HEALTH & DISABILITY COMMISSIONER
TE TOIHAU HAUORA, HAUĀTANGA

Man's death illustrates challenges of complex care across the South Island

Contents

Introduction

1. The Coroner referred a complaint to this Office regarding the death of Mr B, who was aged 19 years at the time of the events. Mr B passed away unexpectedly after suffering complications related to a postoperative wound infection, following removal of tumours related to type 2 neurofibromatosis.[1] Mr B's parents are concerned that Health New Zealand|Te Whatu Ora (Health NZ)[2] did not provide reasonable care to Mr B. This report focuses on the key concerns raised by Mr B's family relating to the standard of neurosurgery care and adequacy of the information provided to them.

2. I express my sincere condolences to Mr B's family on his passing.

Background

3. Mr B lived in the South Island. On 10 Month1 2015 Mr B underwent an elective vestibular schwannoma and tentorial meningioma excision[3] at a tertiary hospital (Hospital 1).[4] This was

[1] A genetic condition that causes benign tumours to develop on nerves, particularly those in the skull and spine.
[2] On 1 July 2022 the Pae Ora (Healthy Futures) Act 2022 came into force, which disestablished all district health boards. Their functions and liabilities were merged into Health NZ.
[3] Removal of tumours from the nervous system.
[4] Tertiary hospitals have the ability to provide specialised and complex medical care.

Names (except Health NZ Waitaha Canterbury, Health NZ Southern, and the clinical advisors 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.

complicated by postoperative infection and meningitis,[5] which required further hospitalisations at a secondary hospital[6] and a second tertiary hospital (Hospital 2). Mr B's care was managed by clinicians at the secondary hospital and/or Hospital 2, with oversight from neurosurgeon Dr A and his team at Hospital 1. Mr B's postoperative infection was treated successfully, but Mr B continued to suffer raised intracranial pressure (hydrocephalus), which required regular release of cerebrospinal fluid (CSF)[7] through lumbar punctures.[8]

4. In the early afternoon of 9 Month4 2015 Mr B was admitted to the secondary hospital acutely following ongoing headaches and vomiting. It was noted that '[Mr B] [was] not coping with CSF balance', but a decision was made to hold off on a lumbar puncture due to concerns that removal of further CSF would cause herniation.[9] Subsequently, a decision was made to insert a ventriculoperitoneal shunt (VP)[10] at Hospital 1.

5. As Mr B was neurologically stable and there were operational delays by the air retrieval team,[11] a decision was made to transfer Mr B a few days later. While waiting for the air retrieval team, Mr B collapsed and had a cardiac arrest. Dr A's team travelled to the secondary hospital urgently and inserted a drain to manage Mr B's hydrocephalus. However, Mr B continued to deteriorate, and after transfer to Hospital 1, Mr B was certified brain dead.

6. Health NZ completed an adverse event review ('the AER') following Mr B's passing, which included an independent review by neurosurgeon Dr Agadha Wickremesekera.

Health NZ neurosurgery care

7. There is dispute as to whether Mr B would have benefitted from an earlier insertion of a VP shunt. Dr Wickremesekera's review indicates that this could have occurred after Mr B's postoperative infection was cleared on 13 Month3 2015. Mr B's family also assert that they were advised that a VP shunt would be inserted once Mr B was cleared of his infection. In contrast, Dr A stated that Mr B's lumbar puncture pressures were not excessive, and he showed periods of slow improvement. Dr A said that at no point was he concerned about Mr B's management (except on the day he was being transferred to Hospital 1). Clinical notes show that there was regular input from Dr A and his team between Month1 and Month4 2015. In addition, Dr A stated that although Mr B's infection had cleared, placing a shunt into the contaminated CSF space too early, in conjunction with Mr B's ventriculomegaly,[12] could have increased the clinical risk. Therefore, a conservative approach was more appropriate. As part of the AER process, another neurosurgeon also disagreed with Dr Wickremesekera's

[5] Inflammation of the membranes covering the brain and spinal cord.
[6] Secondary hospitals are smaller than tertiary hospitals. If more specialised care is needed, consumers are transferred to tertiary hospitals.
[7] Clear fluid that surrounds the brain and spinal cord, providing protection.
[8] Procedure involving a needle being inserted into the lower back.
[9] Protrusion of an organ through a defect or opening.
[10] A plastic tube that drains excess CSF.
[11] A stand-alone service that is operated at the first tertiary hospital.
[12] A condition in which the brain ventricles (fluid-filled cavities) are enlarged due to build-up of CSF.

assertion, noting that post-meningitis communicating hydrocephalus[13] normally tends to settle with lumbar punctures. Dr Wickremesekera agreed that meningitis usually resolves with antibiotics; however, he said that post-infectious communicating hydrocephalus in a chronic symptomatic setting usually requires earlier intervention, and the patient is less likely to recover spontaneously.

8. Mr B's family told HDC that Mr B had a series of lumbar punctures due to the hydrocephalus and that these procedures were really painful for him and very hard for the family to watch. These were not always successful, sometimes taking two or three times before the CSF could be accessed. In addition, the family stated that the symptomatic relief from the procedure was always short-lived.

