Dentist, Dr B

A Report by the

Health and Disability Commissioner

(Case 03HDC11122)

Health and Disability Commissioner
Te Toihau Hauora, Hauātanga

Parties involved

Mr A	Consumer
Dr B	Provider / Dentist
Dr C	Dentist

Complaint

On 12 May 2003 the Dental Council of New Zealand received a complaint from Mr A about the services provided to him by Dr B. The complaint was forwarded to the Health and Disability Commissioner on 24 July 2003. The issues the Commissioner investigated are summarised as follows:

- *the adequacy of the colour and placement of a permanent crown on tooth 21 in October 2001*
- *the circumstances surrounding the crown coming loose between 19 October and December 2001*
- *the adequacy of the composite post and the crown becoming loose in March 2003.*

An investigation was commenced on 7 October 2003.

Information reviewed

- Information from:
  - Mr A
  - dentist Dr C
- Mr A's dental records, X-rays and photographs from Dr C
- Independent report from dentist Dr David Purton

Dr B did not provide any information directly in response to the Commissioner's notification during the investigation. However, Dr B's dental records and radiographs for Mr A were obtained from Dr C and, with the evidence given by Dr C and my independent dental advisor, provided sufficient information to support my conclusions.

Names have been removed to protect privacy. Identifying letters are assigned in alphabetical order and bear no relationship to the person's actual name.

Information gathered during investigation

On 25 September 2001 Mr A consulted Dr B to have a crown replaced on tooth 21. The previous crown had lasted over 10 years. Mr A advised me that Dr B told him the remainder of the tooth under the crown had broken and he would need a post and new crown.

Dr B recorded the following three consultations in Mr A's notes:

> "25.9.01
> 21 [fractured] crown with tooth inside
> X-ray root OK so I will go with Post of core composite
> Then PFM [porcelain fused to metal] crown
> Temp crown on Post of core composite
> 21 PFM 1hrs $1000.
>
> 1.10.01
> C [crown] Prep & impression.
>
> 10.10.01
> Crown fit inst given to pt."

Mr A's complaint is that the new permanent crown fitted by Dr B on 10 October was a poor colour and was not fitted correctly. Mr A reported a "gap" right around the edge where the crown did not quite meet the tooth and gum properly, and he considered it a "poor" crown compared with the previous one. Ten days after Dr B fitted the crown it came off. Mr A went back to Dr B who re-cemented it into place. However, it came loose again within a matter of days.

Mr A recalls that, over the following 12 months or so, the crown came off and Dr B re-cemented it on four occasions. Dr B's notes record the following and include three references to re-cementing Mr A's crown:

> "…
> 19.10.01
> C loose need to recement on Wed.
>
> 24.10.01
> C almost at the same strength which I thought I should leave it for awhile before recement again.
>
> 2.11.01
> Recement crown to 21. instru given, see him Monday for a check.
>
> 5.11.01
> Crown checked. Need to contact the lab for weight of the crown and recement again.

19.11.01
Received check from ACC … [ACC paid for part of [Mr A's] dental treatment because originally the tooth had been broken in an accident. [Dr B] claimed the costs for replacing the crown from ACC as part payment and [Mr A] paid the balance.]

…

4.12.01 …
Recement crown. Pt happy :N/C
OK as he wished ….

20.3.03
PT came with loose crown. Pt fractured the Post & Crown attached to the glove. Remove the Crown & Post. New Post & Core done. Crown cemented with temp cement. Inst given and Pt inf about situation. See him Monday.

24.3.03
The post OK but crown fell down (temp cement). See him Thurs for metal post and do the crown again."

Mr A said that before he left the surgery the crown became loose. He was so "fed up" he sought a second opinion from another dentist, Dr C, that same day. The crown on tooth 21 was temporary. Dr C replaced that crown with another temporary crown which, in Mr A's view, was more successful.

As well as the dental records above, six of Mr A's radiographs were obtained: two dated 7 October 1999, one 29 September 2001 and one 19 October 2001, one 20 March and one 24 March 2003.

Dr C's report
Dr C saw Mr A for the first time on 24 March 2003. Dr C advised me of his findings at the first consultation. He said that generally Mr A's teeth had been well maintained with regular dental care and good home care. Dr C's report stated:

"1. … The crown on tooth 21 is a post core type which is used for a tooth where the nerve has been previously removed and much of the natural crown lost. In this case we provide a post which is placed up into the canal and provides a secure foundation at the top (biting end) of the tooth for placing the crown. The crown on tooth 21 which I saw at the first examination was quite inadequate, being poorly made, a poor fit and provided an inferior post system to support it. The colour match was also poor.

