Dental Service

Dentist, Dr B

A Report by the

Deputy Health and Disability Commissioner

(Case 20HDC00140)

Contents

Executive summary 1
Complaint and investigation 2
Information gathered during investigation 2
Opinion: Dr B 7
Opinion: Dental service — no breach 12
Changes made since events 12
Recommendations 13
Follow-up actions 13
Appendix A: Independent clinical advice to the Commissioner 14
Appendix B: Relevant standards 24

Executive summary

1. This report highlights the importance of providing information on the risks of treatment and the available options to allow a consumer to make an informed decision about treatment. It also highlights the importance of recognising when escalation to a more senior dentist is warranted.

2. The report concerns the services provided to the woman by a dentist and a dental service in 2019.

3. The woman attended the dental service with a throbbing toothache and was seen by the dentist. It was agreed that the woman would be provided with root canal treatment, but the dentist did not explain the risks associated with the treatment.

4. The woman saw the dentist again. During the treatment, significantly more tooth was removed and a file broke in the tooth. The dentist referred the woman to a senior colleague at the Clinic.

5. The woman attended the dental service with ongoing pain. The senior colleague was unable to remove the broken file, and referred the woman to an endodontist, who completed her root canal treatment.

Findings

6. The Deputy Commissioner considered that the dentist did not advise the woman about the risks and possible consequences of root canal treatment prior to the procedure, and found that the dentist breached Right 6(1) of the Code. The Deputy Commissioner also found the dentist in breach of Right 7(1), as the woman was not in a position to make informed choices about her treatment.

7. The Deputy Commissioner was also critical that on 5 December 2019, the dentist continued to drill the affected tooth and failed to refer the woman for specialist advice. As a consequence of the dentist's treatment, the woman's tooth had a poor prognosis, and she experienced considerable pain.

8. The Deputy Commissioner considered that the dental service did not breach the Code.

Recommendations

9. In accordance with the recommendations in the provisional opinion, the dentist provided an apology and this has been forwarded to the woman. The dentist also provided evidence that he has participated in training relevant to informed consent and endodontic care, and has met the recommendations in the provisional opinion.

Names have been removed (except the expert who advised on this case) to protect privacy. Identifying letters are assigned in alphabetical order and bear no relationship to the person's actual name.

Complaint and investigation

10. The Health and Disability Commissioner (HDC) received a complaint from Mrs A about the services provided by a dental service (trading as the Clinic). The following issues were identified for investigation:

- *Whether the dental service (trading as the Clinic) provided Mrs A with an appropriate standard of care between October and December 2019 (inclusive).*
- *Whether Dr B provided Mrs A with an appropriate standard of care between October and November 2019 (inclusive).*

11. This report is the opinion of Kevin Allan, Deputy Health and Disability Commissioner, and is made in accordance with the power delegated to him by the Commissioner.

12. The parties directly involved in the investigation were:

Mrs A	Complainant
Dr B	Provider/dentist
Dental service	Provider

13. Further information was received from:

Dr C	Dentist
Dr D	Specialist endodontist
Accident Compensation Corporation	

14. Also mentioned in this report:

Ms E	Practice Manager

15. Independent expert advice was obtained from Dr Angela McKeefry, a dentist (Appendix A).

Information gathered during investigation

Initial visit 31 October 2019

16. Mrs A, aged in her thirties at the time of events, was experiencing severe throbbing toothache from the left lower molar, and attended the Clinic for emergency treatment. She was assessed by Dr B[1] and diagnosed with irreversible pulpitis[2] on tooth 36.[3]

[1] Dr B is a member of the New Zealand Society for Anaesthesia & Sedation in Dentistry. At the time of events, Dr B was a contractor for the dental service.

[2] Inflammation of the pulp (the centre part of the tooth, made up of blood vessels, connective tissue, and large nerves), from which it cannot recover. Pulpitis causes severe pain.

[3] The lower left molar.

Names have been removed (except the expert who advised on this case) to protect privacy. Identifying letters are assigned in alphabetical order and bear no relationship to the person's actual name.

Consent for treatment

17. Dr B documented in the clinical notes that the treatment options of either root canal treatment[4] or extraction, and the cost variances, were presented to Mrs A. Dr B stated that he told Mrs A that the main benefit of root canal treatment was that the tooth would be retained as opposed to an extraction. The notes state that Mrs A's preference was to proceed with root canal treatment on tooth 36, and that "[verbal consent had been given] to open and dress" the tooth. There is no documentation of any discussion with Mrs A about the risks associated with root canal treatment, and written consent for root canal treatment was not obtained.

18. Mrs A told HDC that at this appointment Dr B explained that the options for treatment were either a root canal at a cost of $1,300.00 for four appointments, or extraction of tooth 36 for $200.00. Mrs A stated that she was not told that a risk of root canal treatment is the need for a referral for specialist treatment.

19. Dr B told HDC:

> "I will freely admit the specific risks of separated root canal files or perforations were not discussed and hence why there is no documentation of this. I agree with [Mrs A's] claim that she was not informed of these specific risks prior to commencing with root canal treatment. For this I am sorry and I totally accept this error."

20. Ms E, Practice Manager, told HDC that the Clinic provides written consent forms for root canal treatment. However, in the situation of either an emergency or after-hours appointment, verbal consent is obtained.

Root canal treatment

21. Dr B proceeded with the first treatment. Mrs A was given a local anaesthetic, and Dr B opened up tooth 36 into the pulp nerve area. Four canals were found and irrigated with an antiseptic[5] and dressed with a sedative dressing[6] and a temporary filling.[7] The plan was for Mrs A to return in two weeks' time for further treatment.

Second visit — 5 December 2019

22. Mrs A saw Dr B for further root canal treatment on 5 December 2019. Dr B recorded that since the last visit, the tooth had settled at first but recently had flared up, and he obtained verbal informed consent to proceed with root canal treatment on tooth 36.

23. Dr B told HDC that his plan was to complete the cleaning and shaping of tooth 36 to allow for irrigation, complete removal of the necrotic pulpal tissue, and to place medication down the root canals to alleviate Mrs A's symptoms.

---

[4] A procedure to save a tooth by removing the contents of its root canal and filling the cavity with a protective substance.

[5] Chlorhexidine.

[6] Odontopaste — an antibiotic and steroid used for the treatment of inflammation and infection.

[7] A glass ionomer filling.

Names have been removed (except the expert who advised on this case) to protect privacy. Identifying letters are assigned in alphabetical order and bear no relationship to the person's actual name.

