Dr B

A Report by the
Deputy Health and Disability Commissioner

(Case 21HDC00195)

HEALTH & DISABILITY COMMISSIONER
TE TOIHAU HAUORA, HAUĀTANGA

Contents

Executive summary

1. This opinion considers the dental treatment Dr B provided to Ms A in 2019 and 2020, including the information provided to her prior to her bone graft treatment. In 2019, Ms A developed symptoms of an infection at the site of an implant in tooth 21. In July 2019, she had a consultation with Dr B about the tooth and she underwent a bone graft to rebuild the frontal bone. Ms A raised concerns that she was not aware of the material that would be used for the bone graft or any of the risks associated with the treatment. Ms A subsequently developed an infection at the site of the graft, and Dr B re-entered the site about two weeks later, despite the risks of this not being explained to Ms A.

Complaint and investigation

2. The Health and Disability Commissioner (HDC) received a complaint from Ms A about the services provided to her by Dr B. The following issue was identified for investigation:

- *Whether [Dr B] provided [Ms A] with an appropriate standard of care between July 2019 to October 2020 (inclusive).*

3. This report is the opinion of Vanessa Caldwell, Deputy Health and Disability Commissioner, and is made in accordance with the power delegated to her by the Commissioner.

4. The parties directly involved in the investigation were:

Ms A	Consumer
Dr B	Provider/dentist
Dental practice	Provider

5. Further information was received from another dentist at the practice, Dr C, oral and maxillofacial surgeon Dr D, the insurance provider, and the healthcare provider.

6. Independent advice was obtained from a general dentist, Dr Lester Settle (Appendix A).

Information gathered during investigation

Introduction

7. On 9 August 1978 Ms A damaged tooth 21 and was covered by an insurance provider for a root canal. On 17 December 2008 Ms A's dentist referred her to a specialist periodontist. The referral email states that Ms A had requested the removal of the previously root-filled tooth 21 and an immediate implant placement if possible. The referral states that she had

declined further root canal treatment by an endodontist to remedy the possibly failed tooth 21.

8. In 2009 the specialist periodontist removed tooth 21 and placed an implant in site 21.[1]

Consultation with Dr B

9. In 2019, Ms A developed symptoms of an infection. On 17 July 2019 she phoned the dental practice and stated that she had infection, pain, and swelling related to the tooth 21 implant (placed in 2009). On 18 July 2019 Ms A telephoned the practice again and said that the site was aching slightly, hurt when her tongue touched it, and the crown was sticking out and moving. She said that she was very uncomfortable.

10. On 29 July 2019 Ms A had a consultation with Dr B regarding the tooth 21 implant. The clinical notes state that Ms A told Dr B that she had been having issues for approximately two years, and it had been throbbing. Dr B documented that the implant was slightly tender to percuss (tap gently) and there was tenderness in the gum near the apex of the root. In response to the provisional opinion, Ms A told HDC that she went to Dr B for cosmetic issues only, in particular because her front tooth 21 was a different color to the rest of her natural teeth. However, she said that she did mention that there was mild throbbing in tooth 21 when she bit into a carrot.

11. Dr B recorded that the implant had been placed too far buccally (towards the upper front lip) and that there was no infection. He told HDC that Ms A asked to have the implant removed and a new one placed. The clinical notes state that Dr B told Ms A that the insurance provider 'most likely [would] not come to the party' and that if it did, then likely it would require multiple surgeries and at least 18 months of treatment.

12. In response to the provisional opinion, Dr B said that he did not dismiss the insurance provider's claim (for implant removal and replacement) completely. He said that complete removal of the implant was one option they discussed, and the other option (as recorded in the clinical records) was that Ms A could return to the specialist periodontist and ask him for advice. Dr B said that they discussed at length the available options, but both were 'unappealing' to Ms A. Dr B said that in hindsight, he probably should have applied to the insurance provider for removal of the implant and retreatment of the site.

13. Ms A told HDC that she wanted a new tooth on the implant as it was feeling uncomfortable. She said that after Dr B took X-rays, he told her that her frontal bone was thinning[2] and needed a graft to strengthen it, and that originally it had been placed too far forward buccally. Ms A said that in hindsight she should have gone back to the specialist periodontist, but Dr B did not support that, which is in contrast to Dr B's recollection at paragraph 11 and

[1] 'NobelSpeedy Replace' 4.0 x 15mm implant in site 21. The NobelSpeedy is designed to maximise initial stability and support immediate loading in soft bone.

[2] In response to the provisional opinion, Dr B told HDC that thinning is not a word he would have used, as it was 'total loss of bone' or dehiscence. He said that thinning bone implies there was still bone present, and if this had been the case, a different treatment plan would have been proposed.

the clinical notes. In response to the provisional opinion, Ms A said that Dr B reassured her that it was all very 'fixable'.

14. Dr B prepared a treatment plan (see Appendix B). Dr B sent information to the insurance provider for preapproval (see Appendix D). That treatment was for a bone graft, new abutment, and a crown. The insurance provider approved the treatment on 10 September 2019. On 13 September a treatment plan was emailed to Ms A, and on 27 September 2019 she had a consultation with Dr B about the plan. Dr B provided HDC with a treatment plan with handwritten annotations (see Appendix C). This version was not provided to Ms A. Dr B said that in hindsight this should have been provided to her. However, he said that the clinical notes recorded during the 27 September consultation do correspond with the handwritten annotations on the treatment plan. Dr B said that this indicates that an informed consent discussion took place.

15. Ms A told HDC that regarding the risks that were discussed with her, Dr B mentioned only that infection was a possibility, but he said that he had performed the procedure many times and only one other person had had an infection, which had healed well. She told HDC that he made the procedure sound very low risk and never mentioned anything about it failing. Ms A said that she did not have a clear understanding of what the treatment plan entailed and should have asked a lot more questions. She stated: 'I really didn't think I was going to have a problem and I trusted [Dr B].'

16. Following notification of this investigation, Dr B provided HDC with an unsigned 'Implant and Periodontal Treatment Information and Consent' document that contains an explanation of the surgery and the materials used. He told HDC that usually the document accompanied the treatment plan. However, the document is not in Ms A's clinical records, and she does not recall having been given it.

17. Ms A told HDC that Dr B did not explain the materials he would use for the bone graft, or any risks associated with the use of those materials. She stated: 'I never thought he would use synthetic bovine.[3] When my implant was removed I only found out then.' The clinical notes state: '[G]one [over] [treatment] plan with [Ms A]. [She] understands risks — pros cons.' In response to the provisional opinion, Dr B said that with infection, there is often failure. However, he said that the risk of infection for Ms A was low.

18. Dr B told HDC that he discussed the required bone graft with Ms A, and Ms A said that she wanted intravenous (IV) sedation for the procedure. He recorded that he told Ms A that there was a high likelihood of swelling after the procedure.

19. Dr B told HDC that he gave very careful consideration to prophylactic antibiotics,[4] including the fact that Ms A was fit and healthy, had no underlying medical conditions, and had excellent oral hygiene with no periodontal disease. Dr B said that he informed her of the risks if she did not take antibiotics, and, as the site had no infection, he did not prescribe

[3] Processed bone harvested from cows, which has all the organic materials removed, is sterilised, and is made up of only the mineral content of the bone.
[4] Antibiotics given to prevent infection.

prophylactic antibiotics. The clinical notes state that Ms A was 'not keen' on antibiotics, that he discussed the risks associated with no antibiotics, and that Ms A 'understands her own risk'.

20. Dr B said that he discussed with Ms A a connective tissue graft[5] to thicken the gum, and Ms A also wanted IV sedation for that procedure.

21. On 7 October 2019 Ms A had a consultation with Dr B regarding IV sedation. She was given an IV sedation consent form and a copy of the pre- and post-operation instructions, and she signed the IV sedation consent form. In response to the provisional opinion, Dr B told HDC that the bone grafting procedure was explained in 'great detail' during this appointment. However, the clinical records contain no documentation of this discussion.

Crown removal procedure — 15 October 2019

22. On 15 October 2019 Dr B removed Ms A's crown and abutment,[6] placed a cover screw, scored the gum,[7] and fitted a partial plate (an Essex splint). Dr B said that the gum around the implant was thin and there was a lack of keratinised tissue.[8]

23. Ms A told HDC that her understanding was that the procedure was intended to strengthen the bone around the implant in order to replace the tooth. In response to the provisional opinion, Dr B said that the crown removal procedure is used to grow some gum and produce tissue height.

24. Ms A told HDC that the procedure resulted in a serious bacterial infection. She stated that Dr B's hygiene standards were poor, and he did not wash his hands correctly in between clients. In response, Dr B stated that the hygiene standards at the dental practice were robust, and they had a track-and-trace system for all critical items. He said:

> 'With regard to the standard of hygiene, at the dental practice we take extreme pride. As the owner of the dental practice, I had the dental practice purpose built for flow and efficiency with hygiene and sterilisation at the forefront of the brief.'

25. On 17 October 2019 Ms A saw Dr B for a check-up. Dr B told HDC that Ms A was not happy with the Essex splint, and again they discussed the pros and cons of an Essex splint compared with other types of partial plates. He said that he discussed the effects other types of partial dentures would have on the soft tissues and bone graft while healing.

