Decision 23HDC01879
25 March 2026

HEALTH & DISABILITY COMMISSIONER
TE TOIHAU HAUORA, HAUĀTANGA

Failure to diagnose stroke despite significant symptoms

Introduction

1. On 17 July 2023, this Office received a complaint from Ms A about the care provided to her partner, Mr B, by Health New Zealand | Te Whatu Ora Te Tai Tokerau Northern Region (Health NZ) and Dr C at a local public hospital (Hospital1). The complaint concerns a failure to diagnose a stroke despite Mr B presenting with significant symptoms.

2. Having considered the concerns raised in Ms A's complaint, for the reasons below I find Health NZ and Dr C in breach of Right 4(1) of the Code of Health and Disability Services Consumers' Rights (the Code).

3. Issues regarding the provision of care in the community have been dealt with separately.

Background

Events leading up to hospital presentation

4. On the morning of 20 January 2023, Mr B (aged 33 years at the time) attended his local GP clinic (clinic1) with his partner, Ms A. Mr B presented with symptoms of chronic sinusitis[1] and worsening snoring and sleep apnoea.[2,3] He was referred for a computed tomography (CT)[4] scan of his sinuses and advised about a sleep study.

5. Around lunchtime that day, Mr B was still feeling unwell and had further symptoms, including intense head pain, visual disturbance, a feeling of pressure in his head, and a loss of balance to the extent that he was unable to walk properly. Accordingly, Ms A took him to their nearest medical centre, (clinic2), where she is an enrolled client. Ms A said that, by this time, Mr B was vomiting and sweating profusely, so she left him in the car and explained the situation to the reception staff. As there were concerns about Mr B's COVID-19 status, and he had been seen earlier at Clinic1, Ms A was advised by clinic2 staff to take Mr B back to clinic1.

6. Owing to Ms A's concern for Mr B's condition, she decided instead to take him to hospital1. During the journey, he continued to vomit and experience the symptoms described in the foregoing paragraph. Ms A also believed his speech was slow.

Initial Emergency Department (ED) presentation — Hospital1

7. On arrival at around 1pm, Ms A took Mr B into the ED by wheelchair, and they were met by a male nurse and admitted to the ED.

[1] Inflammation of the space inside the nose and head (sinuses) for longer than 12 weeks.
[2] A condition that affects breathing while sleeping.
[3] Ms A told HDC that Mr B also had had a small headache since waking up, although this was not mentioned to the clinic.
[4] A scan that uses X-rays to create detailed images of the body.

8. Mr B was seen by Dr C at 1.11pm, and again Ms A explained what had happened and the symptoms Mr B was experiencing. Ms A says she told Dr C that she thought Mr B had had a stroke, and she was also worried about possible food poisoning. After taking a history, Dr C undertook a physical examination and reviewed blood test results. Her working diagnosis was of a likely viral inner ear infection, and she recorded a diagnosis of 'labyrinthitis'.[5] Dr C accepts that the issue of possible stroke was discussed, but she considered this unlikely because of the absence of facial droop, limb weakness, visual disturbance (although it was noted in the clinical record that Mr B was seeing red and orange shapes), and speech disturbance; his young age; and the absence of significant risk factors. Mr B was treated with intravenous fluids, pain relief, and medication to stop him vomiting. It is relevant to note that Mr B's gait was not formally assessed.

9. Dr C discharged Mr B at approximately 4.50pm that afternoon with medication[6] and a plan to re-visit his general practitioner if the symptoms worsened. While his observations were normal at this time, Mr B was still experiencing dizziness. He was advised to return to hospital1 if he experienced fever, confusion, drowsiness, or other symptoms of significant concern. Ms A told the investigation that, before leaving, she told a nurse that it did not feel right 'wheel chairing [Mr B] in and wheel chairing him out, something isn't right'. However, the nurse advised them to return in three days' time if things got worse.

Subsequent ED presentation — Hospital2

10. Mr B did not improve while at home. At 1pm the following day (21 January 2023), Ms A took him to the ED at hospital2. The clinical records from hospital2 show that Mr B was seen by an ED doctor, and various investigations were undertaken, including a CT scan. Mr B was diagnosed with a 'cerebellar infarction'[7] — a rare category of stroke that requires immediate treatment.[8] Following discussions between various clinicians, including a neurosurgical registrar at Auckland Hospital, Mr B was airlifted to Auckland City Hospital for treatment, where he remained for five days. Unfortunately, Mr B has experienced ongoing complications from his stroke.

