

**Ophthalmologist, Dr B
District Health Board**

**A Report by the
Deputy Health and Disability Commissioner**

(Case 18HDC00253)

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Executive summary

1. On 17 November 2017, Mr A attended the emergency department (ED) at a public hospital after being hit in the eye by a firework. He was examined by Dr D, who telephoned ophthalmologist Dr B to consult about diagnosis and treatment of the injury. Dr D told Dr B that Mr A's injury had been caused by a firework, and listed the following symptoms:
 - The left eyelid was swollen (oedema);
 - There were first-degree burns to the skin of the lower eyelid;
 - Several lower eyelid lashes were burnt, singed, or missing;
 - The left pupil was non-reactive and in a mid-fixed position;
 - There was no laceration;
 - The contour of the eye felt normal;
 - Mr A could not visualise anything out of the left eye; and
 - The pH level of the left eye was 10.
2. Dr B advised Dr D to diagnose Mr A's eye injury as superficial and to commence a treatment plan appropriate for someone with a superficial eye injury. However, on 20 January 2017 it was found that Mr A had a serious eye injury.

Findings

3. It was found that Dr D gave Dr B sufficient information to alert him to the possibility that Mr A's eye injury might be severe, and that Dr B needed to attend the ED to assess Mr A himself. Dr B's failure to attend meant that Mr A's injury was not assessed appropriately in a timely manner. Accordingly, Dr B failed to provide care to Mr A with reasonable care and skill and therefore breached Right 4(1) of the Code.
4. Comment was made on the duty that all DHBs owe to staff who have been educated outside of New Zealand, to ensure that they understand the functions and responsibilities of different practitioners in the New Zealand health sector.

Recommendations

5. It was recommended that Dr B apologise to Mr A, confirm the implementation of his new practice of managing telephone consultations and review the effectiveness of that practice, and reflect on his failure to seek sufficient information from Dr D.
6. It was recommended that the DHB implement procedural guidelines for firework-related ocular injuries to ensure that those injuries that require immediate specialist ophthalmological review receive that review.
7. It was recommended that the DHB review its procedures related to employed medical staff to ensure that staff are aware of the contracts and procedures for contracted specialist on-call services. This review should include consideration of the specific training needs that staff educated outside of New Zealand may have.

8. It was recommended that the DHB confirm that improved lines of communication and education between the eye clinic and the emergency department have been implemented, and conduct a review of the effectiveness of those improved lines.
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Complaint and investigation

9. The Health and Disability Commissioner (HDC) received a complaint from Mr A about the services provided to him by Dr B and the DHB. The following issues were identified for investigation:

- *Whether Dr B provided Mr A with an appropriate standard of care in November 2017.*
- *Whether the DHB provided Mr A with an appropriate standard of care in November 2017.*

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

11. The parties directly involved in the investigation were:

Mr A	Consumer/complainant
Mr A's mother/complainant	
Dr B	Ophthalmologist/provider
District health board/provider	

12. Further information was received from:

Dr C	Emergency Department senior house officer (SHO)
Dr D	Emergency Department senior medical officer (SMO)
Dr E	Ophthalmologist
Second district health board	

Also mentioned in this report:

Dr G	Head of ED
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13. HDC obtained expert advice from an ophthalmologist, Dr Keith Small (Appendix A).
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Information gathered during investigation

14. On the evening of Friday 17 November 2017, Mr A, aged 19 years, was watching a fireworks display with his friends when a firework fell over and hit him directly in his left eye, causing severe pain. His friends promptly took him to the ED.

Presentation to the public hospital — 17 November 2017

15. Mr A arrived at the ED at about 9.45pm, and was seen by Dr C very soon after he presented. Dr C told HDC that she asked Mr A how his injury occurred, and examined his left eye briefly. She observed that Mr A's eyelashes were singed, and that he was unable to open his eye himself. Dr C opened Mr A's eye manually and observed that it was significantly burned and held in a fixed position, with dead tissue evident. She noted that Mr A had a "significant injury" and consulted with Dr D.¹
16. Dr D told HDC that he saw Mr A at approximately 10pm, and that he and Dr C examined Mr A's eye together. Dr C then handed over Mr A's care to Dr D, and recorded the cause of Mr A's injury and the symptoms that she and Dr D had observed, as follows:
- The left eyelid was swollen (oedema);
 - There were first-degree burns to the skin of the lower eyelid;
 - Several lower eyelid lashes were burnt, singed, or missing;
 - The left pupil was non-reactive and in a mid-fixed position;
 - There was no laceration;
 - The contour of the eye felt normal;
 - Mr A could not visualise anything out of the left eye;
 - The pH level² of the left eye was 10.³
17. Dr D told HDC that he noted the severity of Mr A's injury and quickly resolved to consult a specialist about how to treat it. His clinical report, written at the time of Mr A's presentation to ED and documented in the discharge summary, noted the history of the presenting complaint as "firework went off in left eye". Dr D's previous experience was that when consulting specialists over the telephone, generally they found it useful to view photographs of an injury, rather than just rely on a verbal account. Accordingly, he took photos of Mr A's eye injury to show the consultant.

Dr D's discussion with Dr B

18. Dr B was the ophthalmologist consultant on call that night.⁴ Dr D telephoned Dr B at 10.15pm to discuss Mr A's eye injury. Dr D told Dr B that Mr A's injury had been caused by

¹ Dr D obtained a Doctorate of Medicine and a Diploma of Emergency Medicine overseas.

² Alkaline/acidity level.

³ This is much more alkaline than normal, with the normal eye pH level being 7 to 7.3, and the maximum alkaline level being 14.

⁴ Dr B has a Bachelor of Medicine and Bachelor of Surgery (NZ) and is a Fellow of the Royal Australian and New Zealand College of Ophthalmologists.

a firework, and told him about the symptoms that Dr C had recorded (as set out above). Dr D did not tell Dr B that Mr A had lost almost all of his corneal epithelium,⁵ as he did not observe this symptom until after his telephone conversation with Dr B.