Discussion of bone grafting

26. Dr B recorded that during the consultation on 17 October, Ms A said that she did not understand bone grafting, so he explained the procedure again. He said that he also gave her the option of not having the bone graft and advised her that in that case she would still have the same issues that she presented with and explained that her lack of bone was the

[5] A section of tissue is cut from the roof of the mouth and the tissue beneath the flap is extracted then attached to the gum tissue surrounding the exposed root.
[6] The metal base screwed into the implant to hold the crown onto the implant.
[7] Abraded or de-epithelialised the tissue.
[8] The band of tissue surrounding the teeth at the point where they meet the gums.

cause of her issues. In response to the provisional opinion, Ms A said that her options were not discussed with her.

27. The main types of bone grafts are autologous bone graft (bone harvested from the patient); allograft (human material donated by someone other than the patient); composite bone grafts (combination of different materials); and xenografts (derived from a non-human animal). Each option has different risks and benefits.

28. Ms A told HDC that again she was not provided with information about what type of bone graft Dr B would use. She said that she did not find out that it was a bovine bone graft until another dentist mentioned that to her later. She stated that when the implant was removed subsequently, the bone graft had granulated and spread into other parts of her gum. In response to the provisional opinion, Dr B told HDC that the bone grafting procedure was explained in 'great detail' at the IV consent appointment on 7 October 2019 (see paragraph 21). Dr B said that the products used are recorded in the clinical notes dated 4 December 2019, but he acknowledged that Bio Oss (bovine bone) is not specifically mentioned in the patient notes or in the handwritten annotations. He said that only 'sticky bone' is mentioned, and he acknowledged that he should have explained sticky bone in more detail.

Consultation 5 November 2019

29. On 5 November 2019 Ms A saw Dr B for a check of her soft tissues and the Essex splint. Dr B recorded that she was able to eat better but was still not happy, and that Ms A asked if the bone graft surgery could be done earlier instead of waiting the recommended eight weeks. Dr B recorded that he advised her that it could not be done earlier, as the tissue needed time to heal and to have strength. He said that again they went through the treatment plan, the healing process, and the need for time to heal, and he told her that the temporary crown was for smiles, not for eating. Dr B documented that he asked Ms A whether she still wanted IV sedation for the bone graft surgery, asked her about her escort home arrangements following the surgery, and confirmed the preoperative and postoperative instructions.

30. The following day, Ms A telephoned the practice and said that she no longer wanted IV sedation and would proceed with local anaesthetic.

Implant removal procedure 4 December 2019

31. Dr B told HDC that on 4 December Ms A was given preoperative Savacol mouthwash (2mg/ml chlorhexidine gluconate), which he said is standard practice pre- and post-procedure. However, there is no written record of mouth rinse being provided to Ms A prior to the surgery.

32. Topical anaesthetic gel was then put on cotton rolls and placed to numb the area before the local anaesthetic articaine was administered. Ms A then used more Savacol mouth rinse because the local anaesthetic tasted bitter.

33. Dr B stated (and the clinical records support) that while the anaesthetic was taking effect, he took a blood draw. The notes also state that a number 15 blade was used and a curette flap was made.

34. Dr B told HDC that he made a full thickness incision from the distal[9] tooth 11[10] around the gingival sulcus[11] of tooth 11 across the edentulous ridge[12] of tooth 21[13] and around the middle of tooth 22[14] to the outer side of tooth 22. The bone around the implant was then checked with a periodontal probe for bony defects and pockets and the implant was checked for fractures. No evidence of pus or infection was visible around the implant.

35. Dr B said that autogenous bone was collected from Ms A using a sterile bone scraper from above the apex of tooth 22 and from the anterior nasal spine area (the small bony protrusion between the front teeth and the nose). The bone was placed in a sterile dish with some sterile saline. Dr B's assistant then cut a PRF[15] membrane into small pieces and mixed them with the autogenous bone, Bio Oss, and LPRF[16] to create sticky bone. The sticky bone was packed around the exposed implant and the neighbouring buccal bone. A sterile cytoplast titanium-reinforced membrane was trimmed to cover the grafted site, and three titanium bone tacks were placed to hold the membrane in place. Most of the information in paragraphs 34 and 35 was not documented in the clinical notes. However, the components used in the graft[17] were documented in the clinical notes.

36. Dr B prescribed erythromycin (an antibiotic), ibuprofen (for pain), and prednisone (for swelling). He instructed Ms A to take two prednisone tablets on day one, two tablets on day two, and one tablet on days 3, 4, and 5.

Reviews

37. On 10 December 2019 Dr B reviewed Ms A and recorded that she was healing well but she was not wearing the partial denture. Dr B prescribed painkillers (ibuprofen 800mg SR) and gave her a medical certificate for five days off work. A review was planned for two days later, but Ms A cancelled the appointment because she was no longer sore.

38. At an appointment on 13 December 2019, Ms A told Dr B that she had smelly yellow fluid coming out of her gums. Dr B recorded that she had no fever, had finished the antibiotics, the swelling had gone down, and there was no bruising. Dr B also documented that Ms A's front teeth were sore to touch, and she thought that she had an infection there. She was

[9] Outer part.
[10] The upper left central incisor.
[11] The ridge in the mouth where the teeth meet the gums.
[12] The area where the tooth was missing.
[13] The upper left central incisor where the implant was placed.
[14] The upper left lateral incisor.
[15] Platelet rich fibrin.
[16] Leukocyte PRF.
[17] 'COMPONANTRY USED: PRF, BIO GUIDE 4CM BY 1 CM, BIO OSS ¼ SIZE SML & ¼ LARGE, CYTOPLAST TITANIUM REINFORCED, MEMBRANE X1, x 3 bone tacs placed on b side, PRF membranes x2.'

prescribed further antibiotics (erythromycin 400mg and metronidazole 400mg) and was advised to gargle with salt water and to use Savacol.

39. Ms A told HDC that Dr B failed to give her the correct antibiotics. Regarding his choice of antibiotics, initially Dr B stated: 'My go to choice of antibiotics is always Augmentin. There is nothing documented why this wasn't prescribed.' In response to the provisional opinion, Dr B told HDC that routinely before prescribing medications, he asks patients whether they have any allergies to antibiotics. He said that his recollection is that Ms A had an allergy to penicillin or that penicillin gave her a rash. He said: 'This is the only reason why I wouldn't prescribe augmentin.' Dr B acknowledged that there is no documentation in the clinical record to suggest that Ms A had an allergy to penicillin. However, he said that when he reviewed Ms A on 16 and 18 December there was no ooze or 'bad taste', which shows that the antibiotics appear to have dealt with the infection.

40. Between 4 and 19 December 2019 Dr B had four in-office consultations with Ms A to look at the site and assess the healing. On 16 December 2019 he documented that all was looking well, the tissue was closing, and no membrane was exposed. Dr B also recorded that there was no pus, no exudate, no bad taste, but some slight puffiness on the buccal area. He stated that Ms A wanted the site re-opened, and he advised her that this was not necessary. He recorded: 'Tissue is closing and membrane is not exposed. Patient to decide if want to open up again.' In response to the provisional opinion, Ms A told HDC that she went back to Dr B because she was feeling unwell and was experiencing burning and an 'uncomfortable feeling'. She said that this is when Dr B said that she could consider re-opening the site and removing the membrane, as it was 'probably the membrane that may be causing the discomfort'.

41. Dr B said that when he saw Ms A on 18 December, she was feeling better but still had some pain. She had no bad taste in her mouth and he considered that the site was healing well.

Procedure 19 December 2019

42. At 6.55am on 19 December, Dr B received a text from Ms A asking him to call her. The receptionist called Ms A, who wanted an appointment to re-open the site and remove the membrane.

43. Dr B said that he saw Ms A after hours on 19 December. He stated that he discussed the possible complications of re-opening the site, but she was very insistent that the membrane be removed. Dr B stated: 'In the end I abided by her wishes.' In response to the provisional opinion, Ms A told HDC: 'This is not correct … It was his only suggestion he gave me to remedy the issue.'

44. Dr B recorded that Ms A had decided that she wanted to open the site and remove the membrane. There is no record of the reason for Ms A's request. The clinical notes do not document Ms A's presenting symptoms on 19 December. In response to the provisional opinion, Ms A told HDC: '[Dr B] suggested the removal of the membrane[.] I agreed because he said that it will be the reason for the discomfort. He had no other options to offer me.'

45. Dr B told HDC that they discussed Ms A's situation and the pros and cons of re-entering the surgical site after only two weeks of healing, and he told her that the tissues would be fragile, and that she would have pain, swelling, and bruising if he did so. He said he told her that he would not know what he would find until he re-entered the site. Dr B said that he told Ms A that if he only cleaned out the site and did not re-graft at that time, she would need a bone graft in about three months' time. Dr B said that Ms A was 'not too keen' on that as it would take more time and she would need to keep wearing the partial denture, so they agreed to re-graft immediately. Dr B told HDC that he proceeded because Ms A was insistent that he remove the membrane.