9. There is dispute as to whether Mr B would have benefitted from earlier transfer to the first tertiary hospital. Mr B's family state that earlier transfer should have occurred, as this would have resulted in better monitoring by Dr A and his team. Similarly, Dr Wickremesekera stated that management of the CSF infection and hydrocephalus at a non-speciality hospital, such as the secondary hospital, was very difficult at the time, and earlier transfer would have allowed for closer monitoring by the neurosurgical team. Dr A disagreed with this, stating that Mr B's infection did not warrant a transfer back to the city, as Mr B's complications required medical management, rather than surgical management. In addition, Dr A stated that keeping Mr B in the region meant that he was closer to his family. Dr A's decision was supported by the other neurosurgeon, who stated that management of the infection at a secondary hospital was clinically sound.

10. As stated above, a decision was made to defer a lumbar puncture on 9 Month4. However, Dr Wickremesekera stated that completing a lumbar puncture could have led to a better outcome, although he did not provide reasoning for this. In contrast, the other neurosurgeon stated that a lumbar puncture at that time would have been dangerous given that Mr B's communicating hydrocephalus was progressing to an obstructive hydrocephalus.

Clinical advice

11. Dr Wickremesekera provided additional neurosurgical advice to HDC (Appendix A). In summary, Dr Wickremesekera advised that the neurosurgical care provided to Mr B was appropriate. However, he noted that Mr B could have been transferred to Hospital 1 earlier, although no departure is noted.

My decision

12. I acknowledge Mr B's family's concerns regarding the neurosurgical care provided to Mr B. However, I consider that Health NZ provided Mr B with a reasonable standard of care. Whilst Dr Wickremesekera's review for Health NZ stated that Mr B would have benefitted from different decisions, I note that it was open to Dr A to make the decision he did. It is also my

[13] Communicating hydrocephalus occurs when the flow of CSF is blocked after it exits the ventricles, while still allowing CSF to flow between the ventricles. This blockage can lead to an accumulation of CSF, causing increased pressure on the brain.

view that Dr Wickremesekera's comments were made in hindsight, rather than based on the information available to Dr A at the time of the events.

Air retrieval team

13. There was a delay in transferring Mr B to Hospital 1 in Month4, and Mr B's poor outcome was attributed to the delay. Initially Mr B was referred to the air retrieval team at 6pm. The referral was triaged by the flight coordinator with input from a senior medical consultant. As Mr B was neurologically stable and the air retrieval team was scheduled to return from another retrieval, a decision was made by the air retrieval team, the neurosurgery team, and the secondary hospital's team to depart from the city at 8am, with an expected arrival back in the city by early afternoon. The air retrieval team stated that this is the nature of prioritisation under a resource-constrained environment.

14. On the morning of the transfer, a further delay occurred in retrieving Mr B due to a flight nurse having to stand down for a period of rest following attendance at an overnight retrieval. Attempts were made to contact other flight nurses and intensive care nurses who were not on the roster, but no one was available. The air retrieval team contacted the secondary hospital's duty manager at 7.15am and was advised that Mr B was on a medical ward and stable. It is not known whether the secondary hospital's medical team were consulted at this point, and if and when they were informed of the air retrieval team's delays. However, the AER shows that the neurosurgery team was not informed of this delay.

15. Dr Wickremesekera stated that road transfer could have been considered as an alternative option when the CAR team was delayed. However, he also said that even if Mr B had been transferred, input from Dr A would still have been needed as he was Mr B's treating surgeon. In addition, Dr A stated that in his experience, moving patients by road had led to a negative outcome, due to a lack of ambulance staff and inability of the ambulances to cross boundaries between healthcare districts at the time.

16. At the time of events, the air retrieval team had been experiencing increasing demands; however, nurse staffing levels had not been increased despite 30% of the retrievals having been nurse only. Between March 2015 and March 2016, there were 60 occasions on which a second retrieval had been requested but could not be responded to. Therefore, the air retrieval team requested additional resourcing in Month1 2015, and this was implemented in June 2016 (see 'changes made' section).

17. The AER also notes that there were no formal guidelines in place to outline the operational factors to be considered when determining the time for a planned retrieval — which may have resulted in variation in the decisions made by intensive care medicine specialists.

Clinical advice

18. Dr Mark Goniszewski, an emergency services specialist, provided independent advice in relation to the air retrieval team (Appendix B). In summary, he advised the following:

- Level of staffing within the air retrieval team = no departure; and
- Triaging and prioritisation of referral to transport Mr B = no departure.

My decision

I accept Dr Goniszewski's advice. I acknowledge that the resourcing constraints within the air retrieval team had an impact on Mr B's outcome. However, it is not my role to determine what caused Mr B's death but rather to determine whether the standard of care provided to Mr B at the time was of an appropriate standard, without hindsight bias. In this circumstance, I agree with Dr Goniszewski that Mr B's care was triaged and prioritised by the air retrieval team appropriately based on the information available to the team at the time.

