MidCentral District Health Board

A Report by the
Health and Disability Commissioner

(Case 18HDC01465)

Health and Disability Commissioner
Te Toihau Hauora, Hauātanga

Contents

Executive summary

1. This report concerns the care provided to a woman by MidCentral District Health Board (MCDHB) in May and June 2018. Aspects of the care provided across three presentations to ED were suboptimal, including an inadequate initial assessment, long waiting times, and an inappropriate triage categorisation, which resulted in a delayed diagnosis of stroke.

2. The report highlights the importance of appropriate triaging and assessment in ED, and of patients being seen within triaging timeframes. Comment is also made on the value of having a support person present, especially where the patient is vulnerable or may require help in navigating the information provided.

Findings

3. The Commissioner found MCDHB in breach of Right 4(1) of the Code. He was critical that MCDHB did not assess the woman adequately at the first ED presentation; did not provide medical review in an adequate timeframe at her second and third presentations to ED; and did not provide an appropriate triage categorisation at her third presentation to ED.

Recommendations

4. The Commissioner recommended that MCDHB; use this report as a case study during education sessions for ED staff; develop a guideline for the assessment and management of acute onset vertigo; educate ED nursing staff on the appropriate triage category for a suspected stroke; review the waiting times for patients to be seen in ED, and provide a plan of action for any issues; consider providing training to staff on communication and advocacy, and provide a formal written apology.

Complaint and investigation

5. The Health and Disability Commissioner (HDC) received a complaint from Ms A's mother about the services provided by MidCentral District Health Board (MCDHB). The following issue was identified for investigation:

- *Whether MidCentral District Health Board provided Ms A with an appropriate standard of care in May and June 2018.*

6. The parties directly involved in the investigation were:

Ms A Complainant/consumer's mother	Consumer
MidCentral DHB	Provider

7. Further information was received from:

RN B	Associate Charge Nurse (ACN)
RN C	ACN

Dr D	General physician, Internal Medicine
Dr E	Emergency Department (ED) House Officer
Dr F	Clinical Director
The medical centre	General practice

Also mentioned in this report:

Dr G	Senior medical officer
RN H	CAN
Dr I	Senior medical officer

8. Independent clinical advice was obtained from an emergency medicine specialist, Dr Shameem Safih (Appendix A), and an internal medicine specialist, Dr David Spriggs (Appendix B).

Information gathered during investigation

Background

9. This report concerns the delayed diagnosis and treatment of Ms A by MCDHB when she suffered a stroke. Ms A has a complex medical history, including type 2 diabetes,[1] and multiple risk factors, including obesity,[2] hypertension,[3] hyperglycaemia,[4] and high cholesterol.[5]

First ED presentation — 14 May 2018

10. At 7am on 14 May 2018, Ms A, then aged in her late thirties, telephoned for an ambulance as she was unable to mobilise, was vomiting profusely, and had nausea and double vision, jerky limb movements, and a numb face and numb right side of her body. She had been unwell the previous day and reported "falling to the left".

11. Ms A arrived at MCDHB Emergency Department at 8.53am, and at 8.55am was triaged by ACN RN B as category 3 — to be seen within 30 minutes. RN B told HDC that the triage category was based on Ms A's history of a left-sided lean. Ms A had a Glasgow Coma Scale score of 15,[6] was FAST[7] negative (no facial drooping, arm weakness, or speech difficulties) at the time of triage, and had elevated blood pressure (200mmHg systolic) and an elevated blood glucose level. A blood specimen was collected at 9.50am.

[1] A chronic condition that affects the way the body processes sugar.
[2] A condition in which excess body fat has accumulated to the extent that it may have an adverse effect on health.
[3] High blood pressure.
[4] High blood sugar.
[5] High amounts of cholesterol (a type of fat) in the blood.
[6] A scoring system used to describe the level of consciousness in a person following a traumatic brain injury. Mild head injuries are scored 13–15.
[7] A stroke assessment tool.

12. At 10.29am, Ms A was assessed by locum Senior Medical Officer Dr G. At 10.46am, Dr G documented his assessment of "Likely Benign Positional Vertigo" and his plan to treat with "IV meds [8] and reassess". His documented neurological examination noted: "NO nystagmus[9] to my exam."