Provider responses

Dr C

11. In a response to the Health and Disability Commissioner's (HDC's) investigation, Dr C acknowledged the failures in the care she provided on 20 January 2023, which she described as 'inadequate'. She apologised to Mr B and his whānau and said how truly sorry she is for what he has suffered as a result. In her response to the provisional decision, Dr C confirmed she had also met with them and apologised. Dr C told HDC that she had been and continues to be profoundly affected by this event. Dr C also told HDC the following:

a) She was somewhat reluctant to accept the Medical Officer Special Scale (MOSS) position at the hospital1. A MOSS is considered a senior doctor who does not have a

[5] Inflammation of the inner ear.

[6] 'Paracetamol, ibuprofen, and cyclizine [to prevent nausea and vomiting] (advised cyclizine can cause drowsiness).'

[7] Disruption of blood flow to a part of the brain that regulates motor movement and balance.

[8] Hospital1's response to HDC states that the CT scan results suggested that the stroke may have occurred on or around 18 January 2023.

qualification as a specialist, and at the time of her employment Dr C had been a doctor for 12 years. However, on commencement of the role, she raised concerns immediately with senior management at the hospital regarding her experience, training, and supervision. Specifically, she was alarmed by the 'apparent mismatch between her experience and what seemed to be expected of her'. The day after she started, she asked to return to a more junior role and contacted Hospital2 to enquire about vacancies at the registrar level. These concerns continued up to the period of care provided to Mr B.[9] However, Dr C says she was reassured that her relative inexperience could be mitigated by a combination of things, including a two-week period of orientation, being rostered on with experienced doctors, and support with building up specific skills through appropriate courses and self-directed study. In relation to upskilling, Dr C said that the domains for stroke management and rehabilitation and referral of stroke patients for intensive rehabilitation were not identified as specific areas in which she needed supervision or further training and so were not prioritised as a specific learning focus. Dr C said that she was reassured continuously that the MOSS role was suitable for her.

b) Dr C stated that she discussed her provisional diagnosis of a viral inner ear infection and alternative diagnoses with Mr B and Ms A, but this was not documented in the discharge summary.

c) Dr C accepts that she did not undertake an assessment of Mr B's gait or ability to walk independently but says she saw him mobilise to the toilet (accompanied by Ms A).

d) Dr C acknowledged that she failed to recognise the clinical significance of Mr B's main presenting complaint, being vertigo, and to consider a central cause (that is, a cause within his brain) for his vertigo, which would have triggered a higher suspicion of a posterior circulation stroke. Dr C said: '[W]ithout seeking to minimise my responsibility for this failure of care, I do feel it was the product of my lack of recent experience in the treatment of posterior circulation stroke.'

e) Dr C stated that, had there been a Senior Medical Officer (SMO) in the department with her at the time, it is likely that she would have run the case by the SMO to cross-check her diagnosis and management plan.

12. As well as providing an apology, Dr C confirmed that she had 'provided a letter of support to ACC for a treatment injury claim in respect of the misdiagnosis'.

13. Dr C told HDC that she no longer works at hospital1.

Health NZ

14. In its response to the complaint, Health NZ sincerely apologised and conveyed its deep regret to Mr B for the delay in diagnosing his cerebellar stroke and subsequent complications it may have caused him. In response to the provisional decision, Health NZ also acknowledged the distress of such a debilitating illness at such a young age for Mr B and the subsequent anguish and stress both he and Ms A have endured since his diagnosis. Health NZ confirmed that it has a specific stroke pathway where all acute stroke presentations are discussed with the on-call stroke specialist at hospital2. Health NZ also

[9] Emails between Dr C and senior management continued between 18 October 2023 and February 2023.

confirmed that no CT scanner is available at the hospital1 and, in response to the provisional decision, highlighted that this 'inevitably impacts the timely intervention for stroke patients.' Health NZ recognised that posterior circulation strokes are significantly more difficult to diagnose and that, on reflection, the appropriate course would have been for Mr B to be transferred for a CT scan.

15. Health NZ told HDC that Mr B's case was discussed both at its Morbidity and Mortality meeting (see Changes Made section below) and at the Reportable Events Committee meeting. However, Health NZ confirmed that no serious event analysis was undertaken, as the Committee members felt that one was not required because all appropriate processes and systems had been followed and no organisation-wide learnings would be identified.

16. In response to HDC's query about why referral of stroke patients for intensive rehabilitation was not identified as a specific area on which Dr C should receive supervision and/or further training, Health NZ stated that no area of weakness in stroke diagnosis or management was identified with Dr C. Health NZ told HDC that, although a senior doctor was always rostered on with Dr C for each shift, there was a roster gap on the day that Mr B presented, and she was working with a senior ED registrar. However, Health NZ stated that rural medicine specialists were available in the inpatient unit at hospital1. In response to the provisional decision, Health NZ stated that they considered Dr C was well supported by the leadership team prior to this event.