Communication

19. Mr B's family raised several concerns about the standard of communication provided to them during these events. The AER also notes concerns relating to communication between treating teams and the family.

20. Mr B's family told HDC that in Month3 2015 they were advised by Hospital 2's team that the team had contacted Dr A regarding consideration of a VP shunt, and that Dr A would provide the family with an update regarding Mr B's ongoing care. While the need for a VP shunt had been assessed after Mr B's postoperative infection cleared in Month3 2015, the communication regarding the outcome of the assessment and reasons for not implementing the shunt were not communicated to the family at the time of the assessment. It is not known why these reasons were not communicated to the family.

21. Further, Mr B's family's statement to HDC indicates that they were provided with minimal information regarding Mr B's transfer to Hospital 1 in Month4. The family stated that they did not understand the reason why road transfer to Hospital 2 (where a neurosurgery team was based) was not considered when the air retrieval team was delayed, and they could not understand why Mr B was transferred to Hospital 1 when he had a poor prognosis. In addition, the family were not consulted on Mr B's transfer to Hospital 1. This meant that the family did not have an opportunity to say goodbye to Mr B prior to his death. Health NZ acknowledged that the family missed a crucial opportunity to say goodbye.

22. The communication following the family's arrival at Hospital 1 also appears to be minimal. The family stated that when they arrived, there was a lack of explanation regarding the infusions and other equipment connected to Mr B. In addition, the family said that clinicians informed them about Mr B's clinical status of being 'brain dead', and then within a matter of minutes asked whether they would like to donate his organs, which left them with little time to consider the donation. Finally, the family was advised by a social worker that it was up to them to organise transportation of Mr B's body back to where they lived, even though Mr B had qualified for National Travel Assistance. Health NZ apologised for the distress caused by the discussion related to organ donation and the miscommunication regarding transporting Mr B's body.

Clinical advice

23. In summary, the following advice was provided:

Dr Wickremesekera

- Communication between Hospital 1 and Hospital 2 teams = no departure; and
- Communication provided to Mr B's family = no departure.

Dr Goniszewski

- Lack of consultation with family prior to Mr B's transfer = moderate departure.

My decision

24. Having reviewed all the information on file, including the clinical advice, I consider that Health NZ breached Right 6(1) of the Code of Health and Disability Services Consumers' Rights (the Code) — the right to the information that a reasonable consumer in the circumstances would expect to receive — due to the lack of information provided to Mr B regarding consideration of a VP shunt after his infection had cleared and the delays associated with the air retrieval team, including why alternative transport options were not considered.

25. I note that following Mr B's deterioration in Month4, Mr B's parents were communicating on behalf of Mr B. This was a critical period in which minimal information regarding Mr B's prognosis and treatment pathway was shared, and there was a lack of consultation regarding his transfer to the city. Once Mr B passed away, incorrect and minimal information was provided regarding the support options available to transport Mr B's body back to where they lived. This was particularly distressing for the family. Health NZ acknowledged that this would have been distressing to the family.

26. In addition to the above, I am concerned about the communication that took place between the air retrieval team and the treating teams in Month4 regarding its delays.

27. Health NZ accepted the moderate departure and sincerely apologised for its standard of care.

Responses to provisional report

28. Health NZ Southern was provided with the provisional report and given the opportunity to comment. It told HDC that it did not have any comments to make.

29. Health NZ Canterbury was provided with the provisional report and given the opportunity to comment. It provided its sincere condolences to Mr B's family for Mr B's passing. Health NZ Canterbury's comments have been included in relevant areas of the report.

30. Mr B's family was provided with the provisional report and given the opportunity to comment. Their comments have been integrated throughout the report as relevant.

Changes made

31. The air retrieval team has made the following changes since the events:

- Since 2015, an additional 4.2 full-time equivalent nursing staff have been approved and two teams have been implemented, allowing for two retrievals to occur at a given time.
- The air retrieval team now communicates to the receiving team any changes to the plan for when a retrieval is to occur.
- The air retrieval team has developed new guidelines that outline operational factors to be considered when determining the date and time for a planned retrieval.
- The air retrieval team has established a group of clinical leads for aeromedical retrieval for inter-hospital transfers.
- The air retrieval team is in the process of developing a standard triage tool and a process of benchmarking the air retrieval team's performance against other services.
- The air retrieval team has developed teleconferencing that enables 10 individuals to be involved in the conference, which also enables rapid consensus decision-making in the referral and transfer of patients.

32. The amalgamation of the 20 district health boards into Health NZ will allow for better integration of services, sharing of resources, and communication between treating teams.

33. In 2017, the NZ government launched the Deceased Organ Donation and Transplantation Strategy, which outlines the process of discussing organ donations with families. Health NZ has adopted this strategy into its internal guidelines and has implemented designated teams to discuss the organ donation process with families.

34. Health NZ now has 24/7 social worker cover within intensive care units. It ensures that social workers are made aware of any patient death outside the hospital region, so they can reach out to families directly. In addition, Health NZ has developed draft letters to inform families about national travel assistance, guiding them on how to access this support.