13. At 1.19pm, Dr G recorded:

> "[Ms A] was well till 2 days ago when progressive vertigo. Describes falling to the left but no actual falls or injury. Slight frontal bilateral headache. No other symptom other than associated NV.[10] NO abdominal pain."

14. Dr G noted that there had been improvement "with IV meds and fluids", and that Ms A "was initially very dizzy with standing but with time/treatment was able to sit up with much less complaint". He noted that Ms A's hypertension had been addressed using IV metoprolol. Dr G decided to treat Ms A at home with the medications diazepam and meclizine (common treatments for positional vertigo).

15. RN B was the shift lead responsible for coordinating patient flow through ED. She told HDC:

> "Ideally, with an ATS[11] triage score of 3, the maximum waiting time for medical assessment and treatment from presentation should be 30 minutes. Unfortunately, in this instance, she was not assessed by a medical officer until 90 minutes after presentation. She was regularly clinically monitored by nurses, including monitoring her vital signs."

16. RN B added that on the morning of 14 May 2018, the workload status in the ED was Code Orange, the second highest alert level, indicating a "significant care capacity deficit". This was due to a high number of patients presenting to ED that morning, and high patient acuity. RN B commented that the high patient numbers on the day may have accounted for "the very regrettable delay in her being assessed in a timely manner".

17. At 4.10pm, Ms A was discharged home with a friend. On the way home, Ms A became very unwell, and her friend drove her back to the ED.

Second ED presentation — 14 May 2018

18. On Ms A's second visit, she arrived in the ED at 4.52pm and was triaged as category 4 — to be seen within 60 minutes. However, she was not seen by a doctor until 10.34pm. MCDHB acknowledged that this was an excessive wait time for an ED presentation.

19. The ACN during Ms A's second presentation to ED that day was ACN RN C. RN C had a telephone conversation with Ms A's mother and, at 7.50pm, RN C recorded that she "[r]eassured [Ms A's mother] that her daughter [would] be seen and not sent home

[8] Intravenous medications.
[9] Rapid, horizontal flickering eye movements.
[10] Nausea and vomiting.
[11] Australasian Triage Scale.

without a plan or if not medically cleared". Another nursing assessment of Ms A was performed at 8pm.

20. At 10.34pm, Ms A was assessed by Dr E, an ED house officer. At 11.02pm, Dr E noted that Ms A had presented earlier in the day with persistent symptoms of vertigo and falling to the left. He documented her symptoms, risk factors, history, and a partial neurological examination, which could not be completed because Ms A was vomiting. Ms A had no apparent facial droop or weakness in her arm or leg.

21. Dr E told HDC:

> "My impression was her symptoms were potentially due to benign paroxysmal positional vertigo (BPPV) but considering her high blood pressure on presentation and other risk factors (on a statin, Type 2 diabetes), she may have had a posterior circulation stroke."

22. Dr E referred Ms A for admission to General Medicine, as he was concerned about a possible posterior circulation stroke, and considered that she needed further investigation and treatment. He treated her symptoms with paracetamol, anti-nausea medication, vertigo treatment (prochlorperazine), and amlodipine for high blood pressure, and commenced intravenous fluids.

23. Dr E recorded that he planned to talk to the on-call medical registrar about medical admission for imaging or ED consultant review in the Emergency Department Observation Area (EDOA) in the morning for consideration of imaging.

24. Dr F, the Clinical Director, confirmed that for sub-acute presentations of possible ischaemic stroke after hours at MCDHB, medical imaging is deferred until the next day, and often is left to the admitting team to organise.

25. Dr F told HDC that "[Ms A] was not a candidate for thrombolysis,[12] given that her symptoms had been ongoing since the day before her ED presentation."

First inpatient admission — 14–16 May 2018

26. Ms A was admitted to the EDOA at 11.25pm on 14 May 2018. The documentation transferring care from ED to the Medical Assessment and Planning Unit (MAPU) was completed at 8am on 15 May 2018, and Ms A was admitted to MAPU at 8.40am. The provisional diagnosis was recorded as "dizziness and viral labyrinthitis[13]".