2. The damage caused by the previous dentist [Dr B] was a consequence of trying to use an inadequate post/core which was made of fibre reinforced composite, a type of dental plastic. This is not an approved dental material for this purpose. To fit such a post, a disproportionate amount of the cross sectional area of the tooth had been

removed leaving the remaining surrounding tooth structure very thin and weak and liable to vertical fracture and consequent loss of the tooth at some future time. Such mutilation of the tooth could have been avoided by using a tailor made cast metal post which is a recognised technique that is universally accepted by the dental profession.

3. The crown had become loose because the supporting plastic core as mentioned above was weak and under the pressure soon fractured.

4. The material used to secure the crown appeared to be Kalzinol which is a temporary filling material rather than a cement.

5. The material is not appropriate as it is not a cement. Also no other material should have been used in its place without first preparing the tooth in some way to provide a larger surface on which to place the crown. The problem now was an inadequately small stump of plastic post remaining following the fracture. No cement could be expected to overcome the problem of trying to fix a comparatively bulky crown onto such a small flimsy foundation.

6. Whilst it is not impossible that the new crown that I have provided could last indefinitely, I would say that based on my previous observations and experience that three to five years is a more likely period before fracture of the weakened root occurs.

As you have requested I also enclose the relevant X-ray films, one showing the crown before the fracture and the other showing the plastic post with the crown rather insecurely stuck on top. I also include photographs showing the remains of the plastic post before I modified the tooth to place the crown that [Mr A] has now.

I am also enclosing too, copies of the written clinical records from the time that this treatment was started. Having checked through these notes and X-ray films again I now find some inconsistencies that seem hard to explain.

The treatment note for 25.9.01 suggests that a post and core were done at this appointment and this was subsequently claimed on ACC. The balance over and above this of $500 was charged to [Mr A] and paid by visa the same day before the crown was even complete.

Looking at the film taken on this date and also at the next film taken on 19.10.01 after the crown was fitted I can see no evidence that a post and core was fitted at all!

The next film taken on 20.03.03 was taken on the same day and just prior to the placing of the substandard plastic post which fractured four days later and prompted [Mr A] to arrive at my surgery for a second opinion. My film taken at this time on 24.3.03 shows the remains of the now fractured plastic post in the tooth."

Subsequent events
On 22 April 2004 Dr C advised me that his estimate of the repair he made to Mr A's tooth lasting for possibly three to five years was unfortunately overly optimistic as the tooth is starting to split. Mr A is facing the complete loss of tooth 21.

Costs
Mr A advised me that the costs he incurred in having a satisfactory crown placed on tooth 21, as at 10 July 2003, were $1355.00 (not including loss of work time). Dr C advised me that he will have to extract tooth 21, incurring additional expenses for Mr A.

Mr A had fractured his tooth 18 years ago in an accident. The last crown had been in place for 10 years, and been satisfactory, until it came off prompting his consultation with Dr B. Dr B made a claim on his behalf to ACC for the costs of replacing the crown. As the accident had occurred so long ago ACC paid for only half the dental repairs. Dr B charged Mr A the full cost and refunded the amount he received from ACC.

Independent advice to Commissioner

The following independent expert advice was obtained from Dr David Purton, a restorative dentist:

"**Re – PROFESSIONAL EXPERT ADVICE – 03/11122**

I have been asked to provide an opinion to the Commissioner on case number 03/11122. I have read and agree to follow the Commissioner's Guidelines for Independent Advisors.

…

The purpose of this report is to advise the Commissioner on whether [Mr A] received an appropriate standard of dental care from [Dr B].

I have reviewed the following supporting information:

- [Mr A's] complaint to the Dental Council of New Zealand dated Thursday 10 July 2003 (pages 1) marked 'A'.
- The Commissioner's notification to [Dr B] dated 7 October 2003 (pages 2-4) marked 'B'. [Dr B] has not responded to any of the Commissioner's requests for information.
- [Dr C's] report to the Commissioner dated 28 October 2003, including [Mr A's] dental records (from [Dr B]), radiographs and photographs (page 11) taken by [Dr C] (pages 5-11) marked 'C'.

Summary of events [as provided to Dr Purton by the Commissioner]

[Mr A] first consulted [Dr B] for dental treatment on 25 September 2001 for the purpose of having a crown replaced on tooth 21. He had had a crown fitted over 10 years previously.