46. Ms A told HDC that Dr B certainly did not mention that re-grafting at that stage would pose risks if there was an infection present. She stated that he was more concerned about his Christmas deadlines and functions.

47. Dr B stated that he cleaned and scraped the PRF membranes off the inside of the flap and found soft mushy tissue on the underside of the flap, which was pink in colour, rather than being deep red and infectious looking. He said that he cleaned out this tissue with curettes and scalers and flushed the area with sterile saline.

48. Dr B recorded: '[I]nfection tissue removed.' He told HDC that there was no pus or tissue on top of the graft, and the graft was quite hard on top and still soft in the deeper layers. He said that as a precaution, he removed the graft and cleaned the implant surface.

49. Dr B did not write up clinical notes about his treatment of the implant surface. He told HDC that he debrided the implant surface mechanically with implant curettes, small brushes, and sterile gauze, with copious amounts of sterile saline, and he applied chemical treatment with chlorhexidine gluconate.

50. Dr B told HDC that he collected autogenous bone from Ms A and mixed it with Bio Oss, finely chopped PFR, and LPRF to create sticky bone, and he placed a new bone graft and PRF membranes.

51. Following the procedure, Dr B prescribed ibuprofen 800mg SR x 14 and prednisone 5mg x 7 but no further antibiotics because Ms A was already on antibiotics.

Presentation to public hospital

52. On 20 December Ms A presented to the Emergency Department (ED) at a public hospital with increasing swelling to her upper lip and left cheek. Examination showed mild swelling but no signs of infection. An X-ray was normal, and she was discharged with advice to continue taking the medications and to return if she became more unwell.

Further reviews

53. On 23 December Dr B reviewed Ms A and recorded that there was some bruising along her incisor line (the front teeth) but otherwise the tissue was looking pink, and that he had reassured her.

54. On 24 December reception staff spoke to Ms A by telephone. They recorded that Ms A did not sound happy, and they advised her that if she was having trouble, she should either go to the hospital (as it was Christmas Eve) or see Dr C, another dentist in the practice, on the following Friday. The notes also state that Ms A was aware of emergency contact details on the answer phone.

55. On 26 December Ms A presented to the public Hospital ED, distressed with pain in her face. She was given paracetamol and ibuprofen and discharged. Ms A sent a text message to Dr B asking him to call her urgently. Dr B sent a message to Ms A that afternoon to ask how she was doing, and she responded that her blood tests were normal and that the clinicians at the hospital suspected that inflammation was the probable cause, but she would follow Dr B's protocol. In response to the provisional decision, Dr B acknowledged that he should have recorded these contacts in the clinical notes.

56. Dr B provided Ms A with a medical certificate on 23 December 2019. Ms A told HDC that in December she asked Dr B to write out an insurance claim, but he declined saying that she was 'okay, [and there was] no need to do that'. She said that she told him that she had no more sick leave and had started to use up her annual leave, but he did not seem to care and shrugged everything off, seemingly ignoring her. Dr B said that the process was that she should have downloaded and completed the relevant form, which he would then have countersigned. The clinical records show that Ms A called reception on 24 December 2019 requesting details of the insurance claim to apply for income supplement. The phone notes state '[d]etails given' but there is no information about exactly what was discussed. In response to the provisional opinion, Ms A said that Dr B did not tell her to download the forms or that he would countersign them.

57. On 27 December Ms A was seen by Dr C, who extended her medical certificate to 3 January 2020 and recorded that her gum looked 'ok'. On 3 January Dr C saw Ms A again and recorded that she was not feeling well, could taste a salty discharge, and felt sunken in the area below her nose. Dr C recorded: '[C]an't see swelling. No pus draining. Some inflammation areas around incision. Patient is rinsing a lot with salt water. Patient was advised to reduce and use savacol.' On 9 January Dr C reviewed Ms A and documented that she was feeling better and the tissue was not red. Dr C again advised her to reduce the salt rinses and to dab Savacol on the area daily until the sutures were removed.

58. On 13 January Ms A was seen by another dentist and the sutures were removed. The notes state that Ms A felt that there was a slow improvement. There was no sign of suppuration (pus), swelling, or infection. On 20 January Ms A was again seen by the dentist, who noted that the site looked normal and was 'healing well', but Ms A was upset and frustrated at the slow healing and was worried that the infection was back because her gums were going white and were tender and uncomfortable. Ms A was assessed, and no concerns were noted. The dentist advised Ms A that she was still healing.

59. Dr B provided HDC with several text message exchanges with Ms A. However, there are no entries in the clinical notes documenting the after-hours contact or the text messages detailing the antibiotics and medications prescribed to Ms A. Dr B agreed that the after-

hours conversations with Ms A and text messages should have been written in the clinical notes as soon as possible.

60. Dr B saw Ms A on 18 February as she was concerned about her progress. Dr B recorded that he reassured her that the site was healing and was looking good.

61. On 15 May Ms A's general practitioner (GP) referred her to an oral and maxillofacial surgeon at a public hospital, querying whether Ms A had an infected dental cyst. The referral notes that Ms A had swelling around her upper gums, persistent erythema[18] around the left paranasal region,[19] and a persistent abnormal taste in her mouth.

62. At an appointment with Dr B on 25 May, Ms A told him that she had had major health issues since the start of the repair of the implant bone. Dr B recorded that the site looked pink and healthy with good bone width. On 9 June Dr B uncovered the implant and placed a temporary crown and abutment. He said he advised Ms A that the temporary crown would be used to manipulate the tissues over time to achieve an aesthetic outcome, as if he went straight to a full-sized permanent crown, she could get tissue die-back.

63. By 16 July, Ms A thought she had swelling around the implant and tenderness and thickening. She saw Dr B, who recorded that the tissues were pink and there was no pus. On 5 August the temporary abutment and crown were loose, and Dr B removed them, cleaned the area with Savacol, and retightened them. Dr B documented that Ms A was not happy with the aesthetics of the temporary crown and said that it was tender, feeling irritated, and throbbed after eating and brushing. Dr B said that overall, Ms A thought that there was an issue with her teeth. Dr B recorded that he found no issues and reassured her. On 12 August Dr B removed the temporary abutment and crown, reshaped the temporary crown, and added composite to encourage papilla (triangle-shaped tissue between two teeth) growth. On 17 August, the temporary crown was again loose, so Dr B retightened it.

64. Ms A told HDC that when she expressed her concerns to Dr B, he said that she was not brushing her teeth properly or maybe the next tooth on the left side was just recovering from the procedure. She said that there were numerous times during 2020 when she was feeling unwell and she asked Dr B whether she had an infection, but he appeared to brush off her symptoms and be in denial that she felt unwell. She stated: 'I felt like he wasn't listening, [and I was] at a loss to know what was happening to my body.'

Public hospital

65. On 17 August 2020 Ms A was seen by the maxillofacial service at the public hospital. The specialist noted the presence of a soft tissue pocket, peri-implantitis,[20] and bone loss, and that there was 'large force put on [the] implant due to incorrect crown/implant ratio'. He noted a need to check whether the implant was still stable, and that possibly it would need to be removed. Ms A was referred to oral and maxillofacial surgeon Dr D.

[18] Reddening of the skin.
[19] The area adjacent to the nasal cavity.
[20] A destructive inflammatory process affecting the tissues surrounding dental implants.

66. In response to the provisional opinion, Dr B raised several issues with the examination undertaken at the public hospital, including that radiographs were not taken to determine the length or depth of the pocket. Dr B also said that peri-implantitis does not heal on its own (and was not identified in Dr D's subsequent review of Ms A).

Dr D

67. Dr D saw Ms A on 16 September and subsequently reported to a maxillofacial specialist at the public hospital that when he had seen her she was very frustrated and emotional. Dr D reported that her gingival tissues[21] were thick and without obvious pocketing, and there was tenderness of the thick labial gingiva[22] and sulcus. There was no mobility of the implant or tenderness to percussion, but there was loss of papilla around the implant. Dr D noted that the findings of a cone beam CT scan (CBCT) were consistent with a chronic infective change.

68. Dr D concluded that the implant had failed. He obtained approval from the insurance provider to remove the implant and debride the infected bone, following which he would place an upper plastic partial denture. He stated to the insurance provider: 'Given the problems [Ms A] has had, she may prefer not to have any other treatment, other than outlined above.'

69. Ms A told HDC that when the infected implant and surrounding bone in her jaw was removed, it left her with gum and bone shrinkage and stained teeth. She said that the bacterial infection had been left undiagnosed for over eight months, and it had taken a toll on her health.

70. Ms A told HDC that she was unable to replace the gap with a more permanent option, and the temporary plate had to be adjusted because of the ongoing swelling. She said that she could not wear the plate for longer than four hours per day because it pushed against the tender swollen roof of her mouth.

71. On 22 December Dr D reported to the maxillofacial specialist that Ms A had ongoing pain towards the base of her nose and the nasolabial angle. Previously she had thought that tooth 22 might be the cause of her pain but was then less certain about that. She was also experiencing a bad taste in the region of the sulcus, but there was no draining sinus. Dr D reported to the maxillofacial specialist that the CBCT was suggestive of a small amount of retained grafted material anterior to the left maxilla (jawbone), but there was no other obvious pathology.