17. Health NZ also told HDC that adverse events like this take a very heavy toll on doctors, and it is sorry to report that the impact of this event on Dr C is that she has not proceeded with training in rural medicine. Health NZ feels that this is a 'sad loss to the future of rural medicine in [the area] and the health of our population, where we desperately need more doctors to staff our rural hospitals'.

Independent advice

18. To determine whether the care Dr C provided was appropriate and reasonable, I considered the external clinical advice (Appendix A) from a fellow in general practice and rural hospital medicine, Dr Johan Peters, who reviewed all relevant information in relation to this complaint, and to which I have referred in my decision below.

Responses to provisional decision

19. Mr B and Ms A were given an opportunity to respond to the relevant sections of the provisional decision, and they remain of the view that hospital1 had not appreciated the impact of these events on Mr B.

20. Dr C and Health NZ were given an opportunity to respond to the provisional decision. Dr C confirmed she accepted the Commissioner's findings. Both Dr C and Health NZ reiterated information that was already within this decision. Other information has been incorporated into this decision where relevant. HNZ also provided comment on proposed recommendations and, accordingly, changes have been made to the recommendations section of this opinion.

Decision

21. I understand from Ms A that this has been a difficult journey of recovery for Mr B, and I commend them for raising their complaint with HDC to prevent this from happening to anyone else.

22. The central issue for me to determine is whether an appropriate assessment was undertaken of Mr B to determine his diagnosis during his initial presentation to the hospital1. In making any determinations, I must be careful to guard against hindsight bias, with a focus on what information was available to clinicians at the time of the care.

Dr C— breach

23. Mr B had the right to have services provided with reasonable care and skill as provided for in Right 4(1) of the Code.

24. In his independent advice, Dr Peters described Dr C 's assessment as 'timely but not adequate, and not complete.' Dr Peters identified that at the time of Dr C 's assessment, Mr B was presenting with 'red flag' symptoms that raised the possibility of a central or brain cause for those symptoms. In particular, Dr Peters noted headache, visual symptoms, and ataxia or incoordination (inability to mobilise independently) which, if properly considered, should have led to further clinical examinations and discussion with a referral service or another clinical team member. Dr Peters also advised that Dr C 's failure to assess Mr B's ability to mobilise independently was a 'significant oversight'. While Dr C at her level of experience and knowledge may not have considered cerebellar stroke at this stage, due consideration of the red flags may have led her to a discussion with another doctor or review of HealthPathways. HealthPathways, an online platform, was guidance available at the hospital, and it would have assisted Dr C in the approach to a patient with vertigo. However, I note that Dr C says she was unaware of such guidance. Dr Peters stated: "The failure is … having an insufficient level of suspicion of an alternate diagnosis, and adopting the commoner diagnosis too early, while not giving sufficient weight to red flags which could have led to a more in-depth clinical assessment."

25. Overall, Dr Peters considered these were moderate departures in relation to the standard of care provided by Dr C.

26. In her response to HDC, Dr C stated she 'agreed with Dr Peters's opinion that [her] assessment of Mr B was not adequate or complete' and said she had considered serious alternative diagnoses such as a subarachnoid haemorrhage and meningitis but assessed them as unlikely given Mr B's history. Dr C recognised that, in making the incorrect diagnosis of a less sinister cause of labyrinthitis, she failed to consider other serious differentials that could be causing Mr B's vertigo. Dr C also agreed that she failed to identify significant red flags that should have led to a more timely and accurate diagnosis for Mr B and that if she had made the correct diagnosis, she would have referred him for consideration of a CT head scan the same day and not have discharged him home.

27. I accept Dr Peters's clinical opinion and have noted Dr C's acceptance of that opinion. I am critical that Dr C failed to adequately consider Mr B's red flag symptoms. In particular, I accept Dr Peters's advice that it would have been reasonable to have expected Dr C to have

directly observed Mr B 's gait, which may have led to consideration of a central brain issue and other bedside examinations. In this respect, I accept that Mr B was unsteady on his feet and required a wheelchair to mobilise in and out of the hospital and assistance to mobilise to the toilet. To the extent that Dr C felt insufficiently informed to take the diagnosis further, she should have sought advice and input from a colleague. In this respect, Dr Peters noted (and I accept) that significant supports were available to Dr C, such as an emergency medicine registrar available on the floor with her, a specialist rural hospitalist on the ward, and the internal medicine service at hospital2.

