental care delivery caused by technological advances, changes in dental practice, group practices, and increasing awareness and expectations on the part of consumers.

It is therefore essential that any attempt to regulate dental record keeping appropriately address all of these factors, without compromising, or at least unduly impinging upon, individual practitioner/patient relationships and clinical encounters, the proper exercise of professional discretion, and clinical decision-making.

8.1 What constitutes the dental record

The patient record should fully document the patient's course of care and provide all relevant information necessary to ensure the safe and effective delivery of health care, it should include:

- The identity of the practitioner who made the record, and the patient it relates to.
- Complete, legible notes of treatment and care given.
- Accurate statements of fact, or statements of clinical judgement or inquiry, made contemporaneously with the patient consultation.
- Relevant dates, and the content of consultations, discussions, and advice or information given to the patient.
- No material rendered unreadable, or erasures.
- Diagnoses, details of any treatment plan or ongoing course of care.
- Details of any allergies, adverse events, and relevant patient history of any of these.
- Copies or other record of consents to treatment given by the patient.

The amount of detail contained in the record should be appropriate to the complexity and significance of the patient's case, and to the dental practice concerned. Obviously a record that contains abbreviations or cryptic notations that can only be subsequently deciphered by the practitioner who made them is of limited use.

All of these basic requirements are included in the Regulation.

8.2 Cost-Benefit Analysis — Dental Records

Costs of Compliance

The proposed Regulation stipulates the minimum amount of information that is reasonably expected to be recorded in properly kept and maintained records. As a result, there should be *no compliance costs* incurred by individual dental care providers *additional to* costs already incurred in terms of the time taken to record information and the resources involved in storing and protecting records.

Further, any compliance costs incurred by dental care providers are likely to be offset by the benefits, and/or potential benefits, especially in the course of any litigation, that will accrue to individual dental care providers who comply with the minimum standards contained in the Regulation.

Costs of Administering and Enforcing the Regulation

The Regulation is administered and enforced by the NSW Dental Board. Complaints about the standard of records, or evidence of poorly kept records, inevitably arise in the context of a wider complaint or claim. As a result, the costs of administering, monitoring and enforcing those parts of the proposed Regulation that deal with records can reasonably be estimated to be minimal.

Benefits

There are potentially significant benefits for health care consumers, dental care providers and the wider community.

Properly maintained records provide valuable background information to assist dental care providers in providing continuous dental care over lengthy periods of time. This is clearly of benefit both to consumers who can be confident that their dental practitioner is informed as to previous treatment they have received as the basis for continuous dental care, and to dental care providers who have ready access to information on previous treatments and examinations that have been provided to the patient.

Properly maintained records are also of significant benefit to patients in having available a record of the dental treatment they have received in instances involving adverse events. It is clearly also in the practitioner's interests that properly maintained records are available in case of a complaint or litigation. Poor communication and a poor standard of record keeping often arise in health care complaints and litigation. Malpractice cases are built around the record, which provides *the only objective documentary record* of the patient's care. Good records are crucial to a practitioner's defence of a complaint made against him or her.

Several cases, generally involving medical practitioners, dealt with by the courts highlight the significance of properly made records. In all of these claims the practitioner was exposed to claims for substantial damages. One relevant case involving a dentist is *Hribar v Wells*, (Aust Torts Reports 81-345 (1995), 64 SASR 129):

• An allegation that a dentist failed to warn of potentially untoward consequences of a maxillo-facial operation was unsuccessfully defended by the dentist who had few notes and relied upon "invariable practice" in relation to the information he provided patients prior to such operations. Plaintiff awarded \$61,489.50.

Although the direct costs of litigation are largely borne by the practitioner's insurers practitioners who become involved in litigation incur substantial indirect costs in terms of lost practice time, and the potentially long term loss of reputation and referrals. The personal costs in terms of stress and depression, and worry caused to the practitioner and his or her family may also be considerable. Ultimately the cost of claims to practitioners is reflected in insurance premiums, which are generally passed on to consumers.