72. Dr D corresponded with the insurance provider, which approved an examination under anaesthetic (EUA) and further debridement. Dr D subsequently conducted an EUA and debrided the left anterior maxilla, which looked clean and healthy and well vascularised.

[21] Gums.
[22] The gum towards the lips.

Further information

Dr B

73. Dr B told HDC:

> 'It is unfortunate [Ms A] has had to go through this. No one likes to see a patient struggle and their treatment not go to plan. Two other dentists and two hospital visits saw no infection. There was no suppuration (pus) evident. The specialist notes there was thick tissue with no pocketing, the implant was not mobile or percussion sensitive. His two radiographs showed nothing. Only a CBCT showed the issue. It seems there was a low grade bone infection … We are all disappointed and sorry for [Ms A] that she got an infection and did not get the desired outcome.'

Responses to provisional opinion

Ms A

74. Ms A was given the opportunity to respond to the 'information gathered' section of the provisional report. Where relevant, her comments have been incorporated into this report. In addition, Ms A told HDC:

> 'Today I still have burning, swelling and discomfort around the area where the implant use[d] to be. I suffer from headaches, brain fog and concentration issues. Coupled with very bad fatigue. I also couldn't go back to work and I ended up losing my employment. Four years on from then my life has never been the same.'

Dr B

75. Dr B was given the opportunity to respond to the provisional opinion. Where relevant, his comments have been incorporated into this report.

76. With respect to the consultation on 29 July 2019, when Ms A said that Dr B would not put through a claim with the insurance provider for her, he stated that they have strict criteria for implant replacement. He stated that Ms A fell outside the insurance provider's criteria for implant replacement, which is why he documented that the provider would be unlikely to 'come to the party'.

77. With respect to his clinical documentation, Dr B said that while he acknowledges that his notes should have been more detailed, the clinical photos taken throughout the treatment journey accurately portray a documented, real-time record of what was presented clinically.

Opinion: Dr B — breach

Introduction

78. From the time of the initial procedure on 4 December 2019, Ms A had concerns about her teeth. However, despite multiple reviews by Dr B, Dr C, another dentist at the practice, and clinicians at a public hospital ED, the bone infection was not recognised.

79. Dr B stated that the infection was not detected until Dr D conducted a CBCT in December 2020, which showed that there was a low-grade bone infection. However, I note that Ms A's GP was sufficiently concerned in May 2020 to refer her to a maxillofacial specialist, and when Ms A was seen at the public hospital on 17 August the maxillofacial service identified a soft tissue pocket, peri-implantitis, and bone loss. Further, on 19 December 2019, Dr B had recorded 'infection tissue removed'.

80. As part of my investigation of this complaint, I obtained independent clinical advice from general dentist Dr Lester Settle. Dr Settle advised that Ms A's ongoing symptoms were only weakly suggestive that the implant had failed, which could have led to Ms A's impression that she was not being listened to and added to her frustration and disappointment when the implant was removed. I agree, and I express my sympathy to Ms A for the extended period during which she experienced pain and anxiety about her progress.

81. I have considered the appropriateness of Dr B's overall clinical management of Ms A, including his follow-up and identification of infection and his escalation to specialist services. Dr Settle advised that postoperative infection is a well-recognised complication post grafting, and Dr B responded promptly when notified of a possible infection. Further, Dr Settle advised that overall, Dr B and the practice provided a good point of contact for Ms A, and therefore, in his opinion, Dr B's follow-up of Ms A was appropriate.

82. Regarding the overall standard of clinical care provided to Ms A, Dr Settle advised that Dr B demonstrated considerable skill, and, although the procedure failed, the treatment was within his scope. Dr Settle did not identify any departures in relation to this aspect of Dr B's care. With respect to the escalation to specialist services, Dr Settle considered that there was no need to escalate Ms A's care to a specialist.

83. Taking the above into account, I find that Dr B's overall management, follow-up, identification of infection, and escalation to specialist services was appropriate in the circumstances. Accordingly, the focus of my opinion will be on the appropriateness of the information provided to Ms A to allow her to make an informed choice on her treatment, the standard of Dr B's record-keeping, and his medication management.

Informed consent — breach

84. The Dental Council Standards Framework for Oral Health Practitioners states:

> 'Provide patients with oral health advice and treatment options relevant to their situation, and discuss associated benefits, likely outcomes and potential risks. Carefully balance the patient's oral health needs with the patient's wishes and be able to explain your approach to care, which could include declining to treat.'

Initial procedure and bone graft

Treatment options

85. On 29 July 2019 Ms A asked to have the implant removed and new one placed. Dr B told her that the insurance provider would not be likely to accept the claim for that, but if approved by the provider, it would require multiple surgeries and there would be at least 18 months

of treatment. The clinical record states: '[Dr B] advises [the insurance provider] most likely will not come to the party.' Dr Settle advised that this decision should have been left up to the insurance provider, and if the provider had approved a replacement implant, a more predicable treatment plan could have been developed. Ultimately, Ms A agreed to proceed with the bone graft. Dr Settle advised:

> 'The predictability of "creating" bone in the significant defect that was present is much lower than starting again, though this would have been a longer journey. If [Ms A] had this option presented to her she may have decided to apply and wait and see, rather than dismissing the option out of hand.'

86. I agree that Dr B should have informed Ms A of all options and the associated risks and side effects and should have assisted her in making a claim to the insurance provider (for the provider to accept or decline). This was information a reasonable consumer in Ms A's circumstances would expect to receive.

Information about treatment and associated risks

87. Dr Settle advised that this was a difficult case where success could never be guaranteed, and it would have had a considerable chance of failure. However, there is no indication in the treatment plan or in Ms A's records that this was explained to her. Ms A said that the only risk mentioned to her was that of infection, and Dr B did not tell her that there was a risk of failure. She said that Dr B led her to believe that the treatment was low risk. I acknowledge that Dr B documented that he went through the treatment plan with Ms A on 27 September 2019 and that she understood the risks and pros and cons. However, neither the clinical notes nor the treatment plan contain a discussion of the fact that there was a risk of failure from the treatment or that infection could also create a risk of failure.

88. Ms A had the right to be informed of the risks of the proposed treatment. Although the treatment plan was discussed with Ms A, it is unclear how well she understood what Dr Settle refers to as a complicated plan. The appointment notes on 17 October 2019 state that Ms A had said that she did not understand what a bone graft was and that she would not have gone ahead with the treatment if she had known that she would be having a bone graft. Dr Settle stated that this aspect of the treatment was critical to the proposed treatment plan, and it was essential that there was clear understanding by the patient. I agree.

89. Although the treatment plan states 'bone graft', it does not state the materials to be used for the bone graft. Dr B told HDC that the materials used are documented in the clinical notes on 4 December, but this was at the time of the procedure and Ms A would not have been aware of these details. Dr B also provided HDC with an unsigned Implant and Periodontal Treatment Information and Consent document that contains an explanation of the surgery, and the materials used. However, there is no copy of that document in Ms A's records, and no evidence that it was given to her. I also note that Ms A told HDC that she does not recall being given a copy of the form.

90. Ms A stated that she did not find out that she had received bovine bone grafts until another dentist mentioned it to her later. The type of bone graft is not specifically mentioned in the notes (other than the entry on 4 December — during the procedure). I note that Dr B said that sticky bone is mentioned in the notes, but he acknowledged that he should have gone into more detail about sticky bone. In any event, it is clear that it was not explained to Ms A clearly that bovine bone grafts would be used in the treatment. This is information I consider a reasonable consumer in Ms A's circumstances would expect to receive.

91. Taking into account the above, I find it is more likely than not that Ms A was not informed about the type of graft to be used, or the risk that the graft could fail. A reasonable consumer in Ms A's circumstances would expect to be informed that bovine material was to be implanted in her body, and I consider that she was not informed of this sufficiently, or of the risks associated with that treatment plan. Accordingly, Ms A was not in a position to make an informed choice and give informed consent.

Re-opening of site/further procedure

92. On 19 December 2019 Dr B recorded that Ms A had decided that she wanted to have the site opened and the membrane removed. There is no record of the reason for that decision. In response to the provisional opinion, Ms A told HDC that she went back to Dr B because she was feeling unwell and was experiencing burning and an 'uncomfortable feeling'. She said that Dr B said she could consider re-opening of the site and removal of the membrane, as it was 'probably the membrane that may be causing the discomfort', and it was the only option he provided to her.

93. Dr B told HDC that he proceeded because Ms A was insistent that he remove the membrane; however, the notes indicate that Dr B believed that the site was healing and Ms A said that she wished to have the membrane removed based on Dr B's opinion that it was likely the membrane causing pain and that there were no other options available to her.

94. Dr Settle advised that if the graft site had been showing continued signs of infection, removing the failed graft would have been good practice as it would have harboured bacteria that would have been very difficult to overcome. Dr Settle said that in that case, the site should have been left to heal, as re-grafting in the presence of infection is a highly risky procedure and normally would not be undertaken.