19. During the telephone conversation, Dr B diagnosed Mr A's injury as a superficial thermal burn to the eye, and advised Dr D to:
 - Lavage⁶ the surface of Mr A's eye thoroughly until its pH had normalised;
 - Perform a Seidel's test⁷ to ascertain whether Mr A's globe⁸ had ruptured;
 - Provide Mr A with chloramphenicol ointment⁹ to apply to his eye four times a day over the weekend;
 - Provide Mr A with pain medication to use over the weekend; and
 - Arrange for Mr A to visit the eye clinic on Monday 20 November 2017 for a review, either by Dr B or another ophthalmologist at the clinic.
20. Dr D accepted Dr B's diagnosis as correct and his treatment plan as appropriate.
21. Dr B told HDC that Dr D did not:
 - Tell him that Mr A had debris in his eye;
 - Tell him that Mr A had ocular surface ischaemia;¹⁰
 - Communicate a sense of concern that he had mistaken the nature and severity of Mr A's eye injury; or
 - Offer to show him photographs of Mr A's eye.
22. In response to the provisional opinion, Dr B further told HDC that Dr D did not tell him that the firework had hit Mr A in the eye directly.
23. With respect to the photographs of Mr A's eye injury, Dr D told HDC that he offered to email these to Dr B, but that Dr B declined the offer. Mr A told HDC that he also remembered this happening.
24. Subsequent to these events, Dr G, head of the ED, organised a meeting between Dr B and Dr D to discuss the care provided to Mr A. At this meeting, Dr B told Dr G and Dr D that he could not recall Dr D offering to send him photographs, but that his usual practice is to accept photographs when offered.

⁵ The tissue that covers the front of the eye, preventing the free movement of fluids and bacteria in and out of the eye.

⁶ To clean the eye thoroughly.

⁷ A test that involves applying a tracer dye to the eye, and observing how the dye behaves.

⁸ The hollow structure that gives the eyeball its shape.

⁹ An antibiotic ointment.

¹⁰ Whitening of the blood vessels of the eye.

Dr D's further care

25. Dr D told HDC that after his telephone conversation with Dr B, he immediately implemented the treatment plan that Dr B had advised. Dr D irrigated the surface of Mr A's eye thoroughly with three litres of Hartman's Solution.¹¹ Following this, the pH of Mr A's eye reduced to 7 (a normal level) and Mr A regained some ability to see out of his injured eye.
26. Dr D told HDC that he then performed a Seidel's test on Mr A's eye. Dr D did this to establish whether the globe of Mr A's eye was leaking fluid, which would indicate a ruptured globe. The test revealed that the globe had not ruptured. It also revealed complete uptake of the fluorescein,¹² indicating a significant corneal injury. Dr D told HDC that he believed at the time that this result would have been expected by Dr B, and so did not think that it would affect the efficacy of Dr B's treatment plan.

Discharge

27. Dr D told HDC that he then provided Mr A with pain medication, and chloramphenicol ointment to apply to his eye four times a day. Dr D arranged for Mr A to visit the eye clinic on Monday 20 November 2017 for a further review. Dr D also asked Mr A to return to ED if his condition changed or worsened. At 11.40pm, Dr D discharged Mr A from the public hospital.
28. The ED discharge summary completed by Dr D described his testing of Mr A and the treatment plan he decided on with Dr B's advice. The discharge summary does not refer to ocular surface ischaemia or orbital debris. Dr D told HDC that although he had observed these symptoms, he did not record them in the discharge summary because Dr C had already recorded most of Mr A's symptoms, and he did not pay close attention to which symptoms she had or had not recorded already.

Subsequent examination and treatment

29. On 20 November 2017, Mr A saw Dr E, an ophthalmologist at the eye clinic. He diagnosed Mr A as having suffered a severe thermal and chemical burn to the left eye. Dr E noted that Mr A had lost almost all of his corneal epithelium and much of his conjunctival epithelium,¹³ and that his eye displayed ocular surface ischaemia.
30. The following day, Mr A was admitted to another DHB for management of his eye injury. Staff prescribed a chemical treatment regimen for Mr A's eye, and surgery was performed to graft conjunctiva from Mr A's right eye to his left eye. Mr A remained at the DHB for one month, and was discharged on 22 December 2017.

¹¹ A chemical solution comprised of water, sodium chloride, sodium lactate, potassium chloride, and calcium chloride, which can be used to wash eyes that have been burned chemically.

¹² A tracer dye.

¹³ The tissue that covers the front of the eye, preventing the free movement of fluids and bacteria in and out of the eye.

Further Information — Dr D

31. Dr D told HDC that in November 2017 he was unfamiliar with the New Zealand health system, as he had been practising medicine in New Zealand for only a few months (although he had practised emergency medicine overseas since 2008). He said that had this incident occurred while overseas, he would have made sure to ask the consulting specialist, “Are you refusing to see this patient?” and would have documented the reply. However, he said that he was uncertain about what level of care emergency doctors in New Zealand could expect consultant specialists to provide.
32. Dr D told HDC that after a specialist has advised an emergency doctor, and the emergency doctor has already questioned the treatment plan and been reassured, it is difficult to question the treatment plan again.

Further information — Dr B

33. Dr B told HDC that his experience of telephone triage is that if one doctor is concerned that the other doctor does not appreciate the urgency or severity of the condition being discussed, the doctor requesting advice should continue to advocate on behalf of the patient until reassured that the patient’s clinical condition has been described and appreciated accurately.
34. Dr B told HDC that his understanding was that a modern ED specialist such as Dr D was trained to recognise and manage acute thermal and chemical injuries to the eyes.
35. Dr B stated that he had found Dr D to be capable and competent previously, and that Dr D’s broad understanding of ophthalmic procedures reassured him that Dr D was capable of assessing Mr A’s injury without him being present physically to review it.
36. Dr B told HDC that after the incident he consulted with several other ophthalmologists who also work in provincial settings. He said that they were all of the view, based on the information Dr D had provided, that nothing clinically demanded immediate attention by an attending ophthalmologist specialist, that an experienced emergency doctor should have been able to manage the case at the time, and that they would have expected an emergency doctor to update them with any new information that raised concerns.
37. Dr B stated that since discussing the incident with Dr D and Dr G, a number of improved lines of communication and education have been opened up between Dr B’s practice and the ED. In addition, Dr B said that he has modified how he manages telephone consultations. He now signs off by asking the doctor concerned whether he or she is happy with the proposed working diagnosis and treatment plan. He also asks doctors whether there is anything else material that they believe he needs to know that could alter the working diagnosis and treatment plan.
38. Dr B told HDC that he is deeply apologetic for any part he played in the inadequate communication between himself and Dr D, and for the consequences of that communication on Mr A’s care.