24. Dr B applied a local anaesthetic and opened tooth 36. He located three canals, but could not find the distolingual canal.[8] Dr B told HDC that the root canals were very difficult to find, and he struggled to locate the distolingual canal. He widened the distal canal opening to look for the fourth root canal.

25. At this treatment, copious irrigation was used,[9] and after the working lengths had been established in tooth 36, a 5mm tip of a file separated in the mesiobuccal canal[10] of tooth 36, about halfway down the root. Immediately after this occurred, an X-ray was taken.

26. Dr B documented: "[I]nformed [Mrs A] of fractured root canal file in [mesiobuccal] canal."

27. Dr B told Mrs A that he would refer her to his colleague at the Clinic, Dr C, who had more root canal experience and a microscope, and might be able to remove or attempt to bypass the broken file.

28. The tooth was dressed with a sedative dressing, cotton wool, and a temporary filling, and Mrs A was advised to call the Clinic if she developed painful symptoms. Dr B did not charge Mrs A for the treatment on this visit.

29. Dr B told HDC:

> "I regret not stopping and referring at this stage when I found the canals tight to negotiate and I agree at this point I could have stopped and referred on before more investigative drilling was carried out."

30. Dr B stated that he regrets that he did not seek advice from colleagues or make an onward referral until after the file had broken. However, he said that on 5 December 2019, there was no opportunity to use a microscope. He said that Dr C was using the microscope, and none of the other colleagues at the practice had a microscope or experience in endodontics.

31. Dr B stated that he requested 60 minutes for the appointment on 5 December 2019, but was allocated 45 minutes, and Mrs A was seven minutes late. He said that the time pressure to complete a second root canal treatment contributed to the clinical error that occurred.

32. Mrs A told HDC that the pain was "godawful", and that she took pain relief that evening and night.

Third visit — 6 December 2019

33. The following day, Mrs A called the Clinic to say that she had been experiencing a lot of pain since her appointment the previous day. Mrs A attended the Clinic and was seen by Dr B, who noted that she reported throbbing pain and had taken tramadol, ibuprofen, and voltaren for pain relief.

---

[8] One of the distal roots in a molar.

[9] A sodium hypochlorite solution and EDTA (a solution for clearing the canal wall).

[10] One of the mesial roots found in a molar.

Names have been removed (except the expert who advised on this case) to protect privacy. Identifying letters are assigned in alphabetical order and bear no relationship to the person's actual name.

34. Dr B examined the painful tooth and documented that he told Mrs A that sedative dressings take time to be effective, and that although the tooth could be re-opened and re-dressed with sedative dressing, this was unlikely to help, as the tooth had been dressed the previous day. Mrs A decided not to have the tooth re-dressed. Dr B recorded that he gave advice that it was unlikely that the pain was caused by the broken file, and it was likely that it was the pulp tissue. He prescribed antibiotics[11] and pain relief,[12] and advised Mrs A to return to the Clinic if her symptoms persisted.

35. In contrast, Mrs A told HDC:

> "[Dr B] drilled my tooth, filled it with medicine [and] gave me a script for antibiotics and painkillers, and said it should calm down, there was nothing more he could do, I left in more pain than I went in with."

Fourth visit 17 December 2019

36. On 17 December 2019, Mrs A attended her scheduled appointment with Dr C at the Clinic. It was documented that Mrs A had been in pain since her previous appointment and wanted the file removed to ease her pain.

37. Dr C told Mrs A that the separated file was not the cause of her pain, and that it could not be removed at the Clinic.

38. Dr C told HDC that Mrs A gave verbal consent for treatment to open and dress tooth 36. Dr C opened tooth 36 and noted that when he removed the temporary filling, this was sore for Mrs A. Dr C was unable to get the files to the full length of the canals, and documented that he queried whether a calcified mass[13] was in the pulp chamber. He re-dressed tooth 36 and recommended a referral to an endodontist for further treatment, and Mrs A agreed. Mrs A was not charged for this treatment.

Discovery of perforation and repair

39. On 24 December 2019, Mrs A was referred to endodontist Dr D[14] for the management of tooth 36. Dr D documented in his notes:

> "1 distal and 2 mesial canals located. PC [pulp/nerve chamber] floor perforation present, has been partially sealed with GI [glass ionomer] cement[15] by previous dentist it seems."

40. Dr D was unable to dry the perforation and dressed it with a calcium hydroxide dressing. He was able to bypass the broken file but was not able to remove it.

[11] Amoxicillin.
[12] Voltaren.
[13] Pulp stone.
[14] An endodontist.
[15] A filling made of silicate glass powder used to form a tight seal between the internal tooth and the surrounding environment.

Names have been removed (except the expert who advised on this case) to protect privacy. Identifying letters are assigned in alphabetical order and bear no relationship to the person's actual name.

41. Mrs A saw Dr D for a second visit on 20 January 2020, and he filled the root canal system around the broken file. It was recommended that the tooth be crowned when it remained free of any symptoms.

Dr B

42. HDC asked Dr B about Dr D's finding of the perforation and glass ionomer repair. Dr B acknowledged that he had been into the pulp chamber of tooth 36 on 31 October and 5 December 2019. He told HDC that on 5 December 2019, there was bleeding in the pulp chamber, but at the time he believed that the bleeding was pulpal rather than a perforation. He stated that in retrospect it is possible that this was the perforation, but at the time of its likely occurrence, he was unaware of it.

43. Regarding Dr D's finding of a glass ionomer filling placed in the perforation, Dr B stated that he has no recollection of the perforation or any repair with a glass ionomer. He submitted that had he attempted this repair, he would have documented this in the clinical notes and informed Mrs A.

44. Dr B provided HDC with a copy of the X-ray taken at 2.14pm on 5 December 2019. He stated that the X-ray shows tooth 36 before he sealed the tooth, and there is no evidence of glass ionomer cement on the pulp chamber floor where the perforation was found. Dr B commented that Mrs A left the Clinic at 2.24pm,[16] 10 minutes after the X-ray was taken, and there was insufficient time to repair a perforation, redress a tooth, discuss the separated root file, and make a referral.

Dr C

45. Dr C told HDC that when he reviewed Mrs A on 17 December 2019, he did not suspect a pulpal floor perforation. He stated that at that treatment, he documented, "pulp stone?". He told HDC: "In hindsight I realise that what I thought could be a pulp stone was probably the [glass ionomer] restoration."