95. Dr B told HDC that he discussed Ms A's situation with her, including the pros and cons of re-entering the surgical site after only two weeks of healing, and he told her that the tissues would be fragile and she would have pain, swelling, and bruising if he did so. Ms A's recollection is that Dr B did not discuss the risk of re-grafting if infection was present, and there is no record that he did so. In my view, the risk of infection was information that Ms A needed before deciding whether to proceed. Dr B re-opened the surgical site and removed the original graft, titanium membrane, covering membrane, and holding tacks, then performed another bone graft. Dr B recorded: '[I]nfection tissue removed.' He told HDC that he removed the graft as a precaution and cleaned the implant surface.

96. I note that there are differences in the account given by Dr B and that of Ms A about why the site was re-entered. Due to the lack of contemporaneous evidence, I am unable to make a finding on why the site was re-entered and at whose suggestion. In any event, I do not consider this finding to be material to my decision on whether Ms A was advised appropriately about the risks associated with re-grafting at that time.

97. Although Dr B said that he re-entered the site at Ms A's request (which Ms A disputes) and had documented that he considered that the site was healing, he also recognised that there was some possibility that infection was present and decided to re-enter and re-graft the site as a precaution. Dr Settle advised that it is risky to re-graft over potential infection. In my view, as Dr B recognised that there was some possibility that infection was present, he should have informed Ms A of the risks associated with re-grafting at that time and recorded his discussion of this conversation in the clinical notes.

Conclusion

98. I consider that Dr B failed to provide Ms A with the information she needed to make informed choices about her treatment, for the following reasons:

- He failed to inform Ms A of all options and the associated risks before she proceeded with the initial procedure and bone graft.
- He failed to inform Ms A about the type of graft to be used, or the risk that the bone graft treatment could fail.
- He failed to inform Ms A about the risks associated with re-grafting the site on 19 December when he recognised that there was some possibility that infection was present.

99. Right 6(2)[23] of the Code of Health and Disability Services Consumers' Rights (the Code) stipulates that before making a choice or giving consent, every consumer has the right to the information that a reasonable consumer, in that consumer's circumstances, needs to make an informed choice or give informed consent. For the reasons outlined above, I consider that Dr B failed to provide Ms A with the information that she needed to make informed choices about her treatment and, accordingly, breached Right 6(2) of the Code. It follows that Ms A did not give informed consent to the initial bone graft procedure and the further procedure on 19 December, and I find that Dr B also breached Right 7(1)[24] of the Code.

[23] Right 6(2) states: 'Before making a choice or giving consent, every consumer has the right to the information that a reasonable consumer, in that consumer's circumstances, needs to make an informed choice or give informed consent.'

[24] Right 7(1) states: 'Services may be provided to a consumer only if that consumer makes an informed choice and gives informed consent, except where any enactment, or the common law, or any other provision of this Code provides otherwise.'

Records — breach

100. The Dental Council 'Standards Framework for Oral Health Practitioners' states: 'You must maintain accurate, time-bound and up-to-date patient records.' In my view, Dr B's records are incomplete in several respects.

101. There is no record of the provision of a pre-procedural mouth rinse on 4 December 2019. However, Dr B told HDC that his standard procedure was for every patient to have pre- and post-procedural Savacol mouth rinses, and Ms A did receive the mouth rinse.

102. Dr B also failed to document the details of the procedure on 4 December, or his assertion that there was no evidence of pus or infection around the implant.

103. No mention is made in the notes of how the exposed implant surface was treated during the procedure on 19 December 2019. Dr Settle stated that the earlier notes mention that there were no signs of infection and the reason given for lack of bone was the poor positioning of the implant. He stated that as the exposed implant threads would be contaminated, the expected practice would be to spend some time cleaning them as much as possible. Dr B told HDC that the implant surface received mechanical debridement with implant curettes, small brushes, and sterile gauze, with copious amounts of sterile saline, and also chemical treatment with chlorhexidine gluconate. However, he did not complete clinical notes for the treatment of the implant surface.

104. As stated above, there is no record of why the re-entry on 19 December 2019 was undertaken. The notes state that this was at Ms A's request (contrary to Ms A's recollection) but do not clarify why the request was made.

105. Regarding his choice of antibiotics, Dr B said: 'My go to choice of antibiotics is always Augmentin. There is nothing documented why this wasn't prescribed.' In response to the provisional opinion, he said that he recalls that Ms A had an allergy to penicillin. However, I note that if departing from the standard practice, clinicians should document the rationale for their decision.

106. After the procedure on 19 December 2019, the patient notes contain no entries explaining the instances of after-hours contact between Ms A and Dr B, and the antibiotics and medications that were prescribed to Ms A (aside from them being listed as prescriptions in the medical record). Dr Settle advised that this would constitute a minor departure from accepted practice. While I accept this advice, I am concerned that it was not the only instance of poor documentation by Dr B.

107. I also note Dr B's failure to record any of the after-hours contact he had with Ms A (including the text messages that he provided to HDC) in the clinical records, which he accepted should have been done as soon as possible.

108. I acknowledge Dr B's comments that he considers that the clinical pictures taken throughout treatment accurately portray a documented, real-time record of what was presented clinically. However, I do not agree that the clinical photos replace the need for detailed and up-to-date clinical records.

109. In my view, Dr B's clinical notes did not accurately record the provision of a pre-procedural mouth rinse, the 4 December procedure details, how the exposed implant surface was treated during the 19 December 2019 procedure, the decision to depart from his usual choice of antibiotic, or the after-hours contacts and text message record of 20 December detailing the antibiotics and medications prescribed to Ms A on 19 December 2019. Accordingly, I consider that Dr B's record-keeping was not of the standard expected by the DCNZ Standards Framework for Oral Health Practitioners, and, cumulatively, the failings amount to a breach of Right 4(2)[25] of the Code.

Medication management — educational comment

110. Dr B did not prescribe prophylactic antibiotics prior to the commencement of the treatment. He said that Ms A was fit and healthy with no underlying medical conditions and had excellent oral hygiene with no periodontal disease, and she was not keen on taking prophylactic antibiotics. Dr B said that he informed her of the risks if she did not do so and, as the site had no infection, he did not prescribe prophylactic antibiotics. This discussion is mentioned in the clinical notes.

111. Dr Settle advised that prophylactic antibiotic cover is much more effective at preventing postoperative infection (than postoperative antibiotics) and is better antibiotic stewardship. I accept this advice but also note that Dr B documented that Ms A did not want prophylactic antibiotics and understood the risks of not taking them.

112. On 4 December 2019 after the first procedure, Dr B prescribed the antibiotic erythromycin, along with ibuprofen (for pain) and prednisone (for swelling).

113. At an appointment on 13 December 2019 Ms A told Dr B that she had smelly yellow fluid coming out of her gums. Dr B recorded that she had no fever and had finished the antibiotics. Her front teeth were sore to touch, and she said she thought that she had an infection. Dr B prescribed further antibiotics (erythromycin 400mg and metronidazole 400mg) and advised Ms A to gargle with salt water and to use Savacol.

114. Regarding his choices of antibiotics, Dr B said: 'My go to choice of antibiotics is always Augmentin. There is nothing documented why this wasn't prescribed.' In response to the provisional opinion, Dr B said that he asks patients if they have any medication allergies prior to prescribing antibiotics. He said he recalls Ms A advising that she had an allergy to penicillin. He said this is the only reason why he wouldn't prescribe Augmentin. Dr B acknowledged that there is no documentation to indicate that Ms A had an allergy to penicillin.

115. Dr Settle advised that postoperative infection is a well-recognised complication of bone grafting, and he considered that Dr B prescribed an unusual combination of antibiotics. Dr Settle stated that there was a bacteriostatic antibiotic combined with a bactericidal antibiotic (metronidazole), which targets a specific type of bacteria. He stated that a better

[25] Right 4(2) states: 'Every consumer has the right to have services provided that comply with legal, professional, ethical, and other relevant standards.'

combination would have been amoxycillin and/or Augmentin instead of erythromycin, as both are penicillin-based antibiotics with a broader range of activity.

116. Furthermore, Ms A had already been prescribed a course of erythromycin post-surgery. Dr Settle stated that when infection occurs shortly after a course of antibiotics, usually a different antibiotic is prescribed, as the previous course of antibiotics would have selectively 'weeded out' bacteria susceptible to erythromycin, leaving resistant bacteria. He said that erythromycin is a macrolide antibiotic that is bacteriostatic, which means that it stops the replication of the bacteria it works against but does not actively kill the bacteria. He stated that erythromycin is a poor choice for oral infections because of its weak action and the limited range of bacteria it is effective against. Dr Settle advised that Dr B's choice of antibiotics was a mild departure from the accepted practice and standard of care. While I acknowledge Dr B's comments that he recalls Ms A had an allergy to penicillin, this was not documented in the clinical notes and there is no evidence to suggest that Ms A did in fact have an allergy to penicillin. Accordingly, I agree that the choice of antibiotics was poor and note that Dr B accepts that these were not the usual antibiotics he would prescribe.