28. I also accept Dr Peters's advice that it was not safe to discharge Mr B, noting that the assessment was incomplete and that there were also safety issues due to Mr B's ability to safely care for himself (he was not independently mobile).

29. I consider therefore, given the failings identified, that Dr C failed to provide Mr B with services of a reasonable standard of care and skill, amounting to a breach of Right 4(1) of the Code.

30. In reaching this conclusion, I have given consideration to the potentially mitigating factor of Dr C practising at a level beyond her capabilities. This issue is addressed below. However, in the circumstances, I consider it is still appropriate to hold Dr C accountable for her clinical decisions. Nevertheless, it is also important to acknowledge how deeply affected Dr C is by what occurred, and I commend her for both her candid responses to this investigation and the steps she has taken to improve her practice (discussed below).

Health NZ — breach

31. An issue that has arisen in this matter is that Dr C held significant reservations about her ability to perform to the level she was employed for – namely as a MOSS. Her misgivings were communicated with the management of hospital1, both verbally and in writing, before and during her period of employment. Each time, she was reassured by management that appropriate supports would be put in place to mitigate her relative inexperience. For example, this investigation has emails before it that demonstrate that Dr C expressed concerns about her level of experience and explored options to become a Registrar (a lower-level doctor). Responses by managerial staff show efforts to support Dr C as a 'training' MOSS but no desire to revert her to a Registrar position (although she had an upcoming secondment as a Registrar to hospital2 as part of her training). In all the circumstances, she was expected to fulfil her role as MOSS (although support of more senior staff was available).

32. In relation to her experience of managing stroke patients, as part of her 'on-boarding' to the hospital, Dr C attended a credentialling meeting in which a number of areas were identified as requiring further upskilling. Stroke management was not one of the areas prioritised as a specific learning focus.

33. In his advice to HDC, Dr Peters noted that the role into which Dr C was employed would normally be filled by either a rural hospital or emergency medicine specialist (senior doctor) or potentially a MOSS but one with demonstrated substantial experience and skills in emergency or rural hospital medicine. Dr C's emergency medicine experience was limited, at a lower level of responsibility, and in better supported centres.

34. Dr Peters further stated that there is a 'requirement for hospital employers to employ staff who will be safe to practice in the roles for which they are employed and to have suitable supports that allow them to practise in their role.' Dr Peters also stated that, in his experience, when a practitioner expresses concerns about their ability to fulfil their duties, and this is supported by their experience and training as reflected on their CV, it is best to respond in a timely way and reduce their level of responsibility or encourage and expedite their transition to a lower-level role.

35. Dr Peters also said that, although Health NZ Te Tai Tokerau Northern Region's processes regarding orientation and credentialling 'were extensive and largely robust', they:

> 'failed to acknowledge that [Dr C's] knowledge of the management of stroke probably reflected her knowledge of managing patients with established strokes, rather than the presentation and acute management of stroke patients as a first responder.'

36. He commented in conclusion that, although there were appropriate supports in place at the time, Dr C's experience and training were not sufficient for the role to which she was appointed.

37. I accept Dr Peters's opinion. I am concerned that, although training and support was offered to Dr C, Health NZ did not adequately respond to Dr C's misgivings or appropriately consider her relative inexperience for the role she was expected to perform. Mr B's case, in my view, demonstrates this mismatch between the role Dr C was expected to perform and her experience. This created an unsafe environment for both staff and patients and increased the risk of harm. Although I acknowledge (as noted by Dr Peters) the national and international challenges in recruiting practitioners for rural positions, together with the level of acuity that patients present with, it is important that staff are both adequately experienced and supported to ensure safe and quality services for consumers.

38. As noted above, I have concluded that Dr C 's assessment of Mr B was inadequate, and I consider that Health NZ contributed to this failure, noting that it had an organisational duty to facilitate reasonable care. By employing Dr C into a role for which she was not sufficiently experienced or trained, and by not reducing her responsibilities in a timely manner when she expressed concerns, including about her level of training and support, I find that Health NZ failed to provide services to Mr B with reasonable care and skill and breached Right 4(1)[10] of the Code.

39. I acknowledge the further comments provided by Dr Peters in his advice that 'the conditions that prevailed at [Health NZ Te Tai Tokerau Northern Region] at this time are widespread in New Zealand due to long-term decisions made at high levels and are probably present in a number of other hospitals.' For this reason, I have copied this decision to the Ministry of Health.

[10] Right 4(1) states: 'Every consumer has the right to have services provided with reasonable care and skill.'

