

Teeth lost in accident reimplanted 24 hours later

Introduction

This report discusses the care provided to Master A (aged 14 years) by an Oral and Maxillofacial Surgery (OMS) department operated by Health New Zealand|Te Whatu Ora (Health NZ).

Background

1. On 3 May 2021 Master A was involved in a bicycle accident when he hit the back of a stationary car and sustained several injuries, including an avulsion¹ of five teeth,² fractures, lacerations, bruising, and a small subdural haematoma.³
2. Master A was transported to Public Hospital 1 and admitted for assessment after his accident (with all five teeth transported in milk). A CT scan was completed, and Master A was transported to another hospital (Public Hospital 2) for neurological monitoring overnight.
3. The complaint states⁴ that both Public Hospital 1 and Public Hospital 2 had contacted OMS seeking advice about assessing and reimplanting Master A's teeth. According to Public Hospital 1's clinical records, the OMS registrar⁵ had responded that there was no need for urgent care, noting: 'Reimplanting teeth not advised as this is at best a temporising solution. Suggest patients see a private dentist tomorrow for replacement therapy.' Public Hospital 2's clinical records note that there was a discussion with an OMS surgeon,⁶ who advised that there was no need to be seen in an OMS clinic. Master A was advised to see a dentist in the community for his lost teeth. Master A's father, Mr A, complained to HDC about the delay in treatment and the inappropriate recommendation that there was no need for urgent care from OMS.
4. Twenty-four hours after the accident, Mr A arranged an appointment for Master A to see a private surgeon, Dr B. At the time of the appointment, Dr B telephoned two endodontists, who advised that

'although it was tragic that the teeth were not reimplanted on the day of the accident, even with a delay of over 24 hours, it was still advisable to reimplant these teeth, especially as they had been stored in the most favorable medium, milk. Although the delay meant that it was almost certain that the teeth would subsequently be lost due

¹ Displacement of teeth from the socket, due to trauma or injury.

² Four upper incisors and right upper canine avulsed.

³ Bleeding in the brain.

⁴ And the clinical notes confirmed.

⁵ In its response, Health NZ clarified that the advice was given by a dental house officer (HO) rather than a registrar, as noted in the records.

⁶ The identity of this surgeon is unclear and may in fact have been the HO.

to resorption of the roots, they would in the meantime maintain bones around them so that implant treatment could be considered once the teeth have been lost, and at the end of growth.'

5. Following re-implantation of the teeth under local anaesthetic with intravenous sedation, Dr B's colleague, an orthodontist, placed orthodontic braces on the upper teeth to serve as a splint to support the reimplanted teeth. Following this, Dr B sutured the extensive lacerations of the upper gum tissues. He also arranged for Master A to see an endodontist so that the pulps of the avulsed teeth could be removed and appropriate endodontic treatment carried out.
6. In his response to HDC, Dr B stated that due to the 24-hour delay in reimplanting the teeth, the prognoses have reduced. He noted that he was surprised and disappointed that the OMS registrar⁷ had not recommended reimplantation or arranged a review on the day of the accident, as avulsion of teeth is one of the true emergencies in dentistry. Dr B stated that the International Association of Dental Traumatology guidelines 2020 (IADT guidelines) indicate that the immediate reimplantation of an avulsed tooth is the most ideal situation. Once the tooth has been out of the mouth for more than 60 minutes, the chances of the tooth 'taking' reduces significantly.

Health NZ's response

7. Health NZ responded that following the concerns raised, Dr C, a staff member, reviewed Master A's clinical notes and the available imaging. Dr C acknowledged and shared the concerns and accepted that the avulsed teeth should have been reimplanted earlier. Dr C apologised on behalf of the service that 'the best care was not provided on this occasion and for the distress this has caused them'.
8. However, Health NZ stated that the dental house officer (HO) had offered to reimplant and splint the teeth if the patient was fit to be transferred. The HO stated:

'Advised due to the teeth being avulsed for five or more hours, they hold a guarded/poor prognosis and would likely become non-vital in future. Splinting would likely be a temporary solution and/or for aesthetics.'
9. The HO recommended that the clinician discuss the above with the parents and, if they were distressed about the avulsed teeth and/or wanted to proceed with the splinting, the patient could be seen at Public Hospital 3. The HO said that a contact number was provided, but no further call was received. The decision was then taken to transfer Master A to Public Hospital 2, and the opportunity to undertake reimplantation/splinting at Public Hospital 3 was lost.
10. I note that the HO statements are inconsistent with the clinical records from Public Hospital 1, and that the handwritten note from the phone call in question was destroyed by the HO.
11. Health NZ noted IADT guidance regarding delayed reimplantation of avulsed teeth, which

⁷ Health NZ confirmed that it was a dental house officer who provided the advice, not a registrar.