Further information — the DHB

39. The DHB told HDC that on 21 December 2017 Dr B met with Dr D and Dr G to discuss the care provided to Mr A in November 2017. The DHB provided HDC with the minutes from this meeting. The minutes record that the parties agreed that poor communication between Dr D and Dr B caused Dr B to misdiagnose Mr A as having a superficial injury, rather than a severe injury. The minutes also note that Dr B offered to work with Dr G to develop a programme of improved interaction between ED and the Ophthalmology service.
40. On the evening of 17 November 2017, Dr B was the contracted on-call ophthalmologist for the ED (through the eye clinic). The eye clinic's contract with the DHB required it to "provide acute cover for ophthalmology services 24 hours per day 7 days per week, with acute call-back attendances as required by [the DHB] on weekends and between the hours of 1600–0800 Monday to Friday". The contract also required the eye clinic's ophthalmologists to comply with the DHB's internal standards.
41. The DHB told HDC that it had educated its staff about the obligations contractors owe to the DHB, and that the DHB supported the decisions of its staff to control the level of involvement of contractors, especially in emergency situations.
42. The DHB stated:
- "There is no training programme at [the DHB] for Medical staff in how to refer [issues to other health professionals]. This is such a basic and fundamental professional expectation that it is acknowledged as being embedded in all specialist training."
43. The DHB's "Internal Professional Standards (IPS) In the Emergency Department" document imposes requirements on all clinicians who work with [the DHB's] emergency services, including contractors. Clause 6 requires clinicians to "do their utmost to provide timely care".
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Responses to provisional opinion

44. Mr A was given an opportunity to respond to the "information gathered" section of the provisional opinion. Mr A had no comments to make.
45. Dr B and the DHB were given the opportunity to respond to the relevant parts of the provisional opinion. Their responses have been incorporated into the report as appropriate.
46. Dr B told HDC that he is regularly available for his on-call duties, he takes them seriously, and he would have had no hesitation attending on the night in question if he had been informed of a significant injury or if Dr D had expressed concern about managing a less significant injury.

47. Dr B submitted that “[h]ad he had indication of a severe injury” he would have advised Dr D differently.
48. In response to my provisional opinion, Dr B provided a letter from another ophthalmologist, Dr Kevin Taylor, who stated:
- “[B]ased on the ‘on examination’ findings of the discharge letter I would have followed a similar plan to that recorded and told the Senior Medical Officer to telephone me again if there were any further concerns or things were not improving.”
49. Based on only the information provided in the discharge form, Dr Taylor did not think that the information given to Dr B required “immediate in person review”.
50. The DHB told HDC that all of its clinical staff, including those from outside New Zealand, “undergo a full credentialing process as well as full induction into the organisation”.
51. The DHB told HDC that its contract with the eye clinic “included a requirement to have regular meetings between clinical staff to review common protocols and procedures and that minutes of these meetings be kept”.
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Opinion: Dr B — breach

52. On 17 November 2017, Mr A was hit directly in the eye by a firework. He attended the ED and was examined by Dr D. Dr D identified that Mr A’s eye was injured.
53. Dr D told HDC that he noted the severity of Mr A’s injury and quickly resolved to consult Dr B, the on-call consultant ophthalmologist, about Mr A’s injury and an appropriate treatment plan.
54. Dr D told Dr B that Mr A’s injury had been caused by a firework, and described the following symptoms:
- The left eyelid was swollen (oedema);
 - There were first-degree burns to the skin of the lower eyelid;
 - Several lower eyelid lashes were burnt, singed, or missing;
 - The left pupil was non-reactive and in a mid-fixed position;
 - There was no laceration;
 - The contour of the eye felt normal;
 - Mr A could not visualise anything out of the left eye; and
 - The pH level of the left eye was 10.
55. Dr B told HDC that Dr D did not:

- Tell him that Mr A had debris in his eye;
 - Tell him that Mr A had ocular surface ischaemia;¹⁴
 - Communicate a sense of concern that he had mistaken the nature and severity of Mr A's eye injury;
 - Offer to show him photographs of Mr A's eye; or
 - Tell him that the firework hit Mr A directly in the eye.
56. Dr B told HDC that he considered it reasonable to expect a senior medical officer to recognise and manage a serious eye injury competently. Dr B advised Dr D that Mr A's eye injury was superficial, and advised Dr D to commence a treatment plan appropriate for someone with a superficial eye injury. However, on 20 January 2017 it was found that Mr A had a serious eye injury.
57. HDC obtained independent clinical advice from an ophthalmologist, Dr Keith Small, about the advice that Dr B provided regarding Mr A's care.
58. Dr Small advised HDC:
- “[T]he information [Dr B] accepts he was given was sufficient to alert him to the real risk of the injury being more serious than he concluded it was. In particular, the presence of visible skin and eyelash burns, but most importantly, the severe loss of vision and the presence of a fixed mid-dilated pupil were very important details and knowing those things he had a responsibility to actively seek further information in order to be confident the injury was not more serious than he had first thought.”
59. Dr Small further noted: “It appears some details, which would more clearly have indicated the severity of the injury were probably not communicated to [Dr B] by [Dr D].” However, Dr Small advised:
- “On being contacted for advice on the clinical management of [Mr A's] case, [Dr B] accepted a responsibility of ensuring he had sufficient clinical information to form appropriate advice. Though he may not initially have been clearly told from what distance the firework hit [Mr A's] eye, he accepts that he was given key information which I contend indicated the important possibility that the injury may have been vision-threatening and severe. It was therefore his responsibility to ask [for] more details of the history, particularly from what distance the impact had occurred, and further details of the examination in order to sufficiently exclude a more serious injury. Had he done so this would have led to him realising [that] he needed to assess [Mr A's] injury in person and promptly.”
60. Dr Small advised that it was not reasonable for Dr B to expect a senior medical officer to recognise and manage a serious eye injury competently. Dr Small said that while “it was reasonable for [Dr B] to be confident in [Dr D's] ability to manage a more minor ocular injury”, Dr B could not reasonably expect a senior medical officer to “make an adequate

¹⁴ Whitening of the blood vessels of the eye.

assessment of the severity of ... more significant injuries". Accordingly, "[Dr B] was not justified in deciding that the injuries were not more serious on the basis of [Dr D's] assessment alone and should have been alert to the possibility he had underestimated their severity".