Recommendations

35. I acknowledge the significant number of changes across the health system that have been made since the time of the events, including the establishment of Health NZ. I am also mindful that providing recommendations at this stage for errors that happened some time ago is likely to have limited practical benefit.

36. I recommend that Health NZ Southern and Health NZ Waitaha Canterbury districts provide a formal written apology for the breaches identified in this report. The apology is to be sent to HDC, for forwarding to Mr B's family, within three weeks of the date of this report.

Follow-up actions

37. A partially anonymised copy of this report (naming only Health NZ Waitaha Canterbury, Health NZ Southern, and my clinical advisors) will be sent to Health NZ and placed on the HDC website (www.hdc.org.nz) for educational purposes.

38. A full copy of this report will be sent to the Coroner.

Nāku iti noa, nā

Dr Vanessa Caldwell
Deputy Health and Disability Commissioner

Appendix A: Independent clinical advice to Commissioner

'Complaint:	**[Mr B]/Health NZ Canterbury and Southern**
Our ref:	**20HDC01089**
Independent advisor:	**Dr Agadha Wickremesekera**

I have been asked to provide clinical advice to HDC on case number 20HDC01089. I have read and agree to follow HDC's Guidelines for Independent Advisors.

I am not aware of any personal or professional conflicts of interest with any of the parties involved in this complaint.

I am aware that my report should use simple and clear language and explain complex or technical medical terms.

Qualifications, training and experience relevant to the area of expertise involved:	My name is Agadha Wickremesekera, Neurosurgeon at Wellington Hospital. I have qualified with a degree in medicine 1986 from the University of Otago. Thereafter I trained in neurosurgery and qualified with a FRACS in 1998 in neurosurgery. I have also completed a doctor of medicine in research completing my thesis in 2005. I have been working at Wellington Regional Hospital as a neurosurgeon from 1999 to the present.
Documents provided by HDC:	1. Coronial referral dated 22 June 2020 and attachments. Please note this includes a redacted copy of the SER containing only the facts, not the findings of the review. 2. Health NZ Southern's response dated 7 August 2020. 3. Health NZ Southern's policies. 4. Health NZ Canterbury's response dated 12 August 2020. 5. Clinical records from Health NZ Canterbury and Southern covering the period [Month1] to [Month4] 2015.
Referral instructions from HDC:	Health NZ Canterbury and Southern 1. The general standard of care provided to [Mr B], including: a. Communication between Health NZ Canterbury and Health NZ Southern neurosurgical units. b. Coordination of care between Health NZ Canterbury and Health NZ Southern neurosurgical units. c. Communication with [Mr B] and his family. 2. The appropriateness of the decision to discharge [Mr B] on 16 [Month1] 2015. 3. The appropriateness of managing [Mr B's] condition after he was cleared of MRSA meningitis on 13 [Month3] 2015.

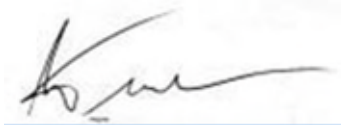
	4. The appropriateness of the care provided to [Mr B], following his presentation to [the secondary hospital] on 9 [Month4] 2015. 5. The appropriateness of care provided to [Mr B], following his collapse in [Month4] 2015, including the decision to transfer him to [Hospital 1]. 6. Any other matters you consider warrant comment.

Factual summary of clinical care provided complaint:

Brief summary of clinical events:	See previous report

Question 1: The general standard of care provided to [Mr B], including: a. Communication between Health NZ Canterbury and Health NZ Southern neurosurgical units. b. Coordination of care between Health NZ Canterbury and Health NZ Southern neurosurgical units. c. Communication with [Mr B] and his family.	
List any sources of information reviewed other than the documents provided by HDC:	Documents provided by HDC
Advisor's opinion:	The management with regards to communication as stated above is to an accepted standard of care.
What was the standard of care/accepted practice at the time of events? Please refer to relevant standards/material.	Acceptable
Was there a departure from the standard of care or accepted practice? • No departure; • Mild departure; • Moderate departure; or • Severe departure.	No departure

Question 2: The appropriateness of the decision to discharge [Mr B] on 16 [Month1] 2015.	
List any sources of information reviewed other than the documents provided by HDC:	Documents provided by HDC
Advisor's opinion:	The patient was recovering well and was discharged at an appropriate time. The discharge planning was to an accepted standard.
What was the standard of care/accepted practice at the time of events? Please refer to relevant standards/material.	Acceptable
Was there a departure from the standard of care or accepted practice? • No departure; • Mild departure; • Moderate departure; or • Severe departure.	No departure
Question 3: The appropriateness of managing [Mr B's] condition after he was cleared of MRSA meningitis on 13 [Month3] 2015.	
List any sources of information reviewed other than the documents provided by HDC:	Documents provided by HDC
Advisor's opinion:	The post operative infection with MRSA meningitis was managed appropriately.
What was the standard of care/accepted practice at the time of events? Please refer to relevant standards/material.	Acceptable
Was there a departure from the standard of care or accepted practice? • No departure; • Mild departure; • Moderate departure; or	No departure