The Clinic

46. Ms E told HDC that the Clinic first became aware of the pulpal floor perforation and repair in a letter from Dr D on 23 January 2020.

Subsequent events

47. In May 2020, Mrs A attended another dental clinic for the extraction of tooth 36.

48. In June 2020, at the request of Mrs A, Dr B completed ACC forms for the treatment on tooth 36 on 5 December 2019. Under the section of the ACC form "Treatment claimed to have caused the injury", Dr B documented: "[D]ifficult to locate and negotiate root canals in 36. Perforation occurred while looking for root canals and file fractured in very tight root canals." Dr B reiterated to HDC that at the time at which it was likely that the perforation occurred, he was unaware of it.

[16] According to the software used by the Clinic.

Names have been removed (except the expert who advised on this case) to protect privacy. Identifying letters are assigned in alphabetical order and bear no relationship to the person's actual name.

Further information — Mrs A

49. Mrs A told HDC: "I have also had two other root canals on different occasions and never experienced this drama or pain. … The pain and suffering has been phenomenal."

Further information — Dr B

50. Dr B told HDC that he is sorry that he did not inform Mrs A about the risks of root canal treatment, and that he did not stop drilling tooth 36 on 5 December 2019, and for any pain caused when he treated her.

Further information — the Clinic

51. Practice Manager Ms E told HDC that following the identification of a fractured root canal, Mrs A was advised immediately and a follow-up appointment was made with a senior clinician, Dr C. Dr C referred Mrs A to a specialist, and she was seen within seven days, although the usual waiting time is at least two weeks. Ms E said that the Clinic did everything possible to manage Mrs A's care.

52. Ms E said that the Clinic advises its clinicians that if there is a perforation, the patient is to be referred for an opinion on the viability of either restoration, or extraction and replacement options. The long-term options for the tooth and how the Clinic can assist are then discussed with the patient.

53. Ms E said that Mrs A's ACC treatment injury claim was accepted.

Responses to provisional opinion

54. Mrs A was given the opportunity to comment on the "information gathered" section of the provisional opinion, but did not respond.

55. Dr B and the dental service were each given the opportunity to comment on the relevant sections of the provisional opinion.

56. Dr B stated that he had no further comment to make, and provided evidence that he had met the recommendations in the provisional decision.

57. The dental service stated that it had no further comment to make.

Opinion: Dr B

Information and informed consent — breach

Discussion of options available

58. Mrs A saw Dr B because of a severe toothache. Following his examination, Dr B noted that the pulp in tooth 36 was inflamed and that the pulp could not be saved. Dr B then discussed the treatment options available.

Names have been removed (except the expert who advised on this case) to protect privacy. Identifying letters are assigned in alphabetical order and bear no relationship to the person's actual name.

59. Dr B documented in the clinical notes that he provided Mrs A with the options of either a root canal treatment or an extraction, and the associated costs of these options. He recorded that Mrs A's preference was to save tooth 36, and that she gave verbal consent to proceed with root canal treatment. Dr B did not use a Clinic consent form to obtain written consent at this visit.

60. Mrs A advised that, at her initial appointment, Dr B did not discuss the specific risks of root canal treatment, including the possible need for specialist treatment.

61. Dr B told HDC that he did not specifically discuss the risk of separated root canal files or perforations prior to commencing the root canal treatment, and he apologised for his error.

62. Right 6(1) of the Code of Health and Disability Services Consumers' Rights (the Code) gives consumers the right to be fully informed, and to "the information that a reasonable consumer, in that consumer's circumstances, would expect to receive". This includes information about the proposed treatment and the options available, including the risks, side effects, benefits, and costs of each option. This is also a requirement in the New Zealand Dental Association Code of Practice on Informed Consent (25 March 2017), which states: "Records should include information regarding the problem(s), the treatment option(s), the risks, the costs and the option to which the patient has consented."

63. My independent advisor, dentist Dr Angela McKeefry, advised that a broken root canal file is a known risk of root canal treatment (about a 1% chance), and that the risk of a broken root canal file should be discussed at the initial visit and documented in the clinical notes. Dr McKeefry advised that if Dr B did not inform Mrs A of the risk of file breakage and ensuing possible consequences, this represents a moderate to severe departure from expected standards.

64. I accept that prior to commencing treatment, Dr B discussed two options — a root canal treatment or an extraction of tooth 36 — and the benefits of each procedure. I also accept that Dr B discussed the associated costs of these two options. However, this does not meet the requirements of the Code in relation to provision of information and informed choice. Dr B should have explained the risks of each option clearly. Regarding the root canal treatment, Dr B should have explained to Mrs A that a broken root canal file or perforation are known risks, and that these may require specialist treatment, and he should have documented this discussion. I note that Dr B accepts this.

65. The Clinic did not have a policy of obtaining written informed consent for root canal treatment. While there is no requirement in the Code for informed consent to be given in written form, it is difficult to show that informed consent has been given when it is given verbally. I also note that the Clinic's informed consent forms detail the specific risks and benefits of root canal treatment. In my view, it would have been wise for Dr B to obtain written informed consent, and this may have prompted him to explain the risks and benefits of the treatment options to Mrs A. I note that Dr B now uses a standard consent form to discuss specific risks relating to root canal treatment, and documents the patient's informed consent, and I consider this appropriate.

Names have been removed (except the expert who advised on this case) to protect privacy. Identifying letters are assigned in alphabetical order and bear no relationship to the person's actual name.

Conclusion

66. In my view, Dr B should have provided Mrs A with information on the risks of the available options, and should have included information about a broken root canal file, perforation, and possible referral to a specialist, allowing Mrs A to make an informed decision about which option she wished to pursue.

67. Overall, I consider that Dr B did not advise Mrs A about the risks and the possible consequences of root canal treatment prior to the procedure. I consider that this was information that a reasonable consumer in Mrs A's circumstances would expect to receive. Accordingly, I find that Dr B breached Right 6(1) of the Code. Consequently, Mrs A was not in a position to make informed choices about her treatment, and I find that Dr B also breached Right 7(1) of the Code.

Standard of care — adverse comment

Broken file

68. On 5 December 2019, a file broke in tooth 36 during the root canal treatment. An X-ray was taken and Dr B advised Mrs A about the broken file, referred her to a dentist with endodontic experience, and documented the discussion, and no fee was charged. As stated above, Dr McKeefry advised that there is a 1% risk of a file breaking during root canal treatment. Dr McKeefry considers that Dr B's actions after the file broke met the accepted standard of care.