61. Dr Small advised:

"[Dr B's] decision not to attend [Mr A] in the Emergency Department was inappropriate and a departure from the appropriate standard of care. I believe it would be commonly accepted amongst my and [Dr B's] peers that the information available was sufficient to require an assessment by an ophthalmologist or a doctor with sufficient ophthalmic training to be competent to fully assess a severe ocular injury and initiate treatment. Not to attend in this situation would be considered a moderate departure from the standard of care."

62. Dr Small noted:

"[Dr B's] failure to attend to [Mr A] and to adequately assess what turned out to be a severe and life-changing injury was a serious lapse of judgment. It is a salutary reminder that even very respected practitioners can make serious errors and what we believe to be safe and careful patterns of practice can be disrupted by such errors of judgment with potentially grave consequences."

63. Dr B was aware that Mr A was experiencing the symptoms set out at paragraph 54 above, and of the fact that Mr A's injury had been caused by a firework. This was sufficient information to alert Dr B to the possibility that Mr A's eye injury might be severe, and of the necessity to attend the ED to assess Mr A himself.

64. I note the letter Dr B provided this Office from ophthalmologist Dr Kevin Taylor, who stated:

"Based on the 'on examination' findings of the discharge letter I would have followed a similar plan to that recorded and told the Senior Medical Officer to telephone me again if there were any further concerns or things were not improving. I would have been unlikely to attend to the patient in the first instance if I was on call."

65. I have considered Dr Taylor's opinion. It is clear that there are differing views about the appropriate approach in this case. I have carefully reviewed the opinion provided by Dr Taylor and the advice from Dr Small. Despite the differing views, I am persuaded by Dr Small's rationale that Dr B had the option of asking Dr D further questions to "exclude a more serious injury", and that, being the specialist consultant, it was Dr B's responsibility to ask such further questions. Even if the information that Dr D provided did "not indicate a requirement for immediate in person review", it also did not support a conclusion that Mr A did not require an immediate in-person review. There was sufficient information to be on notice and enquire further.

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66. Dr Small's advice, together with all of the other information gathered during the investigation, have been used to inform my opinion on whether there has been a breach of the Code.
67. Having considered all of the available information, including the additional opinion provided by Dr Taylor, I accept Dr Small's advice, and I remain critical of Dr B's failure to attend, as it meant that Mr A's injury was not assessed appropriately in a timely manner. Accordingly, I find that Dr B failed to provide care to Mr A with reasonable care and skill, and therefore breached Right 4(1) of the Code of Health and Disability Services Consumers' Rights (the Code).
68. However, I acknowledge that since these events Dr B has worked with the DHB to open up a number of improved lines of communication and education between Dr B's practice and the ED to reduce the risk of an incident of this sort reoccurring. I also note that he has modified how he manages telephone consultations — he now finishes his telephone consultations by asking the consulting doctor whether he or she is happy with the proposed working diagnosis and treatment plan, and whether there is anything else material that the consulting doctor believes he needs to know that could alter the working diagnosis and treatment plan. I welcome these constructive initiatives by Dr B.
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Opinion: DHB — other comment

69. As a healthcare provider, the DHB is responsible for providing services in accordance with the Code. I consider that the DHB was entitled to rely on Dr B, as the on-call consultant ophthalmologist, to recognise the need for him to attend ED and assess Mr A as was indicated. Therefore, I consider that the DHB did not breach the Code.
70. I note that on 21 December 2017, Dr G organised a meeting with Dr D and Dr B to discuss the care provided to Mr A, and to commit to improving communications between the ED and the eye clinic. I welcome this initiative.
71. I note that the DHB told HDC that it educates its staff about the obligations of consultants, and that it supports staff decisions to "control the level of involvement of contractors". Nonetheless, I remain concerned that Dr D reported uncertainty about the level of care emergency doctors in New Zealand could expect consultant specialists to provide. DHBs owe a duty to staff who have been educated outside of New Zealand, to ensure that they understand the functions and responsibilities of different practitioners in the New Zealand health sector.
72. I recommend that the DHB review its procedures related to employed medical staff to ensure that staff are aware of the contracts and procedures for contracted specialist on-call services. This review should include consideration of the specific training needs that staff educated outside of New Zealand may have.

Recommendations

73. I recommend that Dr B:
- a) Provide a written apology to Mr A. The apology is to be sent to HDC within three weeks of the date of this decision, for forwarding to Mr A.
 - b) Confirm the implementation of his new practice of managing telephone consultations, and that he conduct a review of the effectiveness of that policy, and report back to HDC within three months of the date of this report.
 - c) Reflect on his failure to seek sufficient information from Dr D, and provide a written report to HDC on his reflections and the changes to his practice he has instigated as a result of this case, within three months of the date of this report.
74. I recommend that the DHB:
- a) Implement procedural guidelines for firework-related ocular injuries to ensure that those injuries that require immediate specialist ophthalmological review receive that review, and report back to HDC within three months of the date of this report.
 - b) Review its procedures related to employed medical staff to ensure that staff are aware of the contracts and procedures for contracted specialist on-call services, and report back to HDC within three months of the date of this report. This review should include consideration of the specific training needs that staff educated outside of New Zealand may have.
 - c) Confirm that improved lines of communication and education between the eye clinic and the ED have been implemented, conduct a review of the effectiveness of those improved lines, and report back to HDC within three months of the date of the final report.
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Follow-up actions

75. A copy of this report with details identifying the parties removed, except the expert who advised on this case, will be sent to the Medical Council of New Zealand and the Royal Australian and New Zealand College of Ophthalmologists, and they will be advised of Dr B's name.
76. A copy of this report with details identifying the parties removed, except the expert who advised on this case, will be sent to the Australasian College for Emergency Medicine and the Ministry of Health, and will be placed on the Health and Disability Commissioner website, www.hdc.org.nz, for educational purposes.
77. The Royal Australian and New Zealand College of Ophthalmologists and the Australasian College for Emergency Medicine will be invited to review this report and consider whether it should be standard policy across New Zealand that ocular injuries from fireworks (unless demonstrably minor) should be regarded as severe until proven otherwise by examination by a qualified ophthalmic practitioner.