Good record keeping practices within a profession may have potentially significant benefits for practitioners by way of:

- allowing practitioners to quickly and appropriately respond to complaints;
- prevented litigation and associated costs if a plaintiff is dissuaded from suing; and
- lower insurance premiums for practitioners and institutions.

The Wider Community

Improving the flow of information within the health system was a major theme of the Australian Health Care Study. The Taskforce was of the view that "intelligent use of information drives quality improvement." The Taskforce advocated the development and use of a patient-centred computerised clinical information system to link all health care providers as "the only practical way to ensure all relevant information is always available.

Communication failure was the area of most concern to consumers in Taskforce submissions and consultations.

There are two main categories of communication failure —

- 1) Between health practitioners and consumers: and
- 2) Among different health practitioners or organisations where a breakdown of

communication compromises safety and continuity of care.

Poor transfer of information within and between places where health care is provided is an important contributor to adverse events. For older consumers some of whom have multiple health problems and some of whom are frail' communication between health professionals within hospitals and across different health settings is of particular importance to safety and quality of care.

The Taskforce concluded that improving health professionals' communication skills should be a priority and that the government should provide clear incentives to ensure educators rate students' communication skills as highly as they rate their clinical knowledge. "Incentives to ensure that the health system encourages rather than impedes, information flows should be built into the system."

The proposed Regulation is consistent with those objectives.

Furthermore accurate dental records often provide a valuable resource for police and forensic authorities to assist in the proper identification of otherwise unidentifiable human remains.

8.3 Australian Studies of Record Keeping Standards

In two Australian studies of medical record keeping, basic patient information was omitted from the record on many occasions:

- Age was missing/illegible in 6.9% of encounters;
- Gender was missing in 57.9%;
- Presenting symptoms were missing at a rate of 18.9 per 100 encounters; and
- A diagnosis was missing at a rate of 8.6 per 100 encounters.¹⁵

In the Royal Australian College of General Practitioners field testing of Entry Standards to General Practice Accreditation, only 28% of practices had a current health summary in the records of long term patients, even though 93% felt that it was a criterion which would comply with good practice.

The reviewers in this study found that only 63% of practices substantially complied (and 31 % partially complied) with a standard that required the record to contain sufficient information to carry on the management of the practice's patients.¹⁶

There is no reason to believe that in the absence of regulatory controls the record keeping practices of dental care providers would be significantly different to those of medical practitioners.

8.4 Retention of Dental Records

Clause 30(3) of the proposed Regulation requires that records are to be kept for seven years, unless the patient is aged less than 18 years at the date of the last entry in the

¹⁵ Moza RA. Britt H, et al, Morbidity and treatment data collection direct from general practice medical records. A report to the Evaluation Steering Group. Department of Human Services and Health. Sept 1994, reported in the Final Report and Recommendations, Medical Records Project on Behalf of the NSW Medical Board. Medical Records Consortium University of NSW, November 1995. 16 Reported in the Medical Records Project's Final Report, see Footnotes 15 & 23.

record. If the patient is aged less than 18, the record is to be retained until the patient reaches 25 years.

The Regulation is in line with the 1996 Regulation made under the Dentists Act 1989 and with section 25 of the Health Records and Information Privacy Act 2002 (uncommenced). Clause 30(4) of the Regulation provides for the safekeeping of records on the disposal of a dental practice but is silent on what is to happen to records on the death of a practitioner, or the abandonment of a practice. However, in the absence of any difficulties arising in NSW in relation to records that are abandoned, or belonging to a deceased practitioner, it seems unnecessary to legislate for such eventualities.

Another practical consideration is the acknowledgement that almost invariably on the death of a practitioner, or the abandonment of a practice, records fall into the possession of persons who are not dentists, and the regulation cannot control the conduct of persons who are not subject to the principal Act.

8.5 Conclusion — Dental Records Options

On the basis of all of the data currently available, the net present value for patients, dental care providers and the wider community if the proposed Regulation with respect to dental records is likely to be a large positive.

9. Cost-Benefit Analysis of Alternate Regulatory Options

Taking into account the information presented above the net present value of the Do Nothing Option is likely to be a large negative.