‘emphasizes that although delayed reimplantation has a poor long-term prognosis (ankylosis-related replacement resorption), the decision to reimplant a permanent tooth is almost always the correct one. Reimplantation restores esthetics and function and keeps future options open.’

12. Health NZ confirmed that the concerns prompted a review into all aspects of management of dental trauma by the service, which included HO education and support when working after-hours. Health NZ found the following:
 - It would have been helpful for the HO to have discussed with the on-call OMS registrar how to balance the other considerations of head injury, the patient being in a different hospital, and multiple avulsed teeth.
 - It may have been possible for the emergency department at Public Hospital 1 to have reimplanted the teeth and to have had Master A bite on a gauze as an interim measure.
 - It may have been possible to transfer Master A to Public Hospital 3 under general surgery for neuro-observations, and under OMS for reimplantation/splinting of teeth.
13. Health NZ also acknowledged that it would have been appropriate to contact Master A’s family to offer a meeting to discuss their concerns and to apologise in person.

Changes that have occurred

14. Health NZ has undertaken the following:
 - Established a written policy to guide dental HOs regarding escalation of care for difficult dental trauma; and
 - Undertaken a six-month audit to assess the effectiveness of this policy and assessed management of dental trauma against IADT guidelines.

Responses to provisional decision

15. Health NZ and Mr A were given the opportunity to respond to the provisional decision.
16. Mr A responded that he had no further comments to make at this time.
17. Health NZ responded that it agrees with the provisional decision.

Decision: Health NZ — breach

18. This complaint raises concerns about the lack of awareness of best practice when dealing with the avulsion of teeth at the time of these events. It is noted that both Dr B and Dr C were critical of OMS advising that there was no urgency in reimplanting the avulsed teeth, and that this advice did not adhere to the IADT guidelines. I accept the statements from Dr B and Dr C that the avulsed teeth should have been reimplanted with urgency on the day of the accident. I am critical that this did not occur.
19. Although the dental HO’s statement indicated that the HO was willing to assist with reimplantation and splinting at Public Hospital 3, Master A was then transferred to Public



Hospital 2, and at no point was advice given by OMS to reimplant the teeth at either Public Hospital 1 or Public Hospital 2.

Conclusion

20. Health NZ has an organisational responsibility to provide a reasonable standard of care to those under its care. I consider that Health NZ should have adhered to the relevant standards, in this case the IADT guidelines and the Code of Health and Disability Services Consumers' Rights (the Code). When teeth are avulsed, it is imperative that reimplantation occur at the earliest opportunity to provide the best long-term prognosis, although there is no guarantee that they will take. In this case, Master A avulsed five teeth through an accident, and due to a 24-hour delay in having them reimplanted, the long-term prognosis for these teeth has been seriously jeopardised.
21. Taking into account the statements from Dr B, Dr C, and Health NZ and noting the IADT guidelines, I find that Health NZ breached Right 4(2) of the Code, which states that every consumer has the right to have services provided that comply with legal, professional, ethical, and other relevant standards. I find that Health NZ did not provide Master A with services that complied with relevant standards.
22. I note that Health NZ has accepted that the avulsed teeth should have been reimplanted earlier, despite the delays, and that the best care was not provided to Master A.

Recommendations

23. I recommend that Health NZ:
 - a) Provide a written apology to Master A and his whānau for the breach of the Code identified in this report. The apology should be provided to HDC, for forwarding to Mr A, within three weeks of the date of this decision.
 - b) Provide a copy of the six-month audit report into the effectiveness of the policy to guide dental HOs regarding escalation of care for difficult trauma, and any subsequent action/plan. The report should be forwarded to HDC within three months of the date of this decision, with evidence that the policy has been communicated to all applicable dental HOs and OMS staff members.

Follow-up action

24. A copy of this decision with details identifying the parties removed, except Health NZ, will be placed on the Health and Disability Commissioner website, www.hdc.org.nz, for educational purposes.

Dr Vanessa Caldwell
Deputy Health and Disability Commissioner



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