Appendix A: Independent advice to the Commissioner

The following clinical advice was obtained from Dr Keith Small, an ophthalmologist:

“Report to the Health and Disability Commissioner

Complaint: [Mr A]/[Dr B] at [the DHB]

Ref: C18HDC00253

Author

I am Dr Keith Small, a consultant ophthalmologist in public and private practice in Wellington. I am a Fellow of the Royal Australian and New Zealand College of Ophthalmologists and a member of the New Zealand Branch executive of RANZCO and of the College Council. I am actively involved in teaching vocational trainees in ophthalmology and others and was for six years the NZ Branch Director of Training. I have authored a number of reports for the ACC regarding claims for treatment injury and have written previous reports for the Health and Disability Commissioner.

I have read and agree to follow the Health and Disability Commission’s guidelines for independent advisors.

The Basis of the Complaint

The complainant, [Mr A], sustained an injury to his left eye from a firework on the evening of Friday 17 November 2017. He was seen acutely at the Emergency Department of [the public hospital] and documented to have evidence of significant thermal and chemical trauma to the left eyelids, ocular surface and other intraocular evidence of trauma. The senior medical officer who assessed him discussed him with the ophthalmologist on call — [Dr B] who arranged a treatment plan over the phone and who did not assess [Mr A’s] injury in person. Follow up was organised for the following Monday at [the eye clinic] with advice to seek earlier review if [Mr A’s] symptoms deteriorated before then.

[Mr A’s] mother organised an urgent review of the injury with another specialist on the Monday morning and a severe ocular surface injury was diagnosed and intensive treatment initiated.

Despite further treatment including surgery the prognosis for visual recovery remains uncertain and probably poor.

The complaint is that [Dr B] should have attended [Mr A] in person on the night he first presented i.e. that there was sufficient information made known to [Dr B] at the time to justify his assessing the injury directly and instituting treatment on that basis rather than from the assessment of the emergency department consultant alone.

Details of the clinical presentation

In the Emergency Department records written it is noted that [Mr A] had had a firework go off directly into his unprotected left eye. It states that he had severe pain (pain score of 10 out of 10) and eyelid swelling and was unable to open the eye. Important findings were of lid oedema, burnt lower eyelashes and eyelid skin, a fixed mid-dilated pupil and an elevated pH (10). It is noted [Mr A] was 'unable to visualise anything from the left eye'.

The findings of most note in my opinion at this stage were the fixed mid-dilated pupil (suggestive of at least moderate physical or chemical trauma to the eye), the elevated pH indicating an abnormally alkaline ocular surface and so a potentially vision threatening chemical injury to the eye, and also the note of a severe reduction in vision (though this was not quantified — for example it is likely the eye could still perceive the movement of a hand at that stage).

The notes record that [Dr B] advised irrigation of the ocular surface with 1 litre of Hartman's solution (similar to saline), for re-checking of the pH and for further irrigation until the pH was near normal with chloramphenicol (antibiotic) ointment thereafter.

Following the irrigation of the ocular surface as instructed, the pH of the ocular surface had returned to normal (7) and the vision was recorded as sufficient to count fingers. Fluorescein staining showed uptake over the entire cornea indicating an extensive epithelial disturbance.

The improvement of the pH at this stage was reassuring but there is no mention made of physical clearing of any debris or chemical residue from the conjunctival sac (the space behind the eyelids where material such as alkaline or other debris can remain to cause further damage).

[Mr A] was discharged from ED with pain relief medications (paracetamol, ibuprofen, and tramadol) chloramphenicol ointment and instructions to return if need be prior to an anticipated review in [the eye clinic] on Monday.

From [Mr A's] account the severe pain continued over the weekend but he did not re-present to ED as the pain did not frankly deteriorate.

[Dr E], another consultant ophthalmologist assessed [Mr A] at [the eye clinic] on Monday 20 November and found evidence of a severe injury. There was near total loss of the corneal epithelium and extensive (approximately 70%) loss of the epithelial lining of the white of the eye (the conjunctiva) and the under-surface of the eyelids. An area of conjunctival ischemia (visible lost blood supply) measuring about 4x10 mm involving the lower right side of the surface of the eyeball was noted and the conjunctival sac was cleaned of remaining foreign material with a cotton bud.

[Dr E] referred [Mr A] acutely to [a] corneal sub-specialist [at another DHB]. Notes from the presentation there further document the severity of the injury with diagrams indicating more than 180 degrees of 'limbal ischaemia' where the cells around the margin of the cornea from which the corneal epithelium regrows had lost their blood

supply. This is one of the most important indications of severity in ocular surface injury, especially chemical injury and suggests a limited prognosis for visual recovery. There was also thermal damage to the lower eyelid margin with significant necrosis of the eyelid margin, and similar damage to the conjunctival tissue of the ocular surface as noted. [The specialist] initiated intensive treatment to minimise further damage to the eye and to achieve healing of the ocular surface. This included excision of necrotic tissue from the ocular surface and eyelid, transplantation of donor epithelial tissue from the other eye, bandage contact lens use, intensive topical treatment and pain relief.

Subsequently, consistent with the severity of the injury, the surface epithelium was very slow to heal and the vision from that eye remained very limited at the time of the last records supplied (6/120 in February 2018).

Indications of severity at presentation and appropriate acute management

As mentioned above, the history of the injury with a direct impact from a 'Roman Candle' to the eye was an indication of a potentially severe and sight threatening injury. From the Emergency Department assessment, the presence of severe pain, but more specifically, the finding of raised pH, a fixed mid-dilated pupil and extensive fluorescein staining of the ocular surface (indicating epithelial damage or loss) and burns to the eyelids were all evidence suggesting a severe injury.