69. I accept that breakage of a file during root canal treatment is a rare complication of the procedure. I am therefore satisfied that this does not necessarily indicate a departure from the accepted standard. I am guided by the expert advice that the issue here is whether Dr B's care after the file broke was appropriate and of a reasonable standard. In this regard, I accept Dr McKeefry's advice that the action taken by Dr B was appropriate.

Root canal treatment

70. On 5 December 2019, Dr B opened tooth 36 and located three canals but could not find the distolingual canal. Dr B stated that the root canals were very narrow and difficult to negotiate, so he widened the opening of the tooth to establish straight-line access for the files.

71. Dr B told HDC that when he found the canals tight to negotiate, he should have stopped investigative drilling and referred Mrs A or sought advice from a colleague. Dr B accepts that had he stopped drilling sooner, this would have improved the treatment outcome for Mrs A. He submitted that there was insufficient time allocated for this appointment to complete a second root canal, and that this contributed to the clinical error.

72. Dr McKeefry stated that it is advisable to remove as little of the tooth structure as possible, as this will weaken the tooth in the future. She noted that on review of the X-ray of Mrs A's tooth, the pulp chamber and canals were clearly visible, and therefore should have been easy to locate. However, if the canals were not able to be located, a referral to a colleague or specialist was indicated rather than further drilling. This requirement is also in accordance with the Dental Council *Standards Framework for Oral Health Practitioners* (15 August

Names have been removed (except the expert who advised on this case) to protect privacy. Identifying letters are assigned in alphabetical order and bear no relationship to the person's actual name.

2015), which states: "You must practice within your professional knowledge, skills and competence, or refer to another health practitioner."

73. Dr McKeefry opined that during root canal treatment it can be difficult to make a judgement to stop and refer. However, she noted that significantly more tooth was removed than ideal and, as a result, tooth 36 had a much worse prognosis. She considers that this represents a mild to moderate departure from accepted standards.

74. I accept this advice. In my view, Dr B should have been aware that the time allocated for the appointment was not sufficient and, as a professional, he should not have attempted such a complicated procedure under the time constraints. When Dr B was unable to locate the root canals and made the decision to continue further drilling, he should have proceeded with caution. Had Dr B stopped drilling and obtained advice, then the prognosis for tooth 36 may have been more positive. I am critical that Dr B continued to drill tooth 36 and failed to refer Mrs A for specialist advice.

Perforation

75. Dr B recollected that during this visit there was bleeding in the pulp chamber, but at the time he believed that the bleeding was pulpal rather than a perforation. He stated that in retrospect, this was probably a perforation on the pulpal floor, but at the time of its likely occurrence, he was unaware of it. Dr B said that he would not have knowingly irrigated a perforation with sodium hypochlorite, and is sorry for the pain inflicted on Mrs A.

76. Regarding Dr B's treatment, Dr McKeefry advised that although it seems likely that the perforation occurred when the file broke, it is also possible that the perforation did not occur during this treatment. Dr McKeefry said that it is possible that the perforation was not noticed when this occurred, as it can be hard to distinguish between a perforation opening into the bone and an opening into a root canal. Dr McKeefry stated that perforations cause considerable bleeding, and that root canals can also bleed during treatment. However, she advised that the perforation was in the pupal floor, and therefore easily visible, and it was a "fairly large perforation".

77. Dr McKeefry advised that if the perforation was not identified when the file broke, there was no departure from accepted practice.

78. On the information available to me, I am open to the possibility that Dr B caused the perforation when he opened up tooth 36 on 5 December 2019, and I find it more likely than not that Dr B was not aware that he caused the perforation at the time. Accordingly, I find that there was no departure from accepted practice in relation to causing a perforation on tooth 36.

79. I note that Dr B completed ACC forms for a treatment injury claim for a perforation, and I consider that this was appropriate.

Conclusion

80. Dr B saw Mrs A on three occasions for root canal treatment. During the treatment, a number of complications occurred. When Dr B treated Mrs A, a file broke inside a canal in tooth 36.

Names have been removed (except the expert who advised on this case) to protect privacy. Identifying letters are assigned in alphabetical order and bear no relationship to the person's actual name.

However, he continued to drill the tooth when a referral for specialist advice was indicated, and he may have perforated the pulpal floor of the tooth. As a consequence of Dr B's treatment, Mrs A's tooth had a poor prognosis, and she experienced considerable pain. I note that Dr McKeefry considers that given that Dr B was unaware of the perforation, and with the exception of the failure to stop drilling and refer Mrs A to a specialist, the care provided by Dr B was in keeping with accepted practice of treatment on a tooth without a perforation. I accept that advice. However, it concerns me that a number of complications arose during Dr B's treatment, which caused pain and suffering to Mrs A.

Perforation repair — other comment

81. Between 31 October 2019 and 24 December 2019, three dentists had drilled inside Mrs A's tooth — Dr B, Dr C, and Dr D.

82. As stated above, Dr B told HDC that he was not aware of the perforation when he treated Mrs A on 5 December 2019. He said that he has no recollection of performing a glass ionomer repair on the perforation, and that had he attempted this repair, he would have documented this and informed Mrs A. Regarding the appointment on 5 December 2019, Dr B submitted that following the X-ray of the broken file, he completed Mrs A's treatment in 10 minutes, and this was insufficient time to repair a perforation. Dr B saw Mrs A on 6 December 2019, but she declined to have any treatment on tooth 36, and Dr B's contemporaneous documentation supports this.

83. At the next appointment on 17 December 2019, Mrs A saw Dr C, who recorded that he was unable to get any files to the full length of the canals, and queried whether there was a pulp stone in the way. Dr C submitted that he did not suspect a perforation or glass ionomer covering the perforation when he saw Mrs A. He said that with hindsight, what he thought could be a pulp stone was probably the glass ionomer restoration.

84. Endodontist Dr D saw Mrs A following a referral from Dr C. Dr D documented that he found a partial repair with a glass ionomer over the perforation in the pulpal floor.

85. Dr McKeefry advised that although fairly unlikely, it is possible that some of the glass ionomer temporary filling found its way past the cotton wool and Odontopaste to the bottom of the pulp chamber and settled partly over the perforation.

86. Dr McKeefry also advised that if the perforation was identified and repaired without documenting this in the clinical notes, this represents a very severe departure from practice. Dr McKeefry stated: "[T]here is still a mystery around who identified the perforation and covered it with glass ionomer and I doubt this will ever be resolved."