117. Dr Settle advised that ibuprofen is a well-recognised anti-inflammatory and it was an appropriate medication in this situation. He noted that prednisone is a corticosteroid used to reduce swelling, which is best given just before surgery, and that 40mg is the recommended minimum effective dose. Despite the prednisone being prescribed at 5mg post-surgery, Dr Settle considered that Dr B's use of ibuprofen and prednisone was of an acceptable standard.

118. I encourage Dr B to reflect on Dr Settle's comments in this regard.

Changes made

119. Dr B stopped practising dentistry in June 2021 due to a medical condition.

120. Dr B said that his clinical notes for the treatment of the implant surface were not fully written up, and this area of clinical notes was changed so that the notes were more expansive. He stated that he was very conscious of recording the treatment procedure notes in more detail and took more clinical photos during procedures.

121. Dr B told HDC that after receiving the complaint, he and the dental practice reviewed all clinicians' note-taking.

122. Consent forms were being reviewed and updated when Dr B stopped practising.

Recommendations

123. I recommend that Dr B apologise to Ms A for the criticisms in this report. The apology is to be sent to HDC within three weeks of the date of this opinion, for forwarding.

124. I recommend that should Dr B return to dental practice, before obtaining a practising certificate, he undertake additional education on record-keeping, informed consent, person-centred care, and effective communication with health consumers and complete the HDC online modules for further learning (https://www.hdc.org.nz/education/online-learning/). Evidence of attendance at related training and completion of the online modules is to be provided to HDC.

Follow-up actions

125. A copy of the sections of this report that relate to Dr B will be sent to the Dental Council of New Zealand.

126. A copy of this report with details identifying the parties removed, except the independent advisor on this case, will be sent to the Institute of Dental Implants & Periodontics, Health New Zealand|Te Whatu Ora Te Toi Tokerau, and the Dental Council and placed on the Health and Disability Commissioner website, www.hdc.org.nz, for educational purposes.

Appendix A: Independent clinical advice to Commissioner

The following independent advice was obtained from general dentist Dr Lester Settle:

'**RE: Case C21HDC00195**

I have been asked by you to provide an opinion to the Commissioner on case number C21HDC00195.

I have read and agree to follow the Commissioner's Guidelines for Independent Advisors and I am not aware of any conflicts of interest.

I am a New Zealand trained general dentist, graduating in 1988. I have owned my own practice since 1995. In 2010 I became the Clinical Director of the Hospital Dental Service, Christchurch Hospital, splitting my time evenly between both locations. I am currently also a Fellow of the International College of Dentists (FICD).

I have been provided with the following information:

1. Letter of complaint dated 28 January 2021.
2. [The dental practice's] response dated 26 March 2021.
3. Clinical records from [the practice] covering the period 17 July 2019 to 17 August 2020.
4. Photo and x-ray album for [Ms A].
5. [The dental practice] supporting documents A to M.

Answer to the best of my ability the following questions:

1. Whether the dental procedure performed on 4 December 2019 on [Ms A] was performed with reasonable care and skill.
2. Whether post-operative care after the 4 December 2019 procedure was appropriate.
3. Whether the dental procedure on 19 December 2019 was performed with reasonable care and skill.
4. Whether post-operative care after the 19 December 2019 was appropriate.
5. Any issues of concern in the re-screwing of the temporary tooth.
6. Whether there was appropriate assessment, treatment and management of [Ms A's] infection.
7. Whether [Dr B] communicated with [Ms A] appropriately during 2019 and 2020 in relation to risks, complications and the type of bone graft that could be used.
8. Whether [Dr B] should have escalated [Ms A's] care to a specialist.
9. Any other matters in this case that you consider warrant comment or amount to a departure from the expected standard of care.

In answering the above questions, the following parameters are to be answered:

1. What is the standard of care/accepted practice?

2. If there has been a departure from the standard of care or accepted practice, how significant a departure (mild, moderate, or severe) do you consider this to be?
3. How would it be viewed by your peers?
4. Recommendations for improvement that may help to prevent a similar occurrence in future.

Essential tenants of the case

The complainant, [Ms A] had an implant supported crown placed in tooth 21 (upper left central incisor) sometime in 2009, by [the specialist periodontist] … This treatment was approved by [the insurance provider], as the tooth had previously been injured in 1978.

When [Ms A] presented to [Dr B], the complaint, on the 29/07/2019 there was a two-year history of issues with regards to the implant supported crown. Care was provided by [Dr B] to address the issues associated with the implant crown, which eventually failed, with the implant and crown being removed by [Dr D], an Oral and Maxillofacial surgeon on the 13/10/2020.

The complaint centres on the events between July 2017 and October 2020.

Opinion

Question 1. Whether the dental procedure performed on 4 December 2019 on [Ms A] was performed with reasonable care and skill?

I have no way, after the fact, or from the information provided to answer this question with a high level of certainty. The pictures taken after the procedure indicate an advanced level of skill. This would tend to support the position this procedure was performed with reasonable skill; however, care is a subjective judgement which could only be commented on if the procedure is watched.

Indirect evidence would tend to suggest [Dr B] has an advanced level of skill, as he is approved by [the insurance provider] to provide surgical implant care for [the insurance provider's] patients. The ability to do this had to be proven to [the insurance provider], which was a quite detailed and exhaustive procedure, that has been discontinued.

Actions and lack of actions that may indicate a reduction in skill. No pre-procedural mouth rinse noted in records. A one-minute rinse with a chlorhexidine is good practice. No prophylactic antibiotics were prescribed or administered. Prophylactic antibiotic cover is much more effective at preventing post operative infection than post operative and is better antibiotic stewardship.

No mention is made in the notes of how the exposed implant surface was treated. Previously in the notes it mentions there were no signs of infection and reason given for lack of bone labial to the implant was poor positioning. The exposed implant threads are still contaminated, and the expected practice would be to spend some time cleaning the exposed threads, as much as is possible.

Choice of post-operative medications, erythromycin, ibuprofen and prednisone. Ibuprofen is a well-recognised anti-inflammatory and appropriate medication in this situation. Erythromycin is a macrolide antibiotic, that is bacteriostatic. This means it stops the replication of the bacteria it works against but does not actively "kill" the bacteria. It is a poor choice for oral infections because of its weak action and the limited range of bacteria it is effective against. Note also previous comment re prophylactic antibiotics. Prednisone is a corticosteroid used to reduce swelling. Again, general recognition is that this is best given just before surgery and in higher doses, 40mg is the recommended minimum effective dose.

For the reasons outlined above I would constitute this as a minor departure from accepted standard of care.

Recommendations would be to review antibiotic mode of actions, spectrum of effectiveness and use in preventing infection after surgery, i.e. prophylactic antibiotics versus post operative antibiotics. Secondly to review the use of and timing of corticosteroids in the surgical setting.

Question 2. Whether post-operative care after the 4 December 2019 procedure was appropriate?

[Ms A] was contacted the day after surgery (5/12/19) by the practice, a good protocol to undertake.

On the 10th of December (in the notes recorded as the 12th of December) a post operative review was undertaken. At this appointment a further script for pain relief was given. On the 13th [Ms A] was seen again as she was complaining of discharge from the surgical site. At this appointment a prescription for antibiotics was prescribed (metronidazole and erythromycin).

Post-operative infection is a well-recognised complication post grafting and [Dr B] responded promptly when notified of possible infection. The choice of antibiotics prescribed is an unusual combination. You have a bacteriostatic antibiotic (see previous comments) combined with a bactericidal antibiotic (metronidazole) which targets a specific type of bacteria. [Ms A] is not allergic to penicillin so a better combination would be amoxycillin and or Augmentin (amoxycillin + clavulanic acid) instead of erythromycin. Both suggestions are penicillin-based antibiotics with a broader range of activity and are bactericidal. Secondly [Ms A] had already been prescribed a course of erythromycin post-surgery. When infection occurs shortly after a course of antibiotics a different antibiotic is usually prescribed as the previous course of antibiotics would have selectively "weeded out" antibiotics susceptible to erythromycin leaving resistant bacteria.

I would classify this as a mild departure from the accepted practice and standard of care.

Post-operative reviews were carried out on the 16/12/19 and improvement was noted and a repeat script for both antibiotics given. Again, on the 18/12/19 a check consultation was undertaken.

The standard of care and accepted practice for this question indicates a minor departure from expected, mainly in relation to the choice of antibiotics.

Recommendation — see question one, re antibiotic use.

Question 3. Whether the dental procedure on 19 December 2019 was performed with reasonable care and skill?

On the 19/12/19 the surgical site was opened back into and the original graft, titanium membrane, covering membrane and holding tacks removed. Following this another grafting procedure was performed.

I am unable to discern why this procedure was undertaken. In the notes it states this was at the patient's request, however the notes do not elaborate on why this request was made. If the graft site was showing continued signs of infection, removing the failed graft is good practice as it harbours bacteria and is very difficult to overcome. If it was improving as the notes state this would be an unusual request.

Grafting in the presence of infection is a highly risky procedure and would not normally be undertaken. The usual procedure would be to remove the infected graft, let the site heal fully then try again.