The most acute priorities in this situation were to restore a normal pH and limiting any on-going chemical injury to the eye. Standard practice would be to irrigate the ocular surface copiously and to carefully clean any retained foreign material, particularly alkaline matter, from the conjunctival sac by sweeping behind the eyelids with a cotton bud or similar under local anaesthetic.

Thereafter, management to aid recovery of the ocular surface depends on a careful assessment of the degree of damage to the epithelium and its underlying blood vessels. With an injury as severe as [Mr A's] this would usually be done on an in-patient basis with frequent topical drops and other measures (such as he subsequently received) initially aimed at protection and restoration of the tissues of the ocular surface.

The delay of two to three days until residual toxic foreign material was removed from the surface of the eye and appropriate treatment to aid surface recovery is likely to have significantly worsened the damage to the eye and reduced the chances of recovery of useful vision.

Communication between ED and [Dr B]

The notes of [Mr A's] assessment in the Emergency Department indicate that [Dr D] (ED SMO) identified the findings mentioned above that were evidence of a potentially severe injury. It is recorded that [Dr B] was contacted and that a treatment plan was decided with irrigation of the ocular surface until the pH was near normal and thereafter treatment with antibiotic ointment and pain relief given. No instructions

are recorded about the need to further assess the severity of the injury — particularly to carefully remove any residual foreign matter (beyond the important effect of the irrigation) or to assess evidence of ischaemic damage to the blood vessels of the conjunctiva and limbus.

[Dr D] subsequently noted that he offered to send images of the eye to [Dr B] and that he declined but [Dr B] does not recall that part of the discussion.

[Dr D] also subsequently has stated that at the time he felt the treatment plan was undertreating the injury but that he did not ask [Dr B] to reconsider the plan.

Although [Dr D] records in writing to the Health and Disability Commission that ‘complete blanching of the blood vessels of the sclera was noted’ as part of the Emergency Department assessment, this is not mentioned in his written notes of the ED attendance in which the plan established in discussion with [Dr B] is recorded.

[Dr D] also states in his letter to the HDC that [Dr B] advised him during the phone call that he should attempt to remove the debris from the eye as well as possible. There is nothing in the ED notes to record that measures were taken beyond irrigation to remove particulate matter from the ocular surface and from behind the eyelids.

[Dr B’s] response at the time of the acute presentation

[Dr B] gave advice for management that was appropriate for a more minor injury to the ocular surface.

He did not attend the Emergency Department to assess the injury in more detail himself and he states in his written response to the HDC complaint that he had formed the opinion from the information given to him by [Dr D] over the phone that there was a ‘superficial thermal burn involving the left lower eyelid and ocular surface (singed and absent lashes, first-degree skin burns, ocular surface epithelial superficial burn damage and probable traumatic mydriasis)’.

In [Dr B’s] letter of 2 March 2018 to the HDC he states ‘[Dr D] did not give the impression that this was an injury that required my immediate presence, or that he felt uncomfortable treating the injury. At no time during this conversation did [Dr D] request I review the patient that night or the following day.’

Questions raised by the Health and Disability Commission

1. Whether it was appropriate for [Dr B] to decide not to attend the ED and review [Mr A’s] injury in person.

[Dr B] formed the opinion on the basis of [Dr D’s] account, that the injury was significantly less severe than it turned out to be and advised a treatment plan that was therefore inadequate. He similarly formed the opinion that the injury was adequately assessed without his examining [Mr A] in person.

It appears some details, which would more clearly have indicated the severity of the injury were probably not communicated to [Dr B] by [Dr D]. Specifically, the fact that

no mention of the ocular surface ischaemia is recorded in [Dr D's] notes suggests he did not realise the significance of this and may not have therefore described those changes to [Dr B]. I accept this is to a degree speculative on my part.

In my opinion [Dr B] was given sufficient information for him to realise that the injury was potentially very serious and for him to understand that it would be necessary for him to attend [Mr A] and examine his eye himself.

He notes in his letter that he did understand the history of how the injury had occurred, the presence of burns to the lid, the fluorescein staining of the surface and the mid-dilated non-reactive pupil. Although these findings were possibly consistent with a less severe injury, they also, and much more importantly, were consistent with a much more serious injury and required further assessment.

I accept that [Dr D] could have advocated more strongly for [Dr B] to attend but there was enough evidence presented for [Dr B] to have decided to attend without further persuasion.

In my opinion therefore [Dr B's] decision not to attend [Mr A] in the Emergency Department was inappropriate and a departure from the appropriate standard of care. I believe it would be commonly accepted amongst my and [Dr B's] peers that the information available was sufficient to require an assessment by an ophthalmologist or a doctor with sufficient ophthalmic training to be competent to fully assess a severe ocular injury and initiate treatment. Not to attend in this situation would be considered a moderate departure from the standard of care.

I understand that a meeting between [Dr B] and Emergency Department staff has been held regarding the management of [Mr A's] injury and has led to increased training around issues of ocular trauma and a commitment to better communication in such circumstances in the future.

2. Whether [Dr B's] discharge plan was appropriate, on the basis of the information [Dr B] asserts was conveyed to him.

If, as [Dr B] believed, a more minor injury had been sustained with minor burning of the lower eyelid and lashes and a moderate disturbance of the ocular surface then thorough irrigation, confirmation that the pH was near normal and treatment with topical antibiotic ointment and pain relief would have been appropriate treatment. I note there was also a plan to have the eye reviewed two and half days later and a note made for [Mr A] to seek review if his symptoms deteriorated. This also was appropriate for a relatively minor injury as [Dr B] believed was the case.

In other words, [Dr B's] discharge plan did not in itself represent a departure from the standard of care for the type of injury he believed existed. The fundamental issue was the lack of a properly qualified ophthalmic assessment of the injury at the time of the acute presentation.