Changes made

Health NZ

40. Health NZ confirmed that Mr B's case was discussed at the hospital1's Morbidity and Mortality review meeting, which was a learning opportunity that enabled the upskilling of the team and raised awareness to reduce the risk that a similar delay in diagnosis of a posterior circulation stroke will occur again. It was reported that there were also '[v]ery clear learnings from Dr C regarding posterior circulation strokes and the importance of gait in the assessment and documentation.'

41. In response to the provisional decision, Health NZ also confirmed that widespread internal reflection on practices, education, and supervision of all staff has taken place. This has included the doctors' roster being reviewed, and they have ensured anyone not vocationally registered in either emergency or rural hospital medicine will always have on-site support. They are also careful to roster such staff on mid-shifts to enable a crossover between doctors.

Dr C

42. Dr C told HDC that she reflected carefully on the care provided to Mr B and has discussed the case at length with senior colleagues. Dr C confirmed that to reduce the likelihood of missing a similar diagnosis again she has undertaken substantive learning and improved her knowledge in relation to differentiating between the cause of vertigo and the assessment and diagnosis of cerebellum strokes. Dr C confirmed that she has also made positive changes to her clinical practice, such as including a gait assessment in all neurological examinations, utilising the HINTS examination[11] on patients with signs of resting nystagmus,[12] being mindful of the possibility of a posterior circulation stroke and of the need to consider imaging and/or calling for a second opinion, and regularly using HealthPathways to screen for relevant red flags for various presenting complaints. She has also undertaken various other training sessions,[13] and she stated that, as part of a commitment to lifelong education and safe clinical practice, she continues to do courses related to a MOSS position, such as in palliative care. Since reading Dr Peters's advice, Dr C has also read a journal article about overcoming cognitive biases.

Recommendations

Health NZ Te Tai Tokerau Northern Region/Health NZ National Office

43. I recommend that Health NZ Te Tai Tokerau provide a written apology to Mr B and Ms A for the deficiencies identified in this report. The apology is to be sent to HDC within three weeks of the date of this report for forwarding to Mr B and Ms A.

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[11] HINTS stands for 'Head Impulse, Nystagmus, Test of Skew' and is a three-step bedside clinical assessment for those with acute, continuous dizziness/vertigo to rule out stroke.

[12] Involuntary, usually rapid, movement of the eyeballs occurring normally with dizziness during and after bodily rotation or abnormally following head injury or as a symptom of disease.

[13] General Practice Education Training Programme, which included significant amounts of teaching on communication skills and appropriate referrals; the RISC course, which is a simulation and reflection-based trauma management and communication course for rural hospital doctors and nurses and includes teaching on cognitive bias; the Trauma and Emergencies in rural settings post-graduate paper; and attended the Goodfellow Symposium, which included sessions on 'collegiality and professional development.'

44. HDC has previously highlighted the need to ensure appropriate credentialling and orientation for clinical staff recruited to rural and remote areas where there can be limited oversight and support. While acknowledging the recruitment challenges, it is nevertheless important from a patient safety perspective that clinicians are appropriately experienced and qualified for the position to which they are recruited and that less experienced staff are appropriately supported. I therefore ask Health NZ (National Office) to undertake a consideration of my conclusions in this matter and the comments of my clinical advisor (particularly around the recruitment red flags) to ensure safe recruitment and support practices nationally and into the future.

45. I support the consideration by Health NZ Te Tai Tokerau of a model of care where remote supervision/advice/assessment can be provided via telehealth support, I suggest that Health NZ (National Office) give consideration to whether this model could be replicated in other rural or remote areas.

46. I recommend that Health NZ Te Tai Tokerau review what improvements can be made to its recruitment and employment processes to avoid a similar situation where a practitioner considers they are practising beyond their level of experience. Evidence of any actions coming out of the review are to be provided to HDC within 12 months of the date of this report.

Dr C

47. Noting that Dr C has already provided an apology to Mr B and Ms A, and taking into account the substantive changes Dr C has made to her practice, I have no recommendations to make to her.

Follow-up actions

48. A copy of the sections of this report that relate to Dr C will be sent to the Medical Council of New Zealand.

49. A copy of this report with details identifying the parties removed, except Health NZ and the independent advisor who advised on this case, will be sent to the independent advisor, the Health NZ National Office, the Ministry of Health, Health Quality & Safety Commission Te Tāhū Hauora, the Stroke Foundation of New Zealand, and the Medical Council of New Zealand and placed on the Health and Disability Commissioner website, www.hdc.org.nz, for educational purposes.