The requirements set out in clause 33 of the proposed Regulation set out minimum requirements necessary to ensure the achievement of the objectives of the Regulation, and the principal legislation.

As stated above, the costs of administering the Dental Practice Act and other statutory obligations, including the proposed Regulation are borne by the NSW Dental Board. In its 2001/2002 Annual Report, the Board's expenditure totalled \$606,193. A proportion of this expenditure will be attributable to administration of the Regulation.

COSTS	BENEFITS			
A pro rata share of the total annual costs incurred by the NSW Dental Board in administering Dental Practice Act and other statutory obligations including the Regulation. The total expenditure of the Board in 2001/2 was approximately \$600,000, however it is not possible to accurately quantify how much of the Board's expenditure relates to the regulation.	Infection control standards — Saved treatment costs: Current lifetime cost 1x HIV infection >\$140,000 (eat. \$I5k p.a. per individual) Current. Per annum cost 1x AIDS infection >\$32,000 HBV lifetime costs: >\$27.707* HCV> \$48,726 - \$62,599*			

Table 4 — Summary of Costs and Benefits of the Proposed Regulation

Cost of compliance. Infection control - Low to minimal as existing standards have been in place for a long time Record-keeping/retention of records - Minimal to nil over existing costs. Dental advertising – Nil	Higher productivity through prevented illness and premature death - Not quantifiable Reduced pain and suffering and quality of life benefits - Intangible, large positive
Resource allocation costs - Nil over and above those required for maintenance of proper professional and/or infection control standards	Infection control standards: Reduced potential for legal action as a result of clinically acquired infection -Not quantifiable Cost of adverse events: Australian Hospital Care Study: 9.5% of all adverse events are caused by infection -Estimated present net value> \$82.3 million p.a.
	Record keeping — Reduction in adverse events caused by poor communication - Not quantifiable - poor communications or systemic communication failures rated as a "contributing factor" in adverse events, rather than a discrete cause. Large positive
	Reduced potential for malpractice civil claims for damages, and complaints generally. Intangible, large positive.
	Reduction in lost practise days and personal costs associated with litigation. Intangible, large positive.
	Advertising - Consumer protection and consumer confidence - consumers able to make Informed choice regarding dental services and treatment. Intangible, large positive.
NET PRESENT VALUE	LARGE POSITIVE.

*Source: NSW Health Department, Schedule 1 Assessment under the Subordinate Legislation Act 1989 (1996). Reference, Bloom et al, A Reappraisal of Hepatitis B Virus Vaccination Strategies Using Cost Effectiveness Analysis", Annals of Internal Medicine, 15/2/93. Vol 118:4, American College of Physicians.

10. Conclusion

The analysis contained in this Regulatory Impact Statement in relation to the proposed Dental Practice Regulation 2003 demonstrates that the proposed regulatory provisions will best achieve the objective of providing for minimum standards to improve and enhance the delivery of quality dental care in NSW.

Clearly the proposed Regulation provides the best opportunity to achieve the purpose and objectives of the Regulation and its principal Act. It is also the most cost-effective, the benefits of regulating for minimum standards far outweighing the costs, if any, of the regulation.

11. Public Consultation

Prior to preparing the proposed Regulation the department wrote to the following key stakeholders seeking their views on matters that should be included in the Regulation.

- Dental Board of NSW
- Australian Dental Association (NSW)
- Dental Hygienists Association (NSW Branch)
- NSW Dental Therapists Association
- NSW Department of Health Aboriginal Health Branch
- NSW Department of Health Oral Health Branch
- Health Care Complaints Commission

Pursuant to Section 5 of the Subordinate Legislation Act 1989 the Department is required to publish a Notice in the Gazette and in a daily newspaper circulating throughout NSW, and in any relevant trade or professional publication, if that is appropriate.

The Notice is to advise the public of the objectives of the Regulation, and to provide a copy of the Regulatory Impact Statement for inspection. The public is to be given not less than 21 days to make comments or submissions on the proposed Regulation.

Thereafter, in the event that the Regulation is made. a copy of the Impact Statement and all comments and submissions received are to be forwarded the Legislation Review Committee within 14 days of the Regulation being published in the Gazette.