• Severe departure.	
Question 4: The appropriateness of the care provided to [Mr B], following his presentation to [the secondary hospital] on 9 [Month4] 2015.	
List any sources of information reviewed other than the documents provided by HDC:	Documents provided by HDC
Advisor's opinion:	The management on presentation to [the secondary hospital] on 09 [Month4] 2015 was appropriate.
Question 5: The appropriateness of care provided to [Mr B], following his collapse in [Month4] 2015, including the decision to transfer him to [Hospital 1].	
List any sources of information reviewed other than the documents provided by HDC:	Documents provided by HDC
Advisor's opinion:	Following his collapse in [Month4] again he was managed appropriately at the presenting DHB.
Question 6: Any other matters you consider warrant comment.	
List any sources of information reviewed other than the documents provided by HDC:	HDC documents
Advisor's opinion:	This patient has had an unfortunate and tragic outcome. Pre intra and post operative treatment and management were within acceptable standards of care. In hindsight the patient could have been transferred to [Hospital 1] a few days before his final presentation.
Recommendations for improvement that may help to prevent a similar occurrence in future.	To improve resources for timely transport of patients requiring tertiary care.
 Signature:	

Name: Dr Agadha Wickremesekera

Date of Advice: 10 January 2025’

Appendix B: Independent clinical advice to Commissioner

'Complaint:	**Health NZ Waitaha Canterbury**
Our ref:	**20HDC01089**
Independent advisor:	**Dr Mark Goniszewski**

I have been asked to provide clinical advice to HDC on case number 20HDC01089. I have read and agree to follow HDC's Guidelines for Independent Advisors.

I am not aware of any personal or professional conflicts of interest with any of the parties involved in this complaint.

I am aware that my report should use simple and clear language and explain complex or technical medical terms.

Qualifications, training and experience relevant to the area of expertise involved:	Fellow of the Australasian College for Emergency Medicine Fellow of the Royal College of Emergency Medicine (UK) Master of Aviation Medicine (University of Otago, NZ) Master of Aero Retrieval Medicine (University of Otago, NZ) Diploma in Mountain Medicine (University of New Mexico, USA) Member of the Royal College of Surgeons (Edinburgh, UK) Lekarz (Physician) Medical University of Warsaw, Poland
Documents provided by HDC:	1. Complaint referral dated 22 June 2020 2. … report dated 26 January 2016. 3. Health NZ Waitaha Canterbury's response dated 12 August 2020 4. Clinical records from Health NZ Waitaha Canterbury covering the period [Month4] 2015 to [Month4] 2015.
Referral instructions from HDC:	Health NZ Waitaha Canterbury and Health NZ Southern 1. The standard of communication between Health NZ Waitaha [air retrieval service] and Health NZ Southern neurosurgical teams. 2. The adequacy of the [air retrieval service] staffing levels at the time of the transfer. 3. The process for triaging/prioritising calls for [air retrieval] transfers in place at the time of events, and whether any improvements can be made to the current process.

	4. The standard of ARS documentation at the time i.e. the process for recording and capturing discussions, the decision-making process and planning of [air retrieval] transfers. 5. Any other matters you consider warrant comment.

Factual summary of clinical care provided complaint:

Brief summary of clinical events:	**Complaints specific to the retrieval aspects of this case;** *"So why was he then flown to [the city]"* *"If we had been spoken to by the surgeon prior to the decision to take [Mr B] to [the city] and given information about his GCS and his poor prognosis, we would have been able to make the decision as to whether it was the right thing to do"* There do not appear to be any specific concerns about the clinical care provided by [the air retrieval team]. **Summary of clinical events specific to the aeromedical retrieval of [Mr B] from the provided documentation.** [Mr B], a 19 year old man, passed away due to complications of Neurofibromatosis Type 2, specifically hydrocephalus (a blockage of the flow of fluid surrounding the brain leading to an abnormal build up of excess fluid around the brain causing increased and harmful pressure on the brain). [Mr B] presented to [the secondary hospital] on the 9th [Month4] 2015 with increased headaches and vomiting and diagnosed with hydrocephalus, 4th ventricular enlargement (an abnormal increase in size of a normal cavity within the brain) causing tonsillar descent (a part of the brain has been pushed into an abnormal position) following a CT scan at 1500 the same day. These findings were discussed with the [neurosurgical service] who recommended that he be transferred from [the secondary hospital] to [Hospital 1] for a planned procedure the next day. The [neurosurgical service] discussed the transfer with the … Intensive Care Unit (ICU) consultant on call for retrievals at 1800 the same day and, due to service limitations (staffing) the consensus was that the transfer could occur early in the morning. The planned transfer did not occur as planned in the morning, again due to service limitations (staffing). The ICU consultant that