87. I note that three dentists drilled inside Mrs A's tooth — Dr B, Dr C, and Dr D. However, on the evidence available to me, I am unable to determine whether the perforation was repaired deliberately, and, if so, who was responsible for identifying the perforation of tooth 36, its subsequent repair, and the failure to document that care and inform Mrs A.

Names have been removed (except the expert who advised on this case) to protect privacy. Identifying letters are assigned in alphabetical order and bear no relationship to the person's actual name.

88. I agree with Dr McKeefry's advice, and I do not consider that further investigation into this matter would be fruitful.

Opinion: Dental service — no breach

89. As a healthcare provider, the dental service is responsible for providing services in accordance with the Code.

90. I note that the Clinic provides written consent forms for root canal treatment. I also note that in the situation of either an emergency or after-hours appointment, there is a requirement for verbal consent, and in some cases a signed written consent form on the same day of treatment is not considered appropriate. I also note that this is consistent with the New Zealand Dental Association Code of Practice on Informed Consent, which states that informed consent discussions should be documented in patient records, and that in some circumstances it is not necessary to obtain informed consent in writing.

91. I consider that it was reasonable for the Clinic to expect that consenting discussions would be documented in the clinical record, and to have in place written consent forms for root canal treatment. I accept that the failure of Dr B to provide information about the risks of root canal treatment to Mrs A and document that discussion in the clinical records is an individual failure, and in this case does not indicate broader systems or organisational issues at the Clinic.

92. However, I note that since these events the Clinic has required that both written and verbal consent are obtained from patients in relation to root canal treatment prior to treatment commencing. I consider this to be an appropriate change and a positive response to addressing the consent issue in Mrs A's complaint.

93. In my view, Dr B's errors were the result of individual clinical decision-making, and not due to any shortcomings in the policies or the procedures of the Clinic. Accordingly, I find that the Clinic did not breach the Code.

Changes made since events

94. Dr B told HDC that following these events he made the following changes to his practice:

- He now uses a standard consent form to discuss specific risks relating to root canal treatment.
- He conducted a clinical self-audit to monitor the changes made to his practice since these events.

Names have been removed (except the expert who advised on this case) to protect privacy. Identifying letters are assigned in alphabetical order and bear no relationship to the person's actual name.

- He enrolled in endodontic courses.
- He enrolled in an informed consent course.
- He has completed 18 hours of Continuing Professional Development relating to endodontics, and two hours relating to consent.

95. The Practice Manager told HDC that as a result of these events, the Clinic's contractors now obtain written and verbal consent from patients in relation to root canal treatment.

96. I welcome those changes.

Recommendations

97. In accordance with the recommendations in the provisional opinion, Dr B provided an apology, and this has been forwarded to Mrs A. Dr B also provided evidence that he has participated in training relevant to informed consent and endodontic care, and has met the recommendations in the provisional opinion.

Follow-up actions

98. A copy of this report with details identifying the parties removed, except the expert who advised on this case, will be sent to the Dental Council of New Zealand, and it will be advised of Dr B's name.

99. A copy of this report with details identifying the parties removed, except the expert who advised on this case, will be sent to the New Zealand Dental Association for educational purposes.

100. A copy of this report with details identifying the parties removed, except the expert who advised on this case, will be placed on the Health and Disability Commissioner website, www.hdc.org.nz, for educational purposes.

Appendix A: Independent clinical advice to the Commissioner

The following expert advice was obtained from Dr McKeefry:

" …

Date: 23 July 2020

Independent Advisor: Dr Angela McKeefry (BDS)

My Qualifications and Training

- Bachelor of Dental Surgery (Otago) 1993
- Fellow of the International College of Continuing Dental Education
- Graduated from the Progressive Orthodontic Seminars (POS) 2-year course with Highest Honours
- Graduated from the Advanced POS Series
- Have been a general dentist doing a wide scope of dental procedures in the same practice since January 1994
- Have served on several dental committees over my career including running the Wellington branch of the recent graduate program for several years.

Instructions from the Commissioner

Thank you for agreeing to provide advice to the Health and Disability Commissioner. We are seeking your advice on the care provided by [Dr B] to [Mrs A] on 5 December 2019.

Advice Requested

Please advise whether you consider the care provided met accepted standards in all the circumstances and explain your rationale.

In particular, please comment on:

1. Whether management of the retained file fragment was appropriate.
2. Any other matters in this case that you consider warrant comment or amount to a departure from accepted practice.

For each question, please advise:

a) What is the standard of care/accepted practice and what are the relevant guidelines?

b) Has there been a departure from accepted practice? If so, to what degree: mild, moderate, or severe?

c) What recommendations for improvement would help prevent a similar occurrence in future.

Names have been removed (except the expert who advised on this case) to protect privacy. Identifying letters are assigned in alphabetical order and bear no relationship to the person's actual name.

Summary of the Facts

31/10/19

- [Mrs A] attends [the Clinic], seeing [Dr B].
- Her chief presenting complaint was severe throbbing toothache from the 36 (lower left molar) region.
- Irreversible pulpitis was diagnosed on the 36.
- Treatment options were discussed, and [Mrs A] chose to save the tooth with a root canal treatment.
- [Mrs A] states she was told the cost of the root canal would be $1300 over four visits. [Dr B] states she was quoted $1370 for root canal and filling across three appointments. He also says she was advised of the additional cost of $1500 for a crown once the root canal had been completed.
- The tooth was opened into the pulp (nerve) area, four canals were found, and it was then irrigated and dressed with a sedative dressing and temporary filling. The charge for this appointment was $250 which was part of the $1370 quoted total fee.
- [Mrs A] was advised to return for continuation of the root canal treatment and a full examination in two weeks' time.
- This appointment settled the tooth ache for [Mrs A]

5/12/19

- [Mrs A] returned for her next appointment as although the tooth had initially settled, it had started to be sore again, prompting her return.
- Tooth 36 opened to clean and shape the root canal system. [Mrs A] states this was about an hour long appointment. [Dr B] notes that three canals were located (at the previous appointment the clinical notes say four canals were located — usually this tooth has three or four canals). The notes also say [Dr B] was unable to find 'the distolingual canal, will widen the distobuccal canal to see if large opening'. It was also noted that copious irrigation was used alternating between NaOCl and EDTA. (This is potentially important in my end questions.)
- After working lengths were determined, a file broke in the mesiobuccal canal about halfway down the root. An x-ray was taken straight after this happened.
- [Mrs A] was told of the broken file and advised that as this was a more complex situation, she would be referred to [Dr C] within the same practice who had more root canal experience and equipment.
- A sedative dressing was placed in the tooth and the patient advised to call if she develops painful symptoms.
- No charge was applied for this appointment.