3. Whether [Dr B's] discharge plan was appropriate, on the basis of all the information gathered during [Mr A's] presentation to the ED

As mentioned above, [Dr D] noted in subsequent correspondence that the junior doctor who first saw [Mr A] had described extensive ocular surface ischaemia. In his letter to the HDC dated 23 March 2018 he describes the House Officer as having found 'Complete blanching of the blood vessels of the sclera'. This was a very important detail which, if a correct observation as it seems it probably was, represented information that should have been conveyed to [Dr B] and which would have been a persuasive reason to assess the injury in person.

This detail of the examination is not mentioned in [Dr D's] notes of the assessment thereby suggesting that he did not fully realise the significance of it at the time. It seems likely he may therefore not have described this finding to [Dr B] on the phone.

I note, however that [Dr D] recalls offering to send photographs of the injury to [Dr B] while on the phone — a recollection that is at odds with [Dr B's] recollection of the communication. Even if images had not been offered however, there was as noted sufficient information given to [Dr B] that he should have suspected the possibility of a severe injury one of the features of which would have been conjunctival vascular closure (ischaemia).

In this regard, some information may have been withheld from [Dr B] that may have alerted him to the severity of the injury but the primary error was his failure to attend on the basis of sufficient information given.

[Dr B's] discharge plan was not appropriate to the injury on the basis of all the information gathered in ED. It is my belief that this represents a failure of communication that is also in itself a mild departure from the standard of care. The responsibility for this failure of communication is more complex and cannot solely be attributed to [Dr B]. It is however, secondary to [Dr B's] failure to attend, which is discussed above.

I believe that my peers would view the possible failure of communication regarding the presence of ocular surface ischaemia in the context of a thermal/chemical injury a departure from the standard of care. However even with improved training with regard to the management of ocular injuries in the acute situation, this finding would be considered part of the assessment performed by an ophthalmologist or ophthalmic trainee. It would be considered the responsibility of the attending ophthalmologist to look for and recognise this finding and not necessarily one that could be expected of a non-ophthalmologist.

As stated above, there was sufficient evidence that a sight threatening ocular surface injury had occurred to warrant a full assessment by an adequately trained ophthalmic doctor and the responsibility of finding and recognizing the detail fell to [Dr B] in this situation.

4. Any other matters in this case considered a departure from the standard of care.

In all respects other than [Dr B's] failure to attend [Mr A] in ED and the failure of communication regarding the ocular surface ischaemia I believe [Mr A's] treatment was within the accepted standard of care.

5. Further comment regarding prior knowledge of [Dr B]

I have detailed my prior knowledge of [Dr B] at the start of this report.

My opinion is that [Dr B's] failure to attend [Mr A] and to adequately assess what turned out to be a severe and life-changing injury was a serious lapse of judgment. It is a salutary reminder that even very respected practitioners can make serious errors and what we believe to be safe and careful patterns of practice can be disrupted by such errors of judgment with potentially grave consequences.

Recommendations

1. That [Dr B] accept and apologise for his error in judgment in not attending [Mr A] in ED at the time of his acute presentation.
2. That all NZ ophthalmology departments and Emergency departments be advised that ocular firework injuries unless demonstrably minor should be regarded as severe and sight threatening until proven otherwise by examination by a qualified ophthalmic practitioner — a consultant ophthalmologist or sufficiently senior vocational trainee.

Keith Small FRANZCO

July 2018"

The following further expert advice was obtained from Dr Small:

"05 December 2018

...

Complaint — [Mr A]/[Dr B] at [the DHB]

Your ref: C18HDC00253

...

Thank you for your letter requesting further comment on the claim by [Mr A] regarding the care provided to him by [Dr B] on 17 November 2017 with regard to the firework related injury to his right eye.

I have read and carefully considered [Dr B's] response to my report and also the further information provided by [Dr C] (Senior House Officer) and [Dr D] (ED Consultant) including [Dr D's] photographs of the injuries taken at the time of presentation.

[Dr D's] photographs clearly demonstrate features of a severe ocular injury. In addition to the burnt eyelashes and burn to the skin of the lateral aspect of the lower eyelid I particularly note the obvious burn to the inferior anterior surface of the eye

itself with absence of the normal vasculature of this area. This feature (ischaemia of the ocular surface) was mentioned in my report. It is a very important indication of the severity of the injury and was noted by [Dr D] in his original written report to your office though it is not recorded in his medical notes at the time of the original presentation.

The documentation written at the time of the presentation does not make it clear if this visible burn to the white of the eye itself was communicated to [Dr B] in the phone call from [Dr D]. [Dr D] however, in his subsequent letter to your office dated 4 October this year clearly states that this was among the features of the injury he described to [Dr B] in that phone call. [Dr B's] recollection is that this feature was not discussed.

[Dr D] describes offering to send photographs of the injury to [Dr B] at the time though, as noted previously, [Dr B] does not recall that offer.

[Dr D's] account is clearly that he was aware of the severity of the injury and that he was surprised that [Dr B] was comfortable both not attending in person and also not arranging a sooner review after the initial treatment.

[Dr B] has described that he checked [Dr D] was sufficiently experienced and competent to manage lavage of the ocular surface in this situation. However [Dr D's] description of his technique involved removal of debris using his hands and with gauze in addition to irrigation and there is no mention of removal of particulate material from behind the eyelids with a cotton bud (or similar) which, given the demonstrated alkaline nature of the ocular surface at the time should have been an important part of the acute management.

[Dr B's] contention that [Dr D] was competent to manage this situation without [Dr B's] direct involvement is somewhat at odds with this description. This suggests it was reasonable for [Dr B] to be confident in [Dr D's] ability to manage a more minor ocular injury but does not support his belief that [Dr D] had sufficient expertise in the assessment of ocular injuries to make an adequate assessment of the severity of these more significant injuries. In other words, [Dr B] was not justified in deciding that the injuries were not more serious on the basis of [Dr D's] assessment alone and should have been alert to the possibility he had underestimated their severity.

I am in no doubt that if [Dr B] had seen the injuries shown in the photograph he would have instantly recognised their severity and managed those injuries quite differently from the plan he instituted over the phone. The fundamental issue remains that he formed the opinion the injuries were much less serious than in reality they were.