	morning checked on [Mr B's] condition by telephone and was informed that his condition was unchanged. Despite attempts to expedite his transfer, staffing resource limitations resulted in transfer delay until approximately midday. [Mr B] collapsed at approximately … He required resuscitation, intensive artificial life support and critical care therapy from the … ICU. Discussion between the [neurosurgical service], ICUs and the [air retrieval service] formulated a plan which involved sending the retrieval team to [Mr B] along with a neurosurgical doctor capable of providing emergency surgical intervention, to drain the excess fluid around his brain and alleviate elevated pressures to his brain in an attempt to save his life. Once the neurosurgical doctor had completed the procedure at [the secondary hospital], [Mr B] was evacuated to [Hospital 1] ICU for continued management. Unfortunately, despite these measures, [Mr B] passed away [on] the morning of … **Summary of the [Health NZ Waitaha Canterbury] response;** **— Point 2** The response specific to the aeromedical retrieval of [Mr B] does address the rationale for [Mr B's] transfer to [Hospital 1] and reasoning is logical. Following the neurosurgical procedure, [Mr B's] response to the treatment was uncertain and optimal management in a neurosurgical ICU is a suitable reason for transfer. [The air retrieval team] took specialist neurosurgical advice with an aim to give [Mr B] the best possible chance of recovery. … [Mr B's] father['s] complaint letter documents that in [Mr B's] clinical notes, … stated following discussion with [a neurosurgeon] that "*there was a poor prognosis for [Mr B]".* Review of the contemporaneous notes finds that this was documented, but at 2030 following the arrival of [Mr B] at … ICU and after another CT scan completed at 2000 at [Hospital 1] which would have allowed prognostication.

	Unfortunately, it appears that there has been confusion regarding the chronological events. [Mr B's] prognosis was not made prior to the transfer. It is acknowledged and apologised that the discussion with [Mr B's] family did not occur though it appears that [Mr B's] parents did miss the crucial opportunity to have a discussion post surgery. *"We are very sorry that the parents felt that they had missed a crucial opportunity to have a discussion after emergency surgery as to whether it was still the best decision to transfer [Mr B] to [the city]"* **— Point 6** The response indicates that the flight nursing FTE from August 2020, will be 5.2 FTE with retrieval co-ordination. Within the response, [the air retrieval team] is the retrieval service for the South Island of New Zealand and further if required. The number of retrievals is increasing and there has been a response to that demand by increasing staffing. [The air retrieval team] missions are also noted to be of a longer duration as compared to the North Island, and the response does indicate that there is the capacity to be able to perform more than one mission simultaneously. *When writing this summary please summarise the complaint first and then summarise the provider response and clinical notes. You can do so in separate sections, or if it is to be all in one section, please ensure that there is clarity over what is the complainant's perception of events versus the perception of the provider and what is illustrated in the clinical notes.*
Question 1: The standard of communication between [the air retrieval team] … and Health NZ Southern neurosurgical teams.	
List any sources of information reviewed other than the documents provided by HDC:	Nil other than provided by the HDC
Advisor's opinion:	From the documentation provided in the statements, there had been frequent discussions between the Neurosurgical team and [the air retrieval team].

	These discussions have occurred often, with services updating one another in changes in plans working to develop a solution to treat [Mr B's] current condition. I do note that within the … serious event review conducted, it was noted that the neurosurgical service was not updated with the delay in transfer on the morning of … [Month4]. My opinion is that this would not have altered [Mr B's] care as the retrieval co-ordination and the ICU specialist involved were actively seeking solutions to retrieve [Mr B] to [Hospital 1].
What was the standard of care/accepted practice at the time of events? Please refer to relevant standards/material.	The standard of care here is of good, accepted practice both at the time of the event and now.
Was there a departure from the standard of care or accepted practice? • No departure; • Mild departure; • Moderate departure; or • Severe departure.	No departure.
How would the care provided be viewed by your peers? Please reference the views of any peers who were consulted.	Following anonymous discussion with peers alien to this case, the reported standard of communication provided is viewed positively.
Please outline any factors that may limit your assessment of the events.	None.
Recommendations for improvement that may help to prevent a similar occurrence in future.	None. No issues with communication.

Question 2: The adequacy of the [air retrieval team] staffing levels at the time of the transfer.	
List any sources of information reviewed other than the documents provided by HDC:	**Australasian College for Emergency Medicine** **Australian and New Zealand College of Anaesthetists** **College of Intensive Care Medicine** **PS52 Guidelines for transport of critically ill patients 2015**
Advisor's opinion:	Quoted from 2015 guidelines; *"Medical transport services using road ambulance, fixed and rotary wing aircraft must be coordinated for prompt, rapid, efficient and safe transport of critically ill patients on a 24 hour basis"* From the provided documentation and the outcome of the delay to retrieve [Mr B], clearly the staffing of the [air retrieval team] during the incident of [Mr B's] required retrieval was insufficient. Co-ordination was appropriate, but hampered by insufficient staffing. No available flight nurses were able to respond and attend [Mr B's] retrieval despite a number of calls for assistance by the [air retrieval team] co-ordinator. I note that within the review of the event; "*At the time of this event the Flight Nurses were being rostered on for a 24-hour period. This was on call from 1800 until 0830, and this was followed by an in-hour day shift (specifically for [air retrieval]). Over and above this the Flight Nurses often made themselves available to do an extra shift when requested due to the demand exceeding capacity and this goodwill had assisted the service to run without any known adverse event for many years*"
What was the standard of care/accepted practice at the time of events? Please refer to relevant standards/material.	At the time of this incident, this staffing model was accepted practice in New Zealand. I cannot reference any specific documentation; this is from experience.