Names have been removed (except the expert who advised on this case) to protect privacy. Identifying letters are assigned in alphabetical order and bear no relationship to the person's actual name.

6/12/19

- [Mrs A] called the practice to say she was experiencing a lot of pain (in her words 'ït was godawful') from the tooth and an appointment with [Dr B] was arranged for later that day.
- At this appointment, [Mrs A] says [Dr B] 'drilled my tooth filled it with medicine gave me a script for antibiotics and painkillers, and said it should calm down, there was nothing more he could do, I left in more pain than I went in with'.
- [Dr B] however notes a discussion was had between himself and [Mrs A] and he examined the painful tooth/area. He explained while he could reopen the tooth and place more sedative dressing, this was unlikely to help as a fresh dressing had only been placed in the tooth the day before. [Dr B] states [Mrs A] decided not to have the tooth drilled and redressed this day. Antibiotics and pain relief were prescribed, and [Mrs A] was invited to return if symptoms persisted.

17/12/19

- [Mrs A] attended her appointment with [Dr C]. At this appointment [Mrs A] states, she had been in pain since the previous appointment and had been taking voltaren a few times a day.
- [Mrs A] said she wanted the broken file removed to ease the pain.
- [Dr C] advised it was very unlikely the broken file was causing the pain and that while he could likely bypass it and fill the root canal around it, he would not be able to remove the file.
- It was decided [Mrs A] should be referred to an endodontic specialist as that was the only chance of removing the file.
- [Dr C] opened tooth 36 without any local anaesthetic and he noted the removal of the temporary filling was sore for the patient. He partially instrumented three canals and redressed the tooth. In his notes he has written 'pulp stone?'. (Again, possibly important to the questions I have.)
- No charge was applied to this appointment.

24/12/19

- [Mrs A] attends an appointment with [Dr D] (endodontist)
- [Dr D] notes that [Mrs A] has had continuous pain for a month and that it has become much worse in the previous few days.
- Upon opening the tooth, [Dr D] notes '1 distal and 2 mesial canals located. PC (pulp/nerve chamber) floor perforation present, has been partially sealed with GI (glass ionomer) cement by previous dentist it seems'. (Important point here.)
- In his letter back to [Dr C], [Dr D] says a 'fairly large perforation was evident' and that he was unable to dry this perforation and so placed calcium hydroxide over it at that time.

Names have been removed (except the expert who advised on this case) to protect privacy. Identifying letters are assigned in alphabetical order and bear no relationship to the person's actual name.

- During this appointment [Dr D] was able to bypass the broken file but was not able to remove it. He questions if the broken file goes out through the root apex.
- [Dr D] says in his letter back to [Dr C] that 'I have explained to [Mrs A] the root canal system should have a low enough bacterial load to allow for healing, due to the size of the perforation the prognosis for the tooth is guarded at best'. As this is not mentioned in [Dr D's] notes, we do not know if this discussion happened at the first appointment prior to the patient incurring any cost or at the second appointment.
- [Dr D] advises [Mrs A] that if the pain does not settle, she should consider having the tooth removed.

20/01/20

- [Mrs A] presents for her second endodontic specialist appointment. She states she had pain for about three more weeks after the last appointment but that the tooth had now settled.
- [Dr D] states in his letter back to [Dr C] that at this appointment he can get the perforation dry and places MTA at the site. He also fills the root canal system around the broken file which could not be removed.
- [Dr D] advises [Mrs A] that the tooth should ideally be crowned but that she should wait for a period of time to make sure it remains symptom-free first.

22/01/20

- [Mrs A] lodges a complaint with HDC

Questions from the author

- It is noted in the very thorough clinical notes of [Dr B] that options and costs were discussed, and that [Mrs A] gave verbal consent for the root canal treatment. It is NOT noted if this was fully informed consent i.e. did [Dr B] disclose to [Mrs A] the approximately 1% risk inherent to all root canal treatments, of a file breaking and the consequences of this? [Mrs A] does state in her letter that no one told her that due to complexities she may have to see a root canal specialist (though is this due to lack of memory or lack of information?).
- [Dr B] knew he had broken a file in the tooth and he immediately informed the patient and took proactive steps to deal with the situation. The question is, who perforated [Mrs A's] pulpal floor, and did they know they had done it?
  - Between 31 October 2019 and 24 December 2019 (when the first mention of the perforation appears in the patient's notes), three dentists had drilled inside [Mrs A's] tooth ([Dr B], [Dr C] and [Dr D]).
  - After the first relief of pain appt with [Dr B] 31 Oct 2019, the patient reported that the toothache settled for several weeks. It is likely given this, that the perforation did not happen then.

Names have been removed (except the expert who advised on this case) to protect privacy. Identifying letters are assigned in alphabetical order and bear no relationship to the person's actual name.

- At the 5 December 2019 appt [Dr B] notes he can only access 'the distolingual canal, will widen the distobuccal canal to see if large opening'. It was also noted that copious irrigation was used alternating between NaOCl and EDTA. It is possible that the perforation happened during the widening of the distolingual canal opening and also possible that NaOCl was flushed through the perforation into the surrounding bone (which would lead to very severe pain as the patient reported subsequently). During the appointment, the file was broken and would have provided quite a distraction to the dentist. A broken file is far less likely to cause pain (other than if it was preventing the removal of any last remaining nerve tissue or possibly if it extended out the apex). So possibly the perforation occurred at this appointment but may not have been noticed by [Dr B]. However, when [Dr D] first opened the tooth on 24 Dec 2019, he noted that 'PC (pulp/nerve chamber) floor perforation present, has been partially sealed with GI (glass ionomer) cement by previous dentist it seems'. This would indicate that the perforation happened before 24 Dec 2019 and before [Dr D] ever touched the tooth. It also indicates that his assessment is that someone (likely the person who perforated) tried to partially repair the perforation with glass ionomer cement (which was previously used to repair perforations before MTA was available). If someone tried to repair it, then they must have known there was a perforation. If this is the case, why didn't they inform the patient or record it in their clinical notes? The prognosis for perforated teeth is directly related to the size of the perforation and the speed with which it is adequately treated.
- It could be possible that the perforation went un-noticed by the responsible clinician and that the layers of odontopaste and then glass ionomer temp filling got pushed further into the tooth and this is where the appearance of a partial glass ionomer repair comes from. However, [Dr B's] notes clearly state that he dresses with odontopaste, CW (this has been confirmed to mean 'cotton wool') and then restored with glass ionomer. This means that the cotton wool (the purpose of which is to prevent the glass ionomer reaching the pulp floor and blocking the canal openings) should prevent any of the glass ionomer temp filling from meeting the pulpal floor where the perforation was.
- In [Dr C's] notes he states he does not get any files to the full working length of the canals and writes 'pulp stone?'. This indicates he thinks there may be a calcified mass in the way. It sounds like what [Dr C] thinks could be a pulp stone, is what [Dr D] identifies as a glass ionomer partial repair of the perforation. This is far from crystal clear, however.