Having considered the responses and further information provided I remain of the opinion that there was a failure of communication whereby [Dr B] did not realise the severity of [Mr A's] injuries and consequently advised for an insufficient treatment regime. I do however accept that [Dr D] was of the opinion that the injuries were

serious and I note that he believes he communicated this adequately to [Dr B] at the time.

Despite the uncertainty that remains about the exact nature of the telephone discussion between [Dr D] and [Dr B] my opinion remains that sufficient information was given to [Dr B] to have alerted him to the potential seriousness of the injuries and of the need for him to attend in person to more adequately assess and manage the situation. I believe this was a significant error of judgment constituting a breach of his duty of care as discussed in my original report.

I note that [Dr B] has reviewed his practice to ensure he encourages disclosure of any further and possibly relevant clinical information in future telephone consultations and note that he has reiterated the seriousness with which he takes his responsibilities and his apology for his part in the failure of communication.

My findings of the breaches in the standard of care provided and my recommendations remain as in my July report.

Dr Keith Small
FRANZCO
Consultant Ophthalmologist”

The following further expert advice was obtained from Dr Small:

“Complaint — [Mr A]/[Dr B] at [the DHB]
Your ref: C18HDC00253

...

Thank you for your letter of 26 June requesting further comment on the claim by [Mr A] regarding the care provided to him by [Dr B] on 17 November 2017 with regard to the firework injury to his right eye.

I have reviewed the records of this case and my original report and subsequent further comments and I have read the response to your office from [Dr B’s solicitors], dated 13 June this year as provided by you.

You have particularly noted the issue of communication during the telephone discussion between [Dr D], the Emergency Department Consultant and [Dr B] at the time of [Mr A’s] presentation to the ED. [Dr B] concluded from the telephone discussion with [Dr D] that [Mr A’s] injury was substantially less serious than in fact it was and in turn the inadequate treatment of the injury resulted from [Dr B’s] treatment advice given based on that assessment.

I note, as you have, that [Dr B] accepts he was told the following details about [Mr A’s] injury:

1. The left eyelid was swollen (oedema)
2. There were first degree burns to the skin of the lower eyelid

3. Several lower eyelashes were singed, burnt or missing
4. The left pupil was non-reactive and in a mid-fixed position (mid-dilated)
5. There was no laceration
6. The contour of the eye felt normal
7. [Mr A] could not visualise anything out of the left eye
8. The pH level of the left eye was 10

Also, as you note, it remains unclear whether [Dr B] was told:

1. A firework had hit [Mr A] directly in the left eye (as opposed to a firework going off near [Mr A's] left eye)
2. [Mr A's] left eye exhibited ocular surface ischaemia
3. There was orbital debris in [Mr A's] left eye
4. [Mr A's] eye had lost corneal epithelium and conjunctival epithelium

I have been asked to consider whether my assessment would be different if it was indeed the case that the above four points were not told to [Dr B] by [Dr D].

By way of background, the clinical report written by [Dr D] at the time of [Mr A's] presentation to ED noted the history of the presenting complaint was 'firework went off in left eye' and the hand-written nursing notes from the ED assessment at the time record "'rumming candle" pointed directly at him shot onto L) eye' and 'friends reported black tears initially'. All of these notes suggest it was well known to the ED staff including [Dr D] that the firework had hit [Mr A] directly in the eye.

Additionally, the nursing notes record that three separate doses of morphine were administered to [Mr A] during his admission to ED which indicates that the ED staff were aware [Mr A] was in severe pain.

As noted in my December comments, the photographs taken at the time in the Emergency Department demonstrate a severe injury to the ocular surface.

It remains unclear whether or not [Dr B] was told that the firework went off directly in [Mr A's] eye but it is clear to me that sufficient information about the potential seriousness of the injury was known by the ED staff to be available at the time of [Dr D's] phone call to [Dr B].

[Dr B] contends that he gave appropriate clinical advice on the basis of the information he was given at the time of that phone call.

My belief is that the information [Dr B] accepts he was given was sufficient to alert him to the real risk of the injury being more serious than he concluded it was. In particular, the presence of visible skin and eyelash burns, but most importantly, the severe loss of vision and the presence of a fixed mid-dilated pupil were very important details and knowing those things he had a responsibility to actively seek further

information in order to be confident the injury was not more serious than he had first thought.

Had he specifically inquired about the distance from the eye from which the firework went off it is clear to me he would have been told the eye had been impacted directly by the firework and similarly, other information including the photographs that were offered was available that would have led him to conclude the injury was potentially serious had he asked [Dr D] for such information.

In my opinion, [Dr B] was given sufficient information during the phone call that he should have considered a more serious injury than he concluded had occurred and he had a responsibility to consider and exclude such a serious injury.

I am confident that as someone who has fairly achieved a position of respect and influence in his profession, [Dr B] would accept that the privilege of being considered an authority as a specialist carries with it important responsibilities. One of these is the responsibility of recognizing when we have dealt with a clinical situation in such a way that has brought about harm and acknowledging that in a way that improves our own clinical practice in the future but can also lead to wider changes that improve the future performance of the profession as a whole.

On being contacted for advice on the clinical management of [Mr A's] case, [Dr B] accepted a responsibility of ensuring he had sufficient clinical information to form appropriate advice. Though he may not initially have been clearly told from what distance the firework hit [Mr A's] eye he accepts that he was given key information which I contend indicated the important possibility that the injury may have been vision-threatening and severe. It was therefore his responsibility to ask more details of the history, particularly from what distance the impact had occurred, and further details of the examination in order to sufficiently exclude a more serious injury. Had he done so this would have led him to realise he needed to assess [Mr A's] injury in person and promptly.

[Dr B] has apparently accepted that there was an important failure of communication in this case. I believe that he should accept the level of his own responsibility within that complex process and that without that occurring the matter will be left inadequately resolved both from his own perspective but also, more importantly, from that of [Mr A] and his family.

It is a difficult but important act of humility for any of us who bear the privilege of professional respect to accept when we have to an important extent failed but it is a measure of our fitness to accept that privilege that we do so.

With these issues in mind, my assessment of the breaches in the standard of care provided to [Mr A] remain as they were in my original report.

Dr Keith Small
FRANZCO
Consultant Ophthalmologist"