[Mr A] said that [Dr B] told him the tooth underneath the crown had broken and he would need a post and new crown. [Dr B's] records indicate that he prepared the tooth on 1 October 2001 and fitted the crown on 10 October 2001. The crown later became loose and [Dr B] re-cemented it on 19 October, 24 October, 2 November, 5 November and 4 December of 2001. [Mr A] said that the crown required re-cementing four or five times over the following 12 months but there is no record of this in his dental records.

On 20 March 2003 [Mr A's] crown became loose again. [Dr B] informed him that the post had fractured and the crown would need to be removed and a new post and core completed. He re-cemented the crown with temporary cement. Four days later the crown came off and, although [Dr B] made an appointment for him, [Mr A] did not return for the appointment. [Mr A] consulted another dentist, [Dr C].

[Dr C's] report

[Dr C] was asked to comment on his finding when he examined [Mr A] for the first time, before he performed any dental treatment.

[Dr C] saw [Mr A] for the first time on 24 March 2003. In his opinion the crown to tooth 21 was inadequate; the colour match was poor, the crown was poorly made, poorly fitted, and had an inferior post system to support it.

[Dr C] explained that [Dr B] had used an inadequate post core made of fibre-reinforced composite, a type of dental plastic which was not an approved dental treatment for this purpose. In preparing the tooth a disproportionate amount of cross-sectional area of the tooth had been removed, leaving the remaining surrounding tooth structure very thin, weak and liable to vertical fracture with subsequent loss of the tooth.

[Dr C] explained that the reason the crown became loose was because the supporting plastic core was weak and, under the pressure of biting, fractured. It appeared that [Dr B] had used 'Kalzinol' which [Dr C] described as a temporary filling material rather than cement. [Dr C] indicated that the material is inappropriate to use as cement. Furthermore, the post system was inadequate because the stump of plastic post remaining following the fracture was too small. No amount of cement would be able to fix a comparatively bulky crown to such a small, flimsy foundation.

Inconsistencies
[Dr C] also reported that on checking [Dr B's] notes and radiographs he noted inconsistencies. [Dr B's] notes suggest that the post and core was done on 25 September 2001 at that appointment because a claim was submitted to ACC. Comparing

radiographs taken on 25 September 2001 with radiographs taken on 19 October 2001, after the crown was fitted, there was no evidence a post and core had been fitted on 25 September. When comparing the radiographs taken by [Dr B] on 20 March 2003, just prior to placing the substandard plastic post which fractured 4 days later, with [Dr C's] radiograph taken on 24 March 2003 which shows the remains of the fractured plastic post in the tooth, [Dr C] is uncertain when [Dr B] fitted the plastic post.

Expert Advice

To advise the Commissioner whether [Mr A] received an appropriate standard of dental care from [Dr B] and, in addition, to answer the following questions:

I believe that [Mr A] did not receive an appropriate standard of dental care from [Dr B], in respect of the treatment to tooth 21.

- *Whether the post system provided by [Dr B] was adequate and, if not, how (from the available information) was the post system inappropriate?*

The post system is inadequate. Referring to the post and core shown in the radiograph dated 24/3/03 and shown partly in the photographs, the post is too short; it is overly large in diameter; it is off centre in the root canal; it unnecessarily weakens the root predisposing the root to fracture. The core is too short for effective retention of the crown.

My source for accepted standards for root canal posts and cores is the current textbook used in teaching fixed prosthodontics to undergraduates at the University of Otago School of Dentistry:

Rosenstiel SF, Land MF, Fujimoto J *Contemporary Fixed Prosthodontics* 3rd edition, St Louis: Mosby, 2001.

- *Is fibre-reinforced composite an appropriate material to use for a post core system? Please explain.*

Fibre reinforced posts have gained acceptance by the dental profession in recent years. If used appropriately they have adequate properties for the type of clinical application under review here. In [Mr A's] case the system was used inappropriately as described in these notes.

- *What is the material Kalzinol usually used for, and would it be used to permanently secure a crown?*

Kalzinol is the trade name for a zinc oxide and eugenol cement. Cements of this type are routinely used as linings, temporary fillings and as temporary cements in crown work. They are not suitable as permanent cements. There are many zinc oxide and eugenol cements on the market and I don't believe it is possible to identify an individual brand with any certainty by clinical examination.

- *Was the use of Kalzinol appropriate in the circumstances?*

I believe it was appropriate to use zinc oxide and eugenol cement, as this was intended to be a temporary application. [Dr B's] notes of 20/3/03 state that he used 'Temp Cement'.