HDC Questions

Was the management of the retained file fragment appropriate?

1. A broken root canal file is a known risk of root canal treatment (about a 1% chance). In the initial informed consent process this should be discussed and recorded in the patient's notes. The patient should be aware that if this happens it will likely reduce the prognosis of the root canal treatment somewhat and often require referral to a

Names have been removed (except the expert who advised on this case) to protect privacy. Identifying letters are assigned in alphabetical order and bear no relationship to the person's actual name.

specialist at extra cost. I am unsure to what extent this was explained to the patient. The (otherwise very thorough) clinical notes say VCG which means verbal consent given. There is nothing specific noted about file breakages. [Mrs A] claims no one told her of the risk of needing a specialist referral. If [Dr B] informed [Mrs A] of this risk re file breakage but did not specifically note it in his clinical records, this would be a minor–moderate departure from accepted practice (disadvantaging the dentist rather than the patient). If, however, [Dr B] did not inform [Mrs A] of the risk of a file breakage and ensuing possible consequences then this would be a moderate–severe departure from accepted practice. Code of practice (from the Dental Council's Standards Framework for Oral Health Practitioners) potentially breached: 16. You must ensure informed consent remains valid at all times.

Here is what the New Zealand Dental Association states in their Code of Practice on Informed consent:

It is essential that clear, accurate contemporaneous written records are made of informed consent discussions. Records should include information regarding the problem(s), the treatment option(s), the risks, the costs and the option to which the patient has consented. In the presence of written patient records of the informed consent process it is not necessary to obtain informed consent in writing except in the following circumstances.

Written consent required:

- If the patient is to participate in any research,
- If the procedure is experimental,
- If the patient will be under general anaesthetic, or
- If there is significant risk of adverse effects on the consumer.

Dental practitioners may consider obtaining written consent and providing a patient with a copy of this in situations where the treatment is complex, protracted, costly and/or as a reminder of the expectations and obligations of both parties. Written consent can be a useful adjunct to the clinical record notes should issues regarding the treatment be raised in the future. Written consent requires the signature of the patient or authorized person.

2. When the file broke an x-ray was taken and the patient was told. It was recorded in the clinical notes and a referral to a more endodontically experienced dentist was arranged. No fee was charged. This is entirely appropriate. When the patient called back the following day in pain, she was seen by [Dr B] at no charge. She was offered a further dressing of the tooth which she declined, and pain relief and antibiotics were prescribed. Again, entirely appropriate.

3. When [Mrs A] saw [Dr C] and it became clear to him that she would not be happy unless the file was removed (owing to the fact [Mrs A] was identifying this as the cause

Names have been removed (except the expert who advised on this case) to protect privacy. Identifying letters are assigned in alphabetical order and bear no relationship to the person's actual name.

of her severe pain) and [Dr C] realized he would not be able to complete this, he redressed the tooth at no charge and referred her to an endodontist. Again, entirely appropriate.

4. [Dr D] attempted to remove the broken file but was unable to do so. He was able to bypass the file and fill the root canal around this. He informed the patient of this. All appropriate.

Are there any other matters in this case that you consider warrant comment or amount to a departure from accepted practice?

1. I have questions and concerns around the pulpal floor perforation. Firstly, it is not known for sure which dentist caused this. It is also not known if the dentist who perforated, knew he had done so. I have addressed this earlier in my questions at the bottom of the summary of facts. It seems most likely that the perforation occurred at the same appointment as the file being broken (for reasons previously discussed). This however is not a certainty.

2. What caused the perforation? This has happened because an excessive amount of tooth structure was removed, probably in an attempt to locate all root canal orifices. It is always advisable to only remove as little tooth structure as possible while still allowing full access for location and cleaning of the root canals. The more tooth removed, the weaker it will be going into the future. Upon initial presentation by [Mrs A], the tooth had a relatively deep, but only moderately sized two surface filling in it. The pulp chamber and canals were clearly visible on the x-ray. Given these points the canals should have been relatively easy to locate and if they weren't, it would have been better (although hindsight is a wonderful thing) to refer the patient at that stage rather than drilling more tooth away (it can be a difficult clinical judgement to make, when to stop and refer). It can be seen on the x-ray immediately after the file broke, that a lot of tooth structure has been removed (it is impossible to tell from the X-ray if the perforation had occurred at that point or not). By choosing to continue investigative drilling rather than referral to a specialist or even the colleague down the hall with an endoscope, significantly more tooth was removed than ideal and possibly this is when the perforation occurred. This has left the tooth with a much worse prognosis than it needed to have. This is a mild–moderate departure from accepted practice (mild–moderate because it is not easy to assess when you are inside a root canal, at exactly what point your skills and equipment stop being adequate). Code of practice breached: 8. You must practice within your professional knowledge, skills, and competence, or refer to another health practitioner.

3. Did the dentist who perforated know this had happened? It is possible that the perforation was not noticed. It can sometimes be hard to distinguish between a perforation opening into the bone and an opening into a root canal (or indeed, not even see the opening). [Dr D] noted that it was a 'fairly large perforation', which makes it less likely that it was not noticed when it happened. Often perforations bleed quite a lot, depending on how instrumented they are, however root canals can also bleed. The

Names have been removed (except the expert who advised on this case) to protect privacy. Identifying letters are assigned in alphabetical order and bear no relationship to the person's actual name.

perforation is in the pulpal floor rather than down inside a root canal, so more easily visible, although also in a place a canal opening may be expected. [Dr D] noted that he found a partial repair with glass ionomer over the perforation. If this is in fact the case, then the dentist who perforated, must have known they did it, otherwise why would they attempt a repair? It may be possible, but fairly unlikely, that some of the glass ionomer temporary filling found its way past the cotton wool and odontopaste to the bottom of the pulp chamber and settled partly over the perforation, rather than it being a deliberate repair. Pain is much more likely to occur from a perforation than a broken file, especially if NaOCl is flushed out the perforation into the bone.