Was there a departure from the standard of care or accepted practice? • No departure; • Mild departure; • Moderate departure; or • Severe departure.	At the time, this would be perceived as no departure from the standard of care. Clearly, this is not the case now and would not be accepted for a stand alone retrieval service providing services to a large tertiary/quaternary hospital such as [Hospital 1].
How would the care provided be viewed by your peers? Please reference the views of any peers who were consulted.	My colleagues are in agreement with me that the standard of care at the time was adequate, but far from accepted practice today.
Please outline any factors that may limit your assessment of the events.	Nil
Recommendations for improvement that may help to prevent a similar occurrence in future.	Referencing the data provided by [Health NZ Waitaha Canterbury], the significant leap in retrievals performed by the [air retrieval team] (2016 = 470 retrievals, 2017 = 660) a 40% increase over the course of one year. I do not have access to most recent 2024 data, though anticipate further escalation of the demands on the [air retrieval team]. If the goal is for a resilient stand-alone [air retrieval] service that can respond at any time of the day, an increase in staffing for the [air retrieval team] is essential to accommodate this significant workload. The … response documents an increase in flight nurse resources has already occurred.
Question 3: The process for triaging/prioritising calls for [air retrieval team] transfers in place at the time of events, and whether any improvements can be made to the current process.	
List any sources of information reviewed other than the documents provided by HDC:	Nil
Advisor's opinion:	The triage and prioritisation of retrieval was appropriate. This is evidenced by the numerous

	discussions held between involved services at a senior level.
What was the standard of care/accepted practice at the time of events? Please refer to relevant standards/material.	Both at the time of the incident and now, the triage and prioritisation is at accepted standard.
Was there a departure from the standard of care or accepted practice? • No departure; • Mild departure; • Moderate departure; or • Severe departure.	No departure.
How would the care provided be viewed by your peers? Please reference the views of any peers who were consulted.	The consensus is of accepted practice.
Please outline any factors that may limit your assessment of the events.	Nil
Recommendations for improvement that may help to prevent a similar occurrence in future.	The triage and prioritisation had no bearing on the outcome of this incident. The urgency of the case was not underestimated and appropriate shared clinical decision making occurred at a senior level. It remains of an appropriate standard today.
Question 4: The standard of [air retrieval team] documentation at the time i.e. the process for recording and capturing discussions, the decision-making process and planning of [air retrieval team] transfers.	
List any sources of information reviewed other than the documents provided by HDC:	Nil
Advisor's opinion:	At the time of the incident, the documentation is generally good, though the event review by [Health NZ Southern] noted: *"Discussions between various parties are not captured anywhere" but does acknowledge that "information*

	about the request is however handed over verbally by the … [specialist] and then documented by … co-ordinator who commences what is known as a call sheet" I am of the opinion that the documentation was of a sufficient standard to convey the required clinical information.
What was the standard of care/accepted practice at the time of events? Please refer to relevant standards/material.	At the time of the incident, the [air retrieval team] documentation is of adequate and accepted standard.
Was there a departure from the standard of care or accepted practice? • No departure; • Mild departure; • Moderate departure; or • Severe departure.	No departure.
How would the care provided be viewed by your peers? Please reference the views of any peers who were consulted.	The [air retrieval team] documentation pro forma is viewed favourably within New Zealand and has been discussed with multiple NZ retrieval clinicians in recent times.
Please outline any factors that may limit your assessment of the events.	Nil
Recommendations for improvement that may help to prevent a similar occurrence in future.	The documentation provided from 2015 is handwritten, the ideal standard would be for a digitised platform where "live" discussions could be documented and information disseminated to team members.
Question 5: Any other matters you consider warrant comment.	
List any sources of information reviewed other than the documents provided by HDC:	**Australasian College for Emergency Medicine** **Australian and New Zealand College of Anaesthetists** **College of Intensive Care Medicine**