Morag McDowell
Health and Disability Commissioner

Appendix A: Clinical advice to Commissioner

The following advice was obtained from Dr Johan Peters.

4 November 2025

Attn: […], HDC Investigator.

Complaint ref: 23HDC01879 Mr [B].

Kia ora […]

Thank you for asking me to provide a report regarding the above complaint. I hold the primary degree of MB, ChB, from the University of Otago, 1983. I also hold the qualifications of FRNZCGP, FDRHM, DipObst, and AFRACMA. I have worked in surgical services, but primarily in rural general practice, rural hospital medicine, and emergency medicine, in services in rural New Zealand, Australia, and the Cook Islands. I have had Clinical Director roles in surgery, internal medicine, and emergency medicine, and have recently retired from my role as Chief Medical Officer.

I will refer to your questions documented in your email of 23 October 2025.

Whether the assessments, examinations, and investigations undertaken by [Dr C] at [hospital1] in assessing [Mr B] when he presented on 20 January 2023 were adequate, timely, and appropriate.

I have reviewed the complaint letter from Ms [A], the transfer of care [discharge] letter from [Dr C], and the response letter to the primary complaint, from [Dr C]. These letters are largely consistent, with Ms [A] providing substantially more detail than [Dr C]. The presentation is of a previously active and well 32-year-old man with sudden, but not explosive, onset of headache, dizziness described as vertigo, vomiting, visual changes, and difficulty mobilizing. [Mr B] was assessed by [Dr C], a diagnosis of labyrinthitis was made, and [Mr B] was discharged with symptomatic treatment. [Dr C]'s assessment, as described in her discharge documentation, was not adequate.

I refer to p494 of your attachment, in the documentation from Dr […], the HealthPathways guidance to the approach to the patient with vertigo. As this came from [the area] CMO, I understand this is available in [hospital1] ED. It details the approach to such a patient, emphasising the need to differentiate between peripheral [labyrinth and vestibular structures, or inner ear] and central [brain structures, the brainstem and cerebellum]. As such, it describes headache, visual symptoms, and ataxia, or incoordination resulting in difficulty in independently mobilizing as red flags, raising the possibility of a central or brain cause for the patient's symptoms. If these red flags had been properly considered, it would have led to further actions by [Dr C] and possibly an earlier diagnosis.

It appears to me that [Dr C] displayed 'diagnostic anchoring' where a potential diagnosis was reached early, an inner ear cause being the commoner cause of the symptoms of vertigo, and allowing her to disregard the other evidence offered, that of visual symptoms, a progressive headache, and inability to mobilise independently. Regarding the initial

assessment, I consider not attempting to assess [Mr B]'s ability to mobilise independently a significant oversight. [Dr C], at her level of experience and knowledge, may not have considered a cerebellar stroke at this stage, but due consideration of the red flags that were present may have led her to a discussion with another doctor, or review of the HealthPathways, which would have given her advice regarding further clinical assessments, such as the HINTS examination, a relatively simple bedside examination, that could have reinforced the suspicion of a central [brain, or cerebellar] lesion.

I also suspect that [Dr C] intended a diagnosis of neuritis, not labyrinthitis, as labyrinthitis would most often also cause a hearing loss, and this was not documented or looked for.

[Dr C]'s assessment was timely but not adequate, and not complete.

Whether the rationale and diagnosis made by [Dr C] was reasonable given [Mr B]'s presenting symptoms.

As advised above, there was insufficient information to make the diagnosis of labyrinthitis, there were positive reasons why this was not appropriate, and significant red flags were present that should have led to further clinical examinations and discussion with a referral service or other clinical team member. It is not reasonable to have expected [Dr C] to make the diagnosis of a posterior circulation stroke from the available evidence, but it is reasonable for her to have given more consideration to the clinical symptoms and signs, which indicated the possibility of a central cause for [Mr B]'s complaint.

Whether further investigations should have been carried out by Dr [C].

This is not so much an issue of having missed further investigations as there being an insufficient level of suspicion of alternate and potentially serious causes for the symptoms and signs observed. There is an expectation that [Dr C] considered the issues of visual symptoms, headache, and difficulty mobilising in greater detail. It is reasonable to have expected her to have directly observed his gait. Consideration of all of these should have led to a consideration of a central brain issue, and if [Dr C] felt insufficiently informed to take this further, use of HealthPathways or discussion with a colleague should have led to such bedside examinations as the HINTS pathway.

While the CT head examination in [hospital2] clearly showed a cerebellar stroke, with a mass effect, and increased intracranial pressure, it should be remembered that this was 24 hours later, and it is possible that a CT examination at the time of initial presentation may well not have been as clearly diagnostic. Posterior fossa [cerebellar] CT is difficult to interpret, and many of the signs seen on the [hospital2] CT will have taken time to develop.