The crown in place in the radiograph dated 24/3/03 is not the metal ceramic crown that had been previously recemented so many times. It appears to be a poorly fitting plastic temporary crown. [Dr C] confirms it was a poor fit and a poor colour match. Unless there is some important piece of information missing from the record given to me it seems to me that [Dr C's] comments about the crown and the cement must be viewed in the light of the fact that he was looking at a temporary crown, cemented with temporary cement. The comment in the *Summary of events* above, namely 'He re-cemented the crown with temporary cement', I believe to be misleading. It should read 'He cemented a temporary crown with temporary cement'. [Dr C's] comments about the post and core are more germane to this complaint as the post and core were clearly intended by [Dr B] to be permanent components of the restoration.

- *Addressing [Dr C's] concerns about inconsistencies in treatment recorded. Comparing [Dr B's] documentation and radiographs of 25 September 2001, and the radiographs taken on 19 October 2001 after the crown was fitted, is there any evidence of a post and core fitted on either of those dates?*

There is no evidence of a post and core being fitted on 25/9/01 or 19/10/01. The radiographs show that some of the root filling material has been removed and it may have been replaced with a composite filling material but this does not constitute a post.

- *Please review [Dr B's] notes and radiographs and advise when, in your opinion, the post was fitted.*

The post was fitted on 20/3/03. [Dr B's] notes record this and the radiograph confirms that it is in place by 24/3/03. His notes record 'remove the crown & the post' and 'new post and core done'. However as stated in response to the question immediately above, there was no post visible in any radiograph prior to this date.

- *Any other matter which in your opinion should be brought to the Commissioner's attention.*

Nil."

Code of Health and Disability Services Consumers' Rights

The following Rights in the Code of Health and Disability Services Consumers' Rights are applicable to this complaint:

RIGHT 4
Right to Services of an Appropriate Standard

1) *Every consumer has the right to have services provided with reasonable care and skill.*

2) *Every consumer has the right to have services provided that comply with legal, professional, ethical, and other relevant standards.*

Other standards

The New Zealand Dental Association Inc *Code of Ethics* (1991) states:

"**INTRODUCTION**

The Code of Ethics is essentially a standard of conduct for personal and professional behaviour and is binding on members of the New Zealand Dental Association.

…

Principles of Ethical Behaviour

1. Strive to improve knowledge and skill so that the best possible advice and treatment can be provided for the patient.

2. While oral health is the responsibility of the patient, they may expect to receive the best available professional advice in making health care decisions.

…

CHARACTERISTICS OF A PROFESSION

The practice of dentistry achieved the status of a profession when, through the efforts of many generations of dentists, it achieved the three unfailing characteristics of a profession.

The primary duty of Service to the public;
Education beyond the usual level;
The Responsibility for self-regulation – Discipline

Service to the public

The dentist's primary obligation of service to the public shall include the delivery of quality care, competently and timely, within the bounds of the clinical circumstances presented by the patient.

…

THE CODE

…

Patient Records

Dentists are obliged to safeguard the confidentiality of patient records. Dentists shall maintain full, accurate and legible patient records in a manner consistent with the protection of the welfare of the patient. … "

Opinion: Breach – Dr B

Under Right 4(1) of the Code of Health and Disability Services Consumers' Rights (the Code), Mr A had the right to have dental services provided with reasonable care and skill. Under Right 4(2), he also had the right to have services provided that complied with professional and ethical standards.

My advisor commented that Dr B's treatment of Mr A's tooth 21 did not comply with appropriate professional standards for a number of reasons. Under the New Zealand Dental Association's *Code of Ethics* (the Dental Code), a dentist's primary obligation of service to the public is to deliver quality care competently and in a timely fashion within the clinical circumstances presented by the patient. In my view, Dr B failed to discharge this obligation in relation to Mr A. In reaching this conclusion I am mindful of the fact that Dr B has chosen not to respond directly to my notice of investigation of Mr A's complaint and has therefore not explained his actions. However, I am satisfied that there is sufficient evidence from Dr B's records and radiographs (obtained from Dr C), Dr C's contemporaneous observations of the state of Mr A's tooth 21 in March 2003, and the conclusions of Dr Purton, to support the following conclusions.

September 2001 treatment
Dr B did not fit a composite post when he carried out Mr A's root canal treatment on 25 September 2001, even though he charged Mr A for this procedure and claimed it from ACC. After examining the radiographs taken by Dr B on 25 September and 19 October 2001, my advisor reported that he could find no evidence that Dr B fitted a composite post and core. Dr Purton concluded:

> "The radiographs show that some of the root filling has been removed and it may have been replaced with a composite filling material but that does not constitute a post."

It appears that Dr B may have charged his client for treatment he did not in fact provide. In these circumstances, Dr B breached Right 4(2) of the Code.