4. If whoever perforated did not realize this had happened, then no departure from accepted practice occurred. I would note though that I do not deal with perforations and so the treatment and clinical notes relating to the perforation should perhaps be reviewed by an endodontist consulting for HDC. The repair is the largest perforation repair I have ever seen and the notes about this are not clear (perhaps a page is missing from [Dr D's] clinical records?). This could be due to the perforation being extremely large (in which case even greater consideration should be given to the likely prognosis of this tooth and whether restoration of it was worthwhile), or the way it has been repaired is unusual, possibly due to the size and length of time it went unrepaired. Again, this is beyond my scope and should be assessed by an endodontist.

5. If whoever perforated DID realize this had happened, then this represents a very severe departure from accepted practice. If they tried to repair it without noting it in the clinical notes and without informing the patient, then this, particularly in the face of the patient complaining of extreme pain, is extremely problematic.

Codes of practice breached if this is the case:

- 1. You must ensure the health needs and safe care of your patients are your primary concerns
- 2. You must put the interests of your patients ahead of personal, financial, or other gain
- 10. You must maintain accurate, time bound and up to date patient records
- 13. You must communicate honestly, factually and without exaggeration
- 16. You must ensure informed consent remains valid at all times
- 17. You must communicate openly in inter- and intra-professional healthcare teams for the enhancement of patient care
- 23. You must ensure your professional and personal conduct justifies trust in you and your profession
- 25. You must act with honesty and integrity at all times with patients, colleagues, and the public

Names have been removed (except the expert who advised on this case) to protect privacy. Identifying letters are assigned in alphabetical order and bear no relationship to the person's actual name.

I would say that if the person who perforated the tooth was [Dr B], I find it strange that he would act so appropriately over the broken file and yet so inappropriately over the perforation. The inconsistency of the two approaches leads me to wonder if it was him who perforated, or if he did, that he genuinely didn't realize (though the glass ionomer on the perforation remains unexplained if this is the case).

6. This perforation should be lodged as a claim with ACC as a treatment injury. This then should allow for some costs to be recovered by the patient. Also, it is unlikely this tooth will last the patient's life (and is likely to fail considerably sooner). At this point extraction will be required and ideally replacement of the tooth with an implant, bridge, or denture, all of which will be at significant cost.

Summary

1. With regards the broken file; the only potential breach is whether the patient was informed of the potential for a file to break and that if the patient was informed, this was not noted, specifically in the clinical notes. All other aspects of this situation were handled entirely correctly.

2. It is yet to be determined who perforated the tooth and if they realized this had happened. If they did know and tried to repair it without informing the patient, then this is a severe departure from practice standards.

3. The perforation records, treatment and consent should be investigated by an endodontist on behalf of HDC.

4. A claim for treatment injury should be lodged with ACC to aid the patient in costs of continuing treatment.

Completed by :
Dr Angela LM McKeefry (BDS)"

Further Expert Advice

"MARCH 15 2021

Health and Disability Commission

Response by: Dr Angela McKeefry (BDS)

I have reviewed all the responses sent to me in regards this matter and my opinions are as follows:

- [Dr B] has taken on board his errors and has instituted appropriate measures to improve his training and ensure a similar situation does not occur
- [Dr B] and [the Clinic] have improved their consent process

Names have been removed (except the expert who advised on this case) to protect privacy. Identifying letters are assigned in alphabetical order and bear no relationship to the person's actual name.

- [Dr B] has taken ownership for his errors and is appropriately apologetic and regretful
- There is still a mystery around who identified the perforation and covered it with glass ionomer and I doubt this will ever be resolved

Completed by:
Dr Angela LM McKeefry (BDS)”

Names have been removed (except the expert who advised on this case) to protect privacy. Identifying letters are assigned in alphabetical order and bear no relationship to the person’s actual name.

Appendix B: Relevant standards

Policies

Informed Consent for Endodontic Treatment Policy (2015) includes:

> "This procedure will not prevent future tooth decay, tooth fracture or gum disease, and occasionally a tooth that has had a root canal treatment may require re-treatment, endodontic surgery, or tooth extraction.
>
> Risks: Are *unlikely* but may occur. They might include but are not limited to:
>
> a) Instrument separation in the canal.
>
> b) Perforations (extra openings) of the canal with instruments."

Information and consent for Root canal/Endodontic Treatment Policy (2015) includes:

> "Potential risks and complications include but are not limited to:
>
> With some teeth endodontic treatment might not be very straight forward and additional steps may be required or a specialist referral to an endodontist (root canal specialist) will be recommended to achieve the required result. Calcified/blocked/split canals, retreatment, endodontic files separating/breaking inside, periodontal disease, cracks or root fractures, perforations, sinuses, cysts are a few of such difficult situations."

Standards

The Dental Council *Standards Framework for Oral Health Practitioners* (15 August 2015) provides:

> "Ensure safe practice
>
> 8 You must practice within your professional knowledge, skills and competence, or refer to another health practitioner.
>
> …
>
> Professional standards
>
> 16 You must ensure informed consent remains valid at all times."

New Zealand Dental Association Code of Practice on Informed Consent (25 March 2017):

> "Documenting the consent process
>
> It is essential that clear, accurate contemporaneous written records are made of informed consent discussions. Records should include information regarding the problem(s), the treatment option(s), the risks, the costs and the option to which the

Names have been removed (except the expert who advised on this case) to protect privacy. Identifying letters are assigned in alphabetical order and bear no relationship to the person's actual name.

patient has consented. In the presence of written patient records of the informed consent process it is not necessary to obtain informed consent in writing except in the following circumstances.

Written consent required:

- If the patient is to participate in any research,
- If the procedure is experimental,
- If the patient will be under general anaesthetic, or
- If there is significant risk of adverse effects on the consumer.

Agreement to treat

Dental practitioners may consider obtaining written consent and providing a patient with a copy of this in situations where the treatment is complex, protracted, costly and/or as a reminder of the expectations and obligations of both parties. Written consent can be a useful adjunct to the clinical record notes should issues regarding the treatment be raised in the future."

Names have been removed (except the expert who advised on this case) to protect privacy. Identifying letters are assigned in alphabetical order and bear no relationship to the person's actual name.