For the above reasons I consider this to be two moderate departures from expected standard of practice. The detail around the informed consent/decision making needs much greater depth.

Recommendations would be for notes to more fully explain why a decision was made to remove the graft and why a new graft was performed at the same time, when there was possibly infection still present.

Question 4. Whether post-operative care after the 19 December 2019 was appropriate?

The practice rang [Ms A] on the 20/12/19 and there was a follow up review on the 23/12/19 by [Dr B]. The next contact noted in the patient record was on the 3/1/20 by a practice associate and again on the 9/1/20 by the same practice associate. Then another practice associate reviewed [Ms A] on the 13/01/20 and 20/01/20. Finally, [Dr B] saw [Ms A] on the 18/02/20.

There was contact between [Dr B] and [Ms A] via text messaging, with a print out of texts provided, covering the period 19/12/19 to 26/12/19. A script was provided for "different antibiotics" on or around the 24/12/19.

This is a difficult time of the year for easy patient follow up, but the practice and [Dr B] overall provided a good point of contact, therefore in my opinion the care over this time was appropriate.

My only concern is that the patient notes do not have any entries explaining the afterhours contact and more critically what antibiotics and medications were prescribed. This would constitute a minor departure from accepted practice.

Recommendation would be for a summary of afterhours conversations and texts to be entered into the patient notes as soon as convenient.

Question 5. Any issues of concern in the re-screwing of the temporary tooth?

The temporary crown provided by [Ms A] is to help facilitate soft tissue growth to maximise aesthetics (appearance of the soft tissues). These crowns are held in place with a temporary screw which is not tightened to the same torque (resistance) as a permanent crown and because of this they can become loose from time to time. Pictures provided show good progress to an improved soft tissue profile.

I believe the standard of care in this instance meets expected standards.

Question 6. Whether there was appropriate assessment, treatment, and management of [Ms A's] infection?

Comments regarding this question have been covered previously, with comments with regard to antibiotic choices.

Question 7. Whether [Dr B] communicated with [Ms A] appropriately during 2019 and 2020 in relation to risks, complications and the type of bone graft that could be used?

From reading all the information provided I believe there was some lack of understanding by [Ms A]. Though appointments indicate time was taken for informed consent and major topics covered I am not sure how well [Ms A] understood this complicated treatment plan. The appointment notes on the 17/10/19 encapsulate this clearly "[Patient] did not understand what a 'bone graft' was and said she wouldn't have gone ahead with treatment if she knew this was part of it."

This aspect of the treatment is critical to the proposed treatment plan and it is essential that there is clear understanding by the patient.

This then leads into the second part of the question, re the type of bone graft. The type of bone graft is not specifically mentioned in the notes. Therefore, I take it that no discussion on the type of graft to be used was undertaken.

I have asked a few colleagues if they routinely discuss the type of graft to be used and opinion was divided. However, on further discussion could see the importance of this.

I think these two factors combine to indicate there has been a departure from the expected standard of care in the mild to moderate range as there is evidence of consent discussions.

Recommendation for this question would be in potentially complicated treatment plans or where there are communication and or understanding difficulties a detailed treatment letter may help with informed consent and understanding.

Question 8. Whether [Dr B] should have escalated [Ms A's] care to a specialist?

In my opinion [Dr B] has demonstrated considerable skill in some of the procedures, is recognised by [the insurance provider] (able to place implants for [the provider]), which again indicates advanced skills and training. Even though the procedure failed I believe the care was within his scope. Initially an offer to go back to the original specialist was declined.

If an offer to see a specialist when symptoms were continuing is a possibility this is not noted with the patient records. Where there is improvement towards the desired outcome and no symptoms outwardly to indicate infection considering a referral for a second opinion is a tough call. Though in hindsight could have been undertaken.

Overall, I believe there was no need to escalate care to a specialist, but a good consenting process and letter would help to stop this being an issue.

Question 9. Any other matters in this case that you consider warrant comment or amount to a departure from the expected standard of care?

On the 29/07/19 the clinical record states "[Dr B] advises [the insurance provider] most likely will not come to the party". I would have preferred this decision to have been left up to [the insurance provider]. If they had approved a replacement implant, I believe a more predicable treatment plan could have been discussed. The predictability of "creating" bone in the significant defect that was present is much lower than starting again, though this would have been a longer journey. If [Ms A] had this option presented to her she may have decided to apply and wait and see, rather than dismissing the option out of hand.

<u>Summary</u>
My overall impression of this case is that that there was no serious departure from expected standards. This was a difficult case where success could never be guaranteed and indeed would have a considerable chance of failure. Secondly the ongoing symptoms were not a clear-cut failure and only weakly suggestive of failure, so led to the impression by [Ms A] she was not being listened to. Adding to her frustration and disappointment when the implant was removed.

Close inspection of the case has highlighted areas where change could be beneficial but overall indicates a good standard of care.

Yours sincerely

Lester Settle BDS FICD'

Addendum

'You have requested I comment on the additional information supplied by [Dr B], which I have agreed to do. The questions to be considered are listed below.

1) Whether [Dr B] and [the dental practice's] comments change any aspects of your initial advice;
2) Whether there are any other matters in this case that you consider warrant comment; and
3) Any further recommendations that you could think of for future improvements at [the dental practice].

Whether [Dr B] and [the dental practice's] comments change any aspects of your initial advice

I will refer back to my report and address how the information may alter the report. To keep this report logical each "question" in my report will be addressed, with any changes or comments noted.

Whether the dental procedure performed on 4 December 2019 on [Ms A] was performed with reasonable care and skill

[Dr B's] response to this covers many of these areas I commented on, the pre-procedural mouth rinse, and how the implant surface was decontaminated/cleaned, use of steroids and antibiotic use. His response demonstrates he was following evidence based protocols, with regards to pre-procedural mouth rinse and implant surface treatment. With regards to his choice of steroid I can understand his reasoning for this decision including the doses prescribed. While this may not be my usual protocol/choice with the extra information provided I would not have commented on this choice and would place this in the category of acceptable standard of care. With regard to antibiotic choice, no further explanation is given. When taking the further information into account I would change my report to state this was an acceptable standard of care.

Question 2. Whether post-operative care after the 4 December 2019 procedure was appropriate? The extra information provided does not alter my initial report in any substantive way.

Question 3. Whether the dental procedure on 19 December 2019 was performed with reasonable care and skill? The extra information provided addresses the concerns raised in the report. The main issue I raised was grafting in the presence of possible infection. From the additional information provided it is a reasonable decision making process to re-graft the site, especially as this could result in a significant saving in time for [Ms A].

Question 4, 5, and 6 The extra information provided does not change my initial report in any significant way.

Question 7. Whether [Dr B] communicated with [Ms A] appropriately during 2019 and 2020 in relation to risks, complications and the type of bone graft that could be used? The

extra information provided significantly alters my report. The informed consent document gives a well thought out explanation of the surgery and materials used. Likewise the writing on the treatment plan document would support the evidence to support an informed consent discussion. I do note the example of the implant informed consent form is not a signed copy, if a signed copy can be demonstrated I would change my report to state "all practical steps [to] achieve informed consent have been taken and no departure from expected care noted".

Question 8. Whether [Dr B] should have escalated [Ms A's] care to a specialist? No change to this answer.

Question 9. Any other matters in this case that you consider warrant comment or amount to a departure from the expected standard of care?
I still believe leaving the decision to [the insurance provider] as to a new replacement implant would be the correct approach, as this would add more information to the informed consent discussion. However attempting to extend the life of the implant with grafting is a much less invasive procedure and in attempting to do "no harm" removing an implant has a much bigger risk profile.

Whether there are any other matters in this case that you consider warrant comment;
The extra information provided does show a high level of care and detail to achieve hygiene standards expected during implant surgery. This may help address one of the issues raised in the complaint re "hygiene standards". The protocols used during the surgery itself, with the extra information provided does also indicate a desire to provide a high level of care throughout the procedure.

Any further recommendations that you could think of for future improvements at [the dental practice]?
My impression is that [the dental practice] have been very thorough in their response to the complaint and subsequent report and looked critically at the procedures and protocols and made thoughtful changes. Therefore I have no additional changes to suggest. With the extra information provided many of the points I raised in the initial report would not be relevant. The only major point I do think remains relevant regards the choice of antibiotics and in my opinion this could only be classed as a minor departure from expected care.

Kind regards
Lester Settle'

Appendix B: Treatment plan

Treatment Plan

1) Appointment to go over treatment plan
   Time: 15 minutes
   Cost: No Charge

2) Do you want sedation? There will be private fees if yes as [the insurance provider] does not cover sedation costs. Cost: $50 Oral sedation or from $600 for IV Sedation.

3) Impressions appointment
   Time: 15 minutes
   Cost: No charge at this appointment

4) Remove crown and abutment. Place cover screw and score the gum. Fit partial plate - Essics
   partial.
   Time: 45 Minutes
   Cost: $350 top up fee for partial, removal of crown and abutment.