The failure is not that of not ordering an investigation but of having an insufficient level of suspicion of an alternate diagnosis, and adopting the commoner diagnosis too early, while not giving sufficient weight to red flags that could have led to a more in-depth clinical assessment.

Whether it was appropriate for [Mr B] to be discharged.

I do not consider that this was a safe discharge, as discussed above, primarily as assessment and investigation were incomplete, and considering the alternative diagnoses implicit with a central brain cause for [Mr B]'s issues, this should have been addressed with urgency, at the time. Safety netting is providing the patient with information that allows them to return, should their condition deteriorate, as some diagnoses may become obvious with time. The potential causes of [Mr B]'s problems needed to be addressed at the time he was seen, as there was a potential for irreversible deterioration. Additionally, the discharge information suggests that he was not independently mobile, and there would have been safety issues with his ability to safely care for himself.

Whether the safety netting advice provided by [Dr C] was appropriate.

As above, safety netting is appropriate where time may reveal a diagnosis, and no harm will come to a patient from a delay in making a diagnosis, or no change in treatment options. An example might be a patient with undifferentiated abdominal pain who is advised to return if the pain changes or gets worse, and on return is found to have appendicitis. In such a situation, no harm is done to the patient, and the treatment for the condition is curative. For [Mr B], the risk of deterioration would have included death or increased disability. It is important to remember, however, that I am not implying that [Mr B]'s condition and subsequent pathway must have been improved by an earlier diagnosis, just that this possibility existed. If this is a question, it is outside my expertise.

What would be the expected level of supervision for a MOSS in Dr [C]'s circumstances? In the event you are of the view that Dr [C] was not supervised in accordance with the expected standard, please advise what should or should not have occurred.

Supervision, in the context of the New Zealand Medical Council, has a specific meaning. Doctors under supervision include those in their first year after graduation, those in recognised training programmes, and international graduates on a pathway to vocational registration. In those cases, there is a close relationship between the named vocationally registered supervisor, with a requirement of regular interactions and reporting back to the NZMC. [Dr C] was a New Zealand graduate, not in a training scheme, and as such, was not required to have any formal supervision, as stated by […], CMO. There was no breach of this requirement.

There is, however, a requirement for hospital employers to employ staff who will be safe to practise in the roles for which they are employed and to have suitable supports that allow them to practise in their role. The issues regarding [Dr C]'s employment are her initial recruitment and the supports in place for her and the [hospital1]'s response to her written misgivings about the safety of her role.

The context for these issues is a tight recruitment situation, where there is a national and international shortage of suitably trained and experienced practitioners, in particular for rural positions. There is also a demographic trend for younger graduates to pursue a career where they delay vocational training, and many will have multiple part-time or locum/registrar positions without a formal training element, which belies the perceived

depth of their experience. Additionally, there is a frequent perception that rural positions, in particular emergency medicine, somehow have a lower level of acuity of patient load, when in fact, while the total numbers of patients might be lower, the conditions with which they present, and the acuity of these conditions is the same as in large hospitals, but the resources and supports the practitioner has are fewer, demanding what in fact is a higher level of clinical training and experience. Because of the vagaries of distance, there is also the onus on the rural practitioner to anticipate complexity in its early stages due to the time that may be required to transfer a patient to a regional centre. The rural practitioner may also be faced with resistance to transfers from a regional hospital where not all practitioners understand the limited conditions that might prevail in the periphery, further placing demands on the ability of the rural practitioner to be able to accurately assess patients when negotiating transfers.

There is an issue regarding the recruitment of [Dr C] into this MOSS role, which is one that would normally be filled by either a rural hospital specialist or an emergency medicine specialist or potentially a MOSS, but one with demonstrated substantial experience and skills in either emergency or rural hospital medicine and who had maintained the usual training course requirements for such a role, such as APLS, EMST, etc. Reviewing [Dr C]'s CV, I note that her emergency medicine exposure was limited, at a low level of responsibility, in larger, better supported centres. A substantial part of her experience was at locum level, and most recently at what sounds more like a low acuity aged care service, although this is not described. Her medical registrar experience may well have been relevant to this case, but on closer scrutiny, this was only for 15 months, in a large hospital, and almost 10 years prior to the index incident. The acute management of stroke in particular has substantially changed during this time, in particular with regard to urgency and interventions available.