	(Tri-college) PS52 Guidelines for transport of critically ill patients 2015 Tri-college *"Where it would be immediately lifesaving, the transport of expert medical assistance, for example, a neurosurgeon, to the referring hospital should be considered. At all times the risk of placing untrained personnel in an unfamiliar transport environment must be balanced with the likely benefit to the patient."* **PG52 Guidelines for transport of critically ill patients 2024 (most recent iteration of the 2015 guideline referenced)** *5.1 "It is important that transport teams, as much as reasonably practicable, communicate with the patient and/or their carer about their care and where they are going"* **The Faculty of Intensive Care Medicine. Guidance On: The Transfer Of the Critically Ill Adult. Published May 2019** *14 Communication with patients and relatives* *14.1 "Whilst many critically ill patients will be unconscious or lack capacity, every effort should be made to communicate with patients about transfer arrangements. Patients and their relatives should be kept informed at all stages of the transfer process and provided with appropriate written information"*
Advisor's opinion:	**1. Opinion regarding the reasoning of the transfer to [the city].** Retrieval teams are specialists in retrieval and transport medicine. They take advice from the specialists requesting the transfer regarding the acuity, condition and reason for the required transfer. The retrieval team should ideally discuss the transfer plan with the patient/whānau/family and involve the requesting specialist as referenced by the three Australasian Medical College involved in retrieval

	medicine and the UK Faculty of Intensive Care Medicine. In this case, I do not see discussions documented with [Mr B's] family by either the retrieval team, the neurosurgical team or the [secondary] hospital teams. This was acknowledged in the [Health NZ Waitaha Canterbury] response. 2. **This incident highlights insufficient retrieval flight nurse staffing resulting in delay to definitive care for [Mr B].** The urgency of [Mr B's] clinical condition was discussed with the appropriate specialists and a shared plan was made which factored in resource limitations. [The air retrieval team] and the [neurosurgical service] went above and beyond to try and care for [Mr B] once his condition had deteriorated. Flying the surgeon to [Mr B] was an extreme measure to try and save [Mr B's] life. The [neurosurgical service team] should be acknowledged for their efforts, being placed in a desperate situation and unfamiliar environment. *"Where it would be immediately lifesaving, the transport of expert medical assistance, for example, a neurosurgeon, to the referring hospital should be considered. At all times the risk of placing untrained personnel in an unfamiliar transport environment must be balanced with the likely benefit to the patient."* I can see that multiple attempts were made to source staff to go retrieve [Mr B], even seeking ICU nursing staff from the night shift qualified to perform a retrieval. The event review acknowledges that *"goodwill"* was needed to maintain a 24/7 service, however, a stand alone 24/7 retrieval service for a major hospital

	cannot function on essentially a *"best endeavours"* approach. Being aware of the clinical condition and needs of [Mr B], trying to source staff for [Mr B's] retrieval must have been difficult for the co-ordinating staff that day, both the nurse and the ICU consultant. The impossible situation and frustration of not being able to resolve this impasse must have been difficult and would have impacted on patient care beyond that of [Mr B]. The fact that [Mr B] deteriorated whilst awaiting the delayed transfer would have caused distress to all staff involved. Within the … incident review, it is noted that the flight nurse who did complete the mission to retrieve [Mr B], was on duty for the night shift. The flight nurse had completed a critical retrieval mission overnight and would have been recovering during the day. This provides context of the goodwill that the [air retrieval team] required to function at the time. This flight nurse performed a mission with risk to themselves for the benefit of [Mr B] who required an immediate response to try and save his life.
What was the standard of care/accepted practice at the time of events? Please refer to relevant standards/material.	At the time of the incident, the staffing levels for retrieval were of an accepted practice for New Zealand.
Was there a departure from the standard of care or accepted practice? • No departure; • Mild departure; • Moderate departure; or • Severe departure.	1. Moderate departure. Ideally [Mr B's] family should have been informed/consulted about the transfer as per guidelines. However, it is likely that the transfer would have proceeded if his family were informed that to provide [Mr B] the best possible chance for recovery would be to transport to a specialist neurosurgical ICU following the emergency surgery at [the secondary hospital], as was the opinion of the specialist neurosurgical service.

	2. No departure at the time of the incident.
How would the care provided be viewed by your peers? Please reference the views of any peers who were consulted.	1. Communication with patients/whānau/family is essential practice today. 2. Although the staffing model at the time of the incident would have been accepted, this is not the case today for a tertiary/quaternary level hospital retrieval service … Across New Zealand, retrieval staffing is generally insufficient in relation to retrieval service pressures and demand.
Please outline any factors that may limit your assessment of the events.	There is no documentation of discussions held with [Mr B's] family following the emergency surgery at [the secondary hospital] and so the assumption must be that it did not occur.
Recommendations for improvement that may help to prevent a similar occurrence in future.	1. Tri-college (ACEM, ANZCA, CICM) Guidelines for transport of critically ill patients advise communication with the patient and/or carers as much as reasonably practicable to inform of their care. 2. I do note the current staffing for [the air retrieval service] is significantly improved, but I am unable to calculate the FTE required for a fully staffed, 24/7 roster with capacity for service resilience. To prevent any future instances where lack of staffing results in delay to retrieve a critically unwell patient, [the air retrieval service] medical and operational directorates would need to calculate the FTE required for a full time roster that factors a fatigue management systems approach, current and anticipated future service demands and cross-referenced with current provided staffing levels to identify service staffing deficiencies and close them. Once fully staffed to service demands, a recurrence of such an incident should be minimised.

Mark Goniszewski
Date of Advice: 8 December 2024'