5) Leave 8 weeks for healing

6) Bone graft
   Time: 2 hours
   Cost: No cost at this appointment

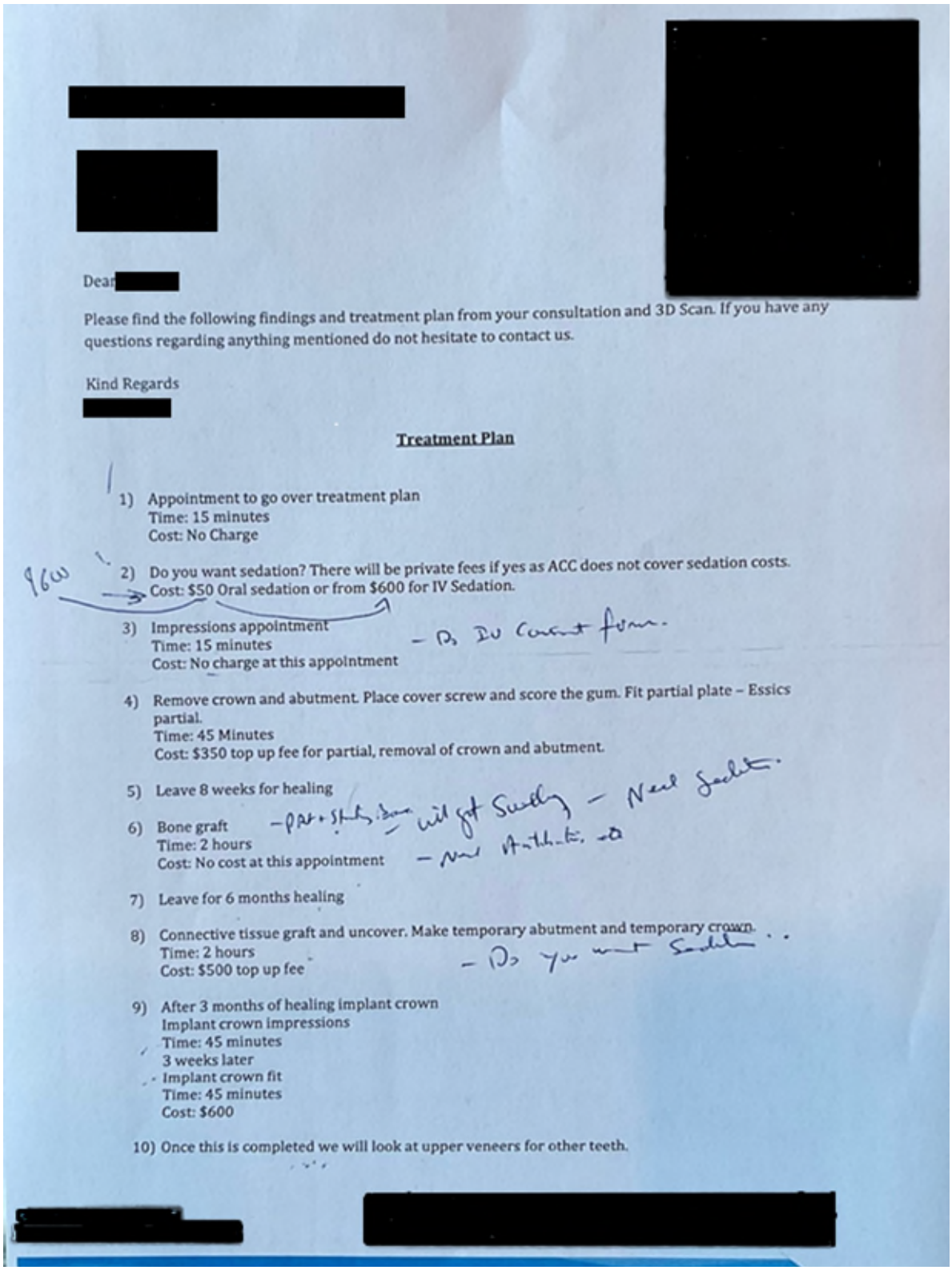
7) Leave for 6 months healing

8) Connective tissue graft and uncover. Make temporary abutment and temporary crown.
   Time: 2 hours
   Cost: $500 top up fee

9) After 3 months of healing implant crown
   Implant crown impressions
   Time: 45 minutes
   3 weeks later
   Implant crown fit
   Time: 45 minutes
   Cost: $600

10) Once this is completed we will look at upper veneers for other teeth.

Appendix C: Annotated treatment plan



[redacted]

[redacted]

[redacted]

Dear [redacted]

Please find the following findings and treatment plan from your consultation and 3D Scan. If you have any questions regarding anything mentioned do not hesitate to contact us.

Kind Regards

[redacted]

Treatment Plan

1) Appointment to go over treatment plan
   Time: 15 minutes
   Cost: No Charge

2) Do you want sedation? There will be private fees if yes as ACC does not cover sedation costs.
   Cost: $50 Oral sedation or from $600 for IV Sedation.

3) Impressions appointment
   Time: 15 minutes
   Cost: No charge at this appointment

4) Remove crown and abutment. Place cover screw and score the gum. Fit partial plate – Essics partial.
   Time: 45 Minutes
   Cost: $350 top up fee for partial, removal of crown and abutment.

5) Leave 8 weeks for healing

6) Bone graft
   Time: 2 hours
   Cost: No cost at this appointment

7) Leave for 6 months healing

8) Connective tissue graft and uncover. Make temporary abutment and temporary crown.
   Time: 2 hours
   Cost: $500 top up fee

9) After 3 months of healing implant crown
   Implant crown impressions
   Time: 45 minutes
   3 weeks later
   Implant crown fit
   Time: 45 minutes
   Cost: $600

10) Once this is completed we will look at upper veneers for other teeth.

[redacted]

[redacted]

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

Appendix D: Information sent to insurance provider

D

29th August 2019

To [redacted]

1. 21 Implant place 2009
   Patient has pain in implant area, tender around gum, gingival area has been throbbing. Not happy with the size, length and width of crown or shade of crown or the recession that occurred.

   Clinically
   - Shade is poor
   - Thin bio type
   - Tender on buccal gingiva
   - Recession, abutment is exposed
   - Shape and size is unsightly

CBCT shows, a long well integrated implant

- Loss of bone buccal on implant

Treatment

1. Remove abutment and crown. Place cover screw and do a connective tissue graft and fit temporary partial denture.
2. Wait 6 – 8 weeks for healing.
3. Raise flap and place a level 3 bone graft and bury implant and leave for 6 months.
4. After 6 months uncover
5. New abutment and crown

[redacted]

emailed 04/09 D

[redacted]

Request for Prior Approval of Simple Dental Treatment

"This form should be completed as a request for [redacted] to confirm cover, entitlement or contribution to dental treatment."

[redacted]

CLIENT DETAILS

[redacted]	Date of injury: 9-8-1978	Date of birth: [redacted]	
Client's surname: [redacted]	Client's first name: [redacted]		
Address: [redacted]			

CURRENT CONDITION *Please attach diagnostic evidence to help [redacted] make an informed and timely decision.*

Please describe damage to teeth, jaw or prosthesis, including current condition and complete specified assessments below.

See [illegible] Treatment Plan [illegible]

Assessment of oral hygiene:	☑ Good	☐ Fair	☐ Poor	refer to [redacted] Form Completion Guide
Assessment of periodontal condition:	☑ Good	☐ Fair	☐ Poor	
Assessment of caries activity in mouth:	☑ Little or none	☐ Moderate	☐ Extensive	

PROPOSED TREATMENT

TOOTH No. / JAW / PROSTHESIS	SERVICE ITEM	DESCRIPTION	QTY	FOR [redacted]
21	D133	[illegible]	1	
21	D131	[illegible] 3 [illegible]	1	
21	D07	[illegible]	1	
21	Dn2	[illegible]	1	
21	Dn5	[illegible]	1	
21	Dn3	[illegible] Crown	1	
21	D[illegible]	[illegible] Abutment + Crown	1	
		Total amount approved		

INFORMATION ABOUT THIS PRIOR APPROVAL REQUEST — SELECT ONE

1. Is this continuing care for an old injury? ☑ Yes ☐ No
2. I have included appropriate supporting information with this request (e.g. xrays (desirable), treatment records, previous claim papers, cover confirmation letter, previous [redacted] payment advice). ☑ Yes ☐ No
   If you have previously emailed the information to [redacted] when did you send the email?
3. I have also submitted a [redacted] for an old claim/injury and supporting information (as above) with this request as [redacted] does not appear to have adequate information about the original claim. ☐ Yes ☐ No

DECLARATION

This treatment is for an injury for which I understand the client has cover.
☑ YES ☐ NOT SURE ☐ NO

The treatment is:
- for the purpose of restoring the client's health to the maximum extent practicable
- necessary and appropriate, and of the quality required, for that purpose.

The information on this form is true and correct and I am aware that if I give false or misleading information about the treatment and the claim, I may be prosecuted.

[redacted]

Signature: [redacted] Date: 21/8/17

[redacted] Provider number: [redacted] [redacted] Vendor code: [redacted]

The information collected on this form will only be used to fulfil the requirements of the [redacted] in the collection, use ...

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