October – December 2001 treatment
Dr B completed a root canal filling on 25 September and fitted the crown on 10 October 2001. Within nine days the crown became loose but Dr B did not re-cement it until 2 November. The crown became loose again and needed re-cementing on 5 November and 4 December 2001. Dr B's records show that he suspected that the crown was too heavy and intended to contact the laboratory about this on 5 November but there is no documentation of the outcome, if any, of such discussion.

My advisor reported that the reason the crown continued to dislodge was because the post system Dr B fitted was too short. Dr C also described efforts to fix a "comparatively bulky crown onto such a flimsy foundation", and criticised the filling Dr B used as a type of dental plastic not approved for this use. Dr Purton commented that "fibre reinforced posts have the properties for this clinical application but Dr B did not use the system appropriately".

In my opinion Dr B did not perform Mr A's root canal filling with reasonable care and skill and was negligent in using a dental material that was weak and incapable of supporting a larger crown. I am concerned that Dr B continued to treat Mr A for a considerable period of time without finding the cause of the problem or referring him for specialist care. It is clear that Mr A wanted the crown, which had been in place for over 10 years, replaced and was frustrated by the number of times he had to return to Dr B to secure it each time it loosened. Mr A incurred significant costs and loss of work time. In these circumstances Dr B failed to provide appropriate care in accordance with professional standards and breached Rights 4(1) and 4(2) of the Code.

March 2003 treatment
The post shown in the radiographs dated 24 March 2003, and partially in Dr C's photographs, was described by Dr Purton as too short, too wide in terms of diameter and off centre in the root canal. The post weakens the tooth structure and leaves it prone to fracture. Dr Purton also said, "The core is too short for effective retention of the crown." Dr C, who had the benefit of examining Mr A, also made these findings.

Dr C described Dr B's preparation of tooth 21 as inadequate because he had removed a large cross sectional area of the tooth's surface leaving the tooth structure thin and weak, liable to vertical fracture and subsequent loss of the tooth. When Mr A consulted Dr B on 20 March 2003 the post and crown had already fractured.

While the crown placed on 20 March 2003 was intended to be temporary and Dr C's criticisms of it must be seen in that light, the post and core fitted at the same consultation were intended to be permanent. It is clear from the comments of both Dr C and Dr Purton that the post and core were inadequate for that purpose.

Dr B's dental treatment in March 2003 was inappropriate for a number of reasons, not least because the methods and materials he used were inappropriate for their intended purpose. Dr B had not fitted a post in October 2001 but had used filling material that he described as a post. It was inadequate to hold a crown. At his second attempt to place a post on 20 March 2003 the filling material Dr B used was also inappropriate and it fractured four days later. According to the records, he intended to make a third attempt at fixing Mr A's problem by replacing the second post with a metal post. By this time the tooth had been so weakened that extensive work was needed to achieve the desired result. Not surprisingly Mr A was not prepared to have Dr B carry out the work.

Dr B had a professional and ethical duty to Mr A to provide dental services of an appropriate standard. In my opinion, Dr B's dental services were not provided with reasonable care and skill and did not meet professional standards. Consequently, in relation to the treatment in March 2003, Dr B breached Rights 4(1) and 4(2) of the Code.

Recommendations

I recommend that Dr B take the following actions:

- Reimburse Mr A $1355.00, being the costs incurred as a result of his poor dental treatment. Dr B is to send the cheque to my Office and I will forward it to Mr A.

Follow-up actions

- A copy of this report will be sent to the Dental Council of New Zealand with a recommendation that the Council review Dr B's competence, the New Zealand Dental Association, and the Accident Compensation Corporation, with a recommendation that Dr B's claim for the September 2001 treatment be reviewed.

- A copy of this report, with details identifying the parties removed, will be placed on the Health and Disability Commissioner website, www.hdc.org.nz, for educational purposes, upon completion of the Director of Proceedings processes.

- This matter will be referred to the Director of Proceedings under section 45 of the Health and Disability Commissioner Act 1994 for the purpose of deciding whether any proceedings should be taken.

Names have been removed to protect privacy. Identifying letters are assigned in alphabetical order and bear no relationship to the person's actual name.

Addendum

The Director of Proceedings issued proceedings before the Health Practitioners Disciplinary Tribunal. Pursuant to s 101(1)(a) of the Health Practitioners Competence Assurance Act 2003, the Tribunal found Dr B guilty of professional misconduct and ordered cancellation of his registration as a dentist, with effect from 1 September 2005. The Tribunal also ordered payment of $5,000 costs.