I consider that, while the [hospital1] processes regarding orientation and credentialling were extensive and largely robust, the credentialling process in particular failed to acknowledge that her knowledge of the management of stroke probably reflected her knowledge of managing patients with established strokes rather than the presentation and acute management of stroke patients as a first responder.

I would also acknowledge that [Dr C] showed considerable insight into the limitations of her experience, and there is written evidence of this where she discussed this with the clinical leadership of [hospital1]. While accepting that [hospital1] staffing levels probably placed limits on their flexibility, it is my experience that where a practitioner expresses their concerns regarding their ability to fulfil their duties, and this is supported by their experience and training on their CV, it is best to respond to this in a timely way and reduce their level of responsibility or encourage and expedite their transition to a lower level role. [Hospital1] clinical leadership appears to have not done this, and this has exposed both [Dr C] and her patients to a level of risk.

Regarding the level of support available to [Dr C] at the time of the consultation with [Mr B], there were significant supports available to her. In particular, there was an emergency medicine registrar available on the floor with her and a specialist rural hospitalist on the ward. I also note that Dr […] made her cellphone available, though this avenue may not have been reliable. Also, the incident happened during normal working hours on a Friday.

Normally, in such conditions, if a senior practitioner in a rural hospital had a suspicion that a patient needed a further assessment or investigation, it would have been relatively simple for her to phone the internal medicine service [in the wider area] to seek their advice. The fact that [Dr C] didn't do this probably reflects both her lack of confidence in the seniority of her role and lack of suspicion that [Mr B] had more complex pathology than she realised.

It is my view that formal supervision was not required, that there were appropriate supports in place at the time, but that [Dr C]'s experience and training were not sufficient for the role to which she was appointed.

Any other comments I wish to make on the care provided to Mr [A].

I would like to acknowledge the devastating impact that the diagnosis of a cerebellar stroke has had on [Mr B]'s life, and his prolonged battle with his complex rehabilitation. The fact that the diagnosis was not made at the initial consultation will have enormously overshadowed how he feels about his care and the trust that [Mr B] and his intergenerational whānau will have in the broader health services available to them. I'd also like to commend his partner [Ms A] in her clear and articulate support for him.

Furthermore, it is clear that this has also been a destructive event for [Dr C], and I accept that she will already have learnt most of the lessons I have described above.

I'd also summarise that the conditions that prevailed at [hospital1] at this time are widespread in New Zealand due to long-term decisions made at high levels and are probably present in a number of other hospitals.

Any recommendations regarding appropriate remedial measures.

[Hospital1] clinical leadership would be well served by making the decision that the ED should have at least one practitioner vocationally registered in either rural hospital medicine or emergency medicine at all times. I accept the difficulties in fulfilling this at this time, but where this is not possible, there should be at least one such qualified practitioner formally available within a 20-minute callback timeframe who is formally assigned to support the practitioners in the department.

[Hospital1] should acknowledge that the employment of MOSS-level doctors is exceptional, and new MOSS roles should not be created.

I expect clinical leadership at [hospital1] to take lessons from the recruitment red flags that existed in [Dr C]'s CV and her misgivings about her suitability for the role in which she was working.

I am not aware of where [Dr C] is currently working, but I recommend that she commits to a properly supervised training programme in the specialty of her choice and that she completes such a programme.

Regarding education, I appreciate the effort at education regarding posterior circulation stroke, but the wider area of education should be regarding common cognitive errors in medicine, in this case 'anchoring'. While it is useful to know about uncommon stroke

presentations, awareness of common cognitive errors might be more applicable to a wider range of situations.

What is the standard of care/accepted practice?

In this case, the standard of care was to be aware of red flags suggestive of a central cause and for this to lead to any of a number of actions, such as being guided by HealthPathways, as provided by [hospital1], or discussion with a colleague, or the application of further bedside clinical examinations. This would be expected to result in referral and transfer to a secondary care hospital.

Has there been a departure from the standard of care or accepted practice?

I consider that there was a moderate departure of the standard of accepted practice. Most practitioners faced with the above situation in rural hospital medicine would have taken one or several of the above steps. I regard the departure as moderate for several reasons: this is a rare condition that, in good studies, has been found to be missed in about half of initial presentations; because by her own acknowledgement, [Dr C] should probably not have been in this situation, and therefore [hospital1] clinical leadership should share in the responsibility; and because it cannot be established that [Mr B]'s subsequent clinical course would have been substantially improved by an earlier diagnosis.

How would the care be viewed by your peers?

The care was suboptimal, for reasons I have outlined above, and it would be considered as such by most rural hospital practitioners, moderated by the fact that [Dr C] was not a vocationally registered rural hospital practitioner.

Dr Johan Peters