27. At 9.45am on 15 May 2018, Dr D, an Internal Medicine general physician, took Ms A's history and performed a neurological examination that was non focal[14] except for a positive Dix-Hallpike manoeuvre[15] consistent with BPPV. Dr D told HDC that he did not diagnose the patient with viral labrynthitis, although it was in the differential diagnosis. He

[12] The dissolution of a blood clot by infusion of an enzyme into the blood.
[13] Inflammation of the inner ear or the nerves that connect the inner ear to the brain.
[14] Not specific to a certain area of the brain.
[15] A diagnostic manoeuvre used to identify BPPV.

thought that Ms A had a peripheral vertigo, and treated her symptoms, encouraged her compliance with her hypertension and diabetic medications, and recommended further imaging if she showed no improvement or her symptoms worsened. At 4.50pm, Ms A was transferred from MAPU to a ward.

28. Dr D told HDC that Ms A continued to improve on 15 May 2018, and could ambulate[16] independently. He said that stroke was considered, but he thought that peripheral vertigo was more likely. Dr D stated that a CT scan of the brain was not ordered at that time, as it would not have provided good information regarding a posterior circulation stroke, and an MRI was not thought to be necessary because of her non focal neurological examination. Dr D commented that when he saw Ms A she was outside the thrombolysis window, but reflected that antiplatelet[17] therapy may have been of benefit.

29. On 16 May 2018, Dr D reviewed Ms A on the morning ward round. She remained hypertensive, had a negative Romberg's test[18] and a normal neurological examination, and she was walking and generally looked brighter. Further observations were recorded at 11.55am, with a plan that included Ms A's discharge home.

30. The discharge summary was completed at 1.33pm on 16 May 2018. This recorded the likely cause of Ms A's nausea and vertigo as "viral labyrinthitis", and suggested that this should resolve over the next week. A follow-up with her GP for reduction of her blood pressure was recommended, and follow-up with a diabetes nurse was encouraged for management of her diabetes. Ms A was advised to seek medical attention if she experienced "numbness, tingling, weakness, loss of continence, increasing headache, chest pain, fever or any worrying symptoms". Ms A's diabetes and hypertension were poorly controlled, and non-compliance with her medication was noted.

31. Ms A was discharged home at 3.20pm. Her mother told HDC: "[Ms A] was discharged, very unwell and unable to mobilise. I got her into the car with much difficulty and drove her home."

32. Over the next week, Ms A's symptoms varied but did not improve. On 21 May 2018, Ms A and her mother presented to the medical centre for a review, as Ms A's symptoms were continuing. The impression recorded was: "Ongoing ?? viral labyrinthitis + normoglycaemia (known diabetes) + normotensive today (known hypertension)." A plan was made to monitor her blood sugar level and blood pressure, and to review her again, and advice was given to return if her symptoms worsened.

Third ED presentation — 24 May 2018

33. On 24 May 2018, Ms A returned to medical centre with worsening symptoms of left-sided facial numbness and right-sided altered sensation, and was referred to MCDHB. A referral letter was faxed to the ED at 12.55pm.

[16] Able to walk around.
[17] Medicines that stop blood cells (platelets) from sticking together and forming a blood clot.
[18] A test of the body's sense of positioning used to investigate the cause of loss of motor coordination.

34. Ms A and her mother presented to the ED at 1.52pm. Ms A was seen by the first triage nurse at 2.03pm and given a triage category of 4 — to be seen within 60 minutes. The nurse made a note of Ms A's left-sided facial numbness, right-sided weakness, unsteady gait and headaches, and her previous admission 10 days previously.

35. Ms A's mother told HDC:

> "[W]e waited for 2 hours in the waiting room. Despite my saying to the triage nurse I believed [Ms A] was having a Cerebral event. [Ms A] during this time was agitated, nauseous, slightly combative and difficult to keep calm."

36. During the wait to be seen, a nurse approached Ms A to undertake a secondary triage assessment and to take her blood pressure and pulse. Ms A refused, and said that she had already had her blood pressure taken.

37. Ms A's mother told HDC that her daughter was at the end of her tolerance, cerebrally irritable and snappy at everything. Ms A's mother spoke to the ACN, RN H, and apologised and expressed concern that the nurse had not engaged effectively with a patient who was clearly cerebrally irritable. Ms A's mother told HDC that she expressed her concerns that her daughter was having a suspected cerebral event. In response to the "information gathered" section of the provisional opinion, Ms A's mother stated that the failure to engage with a very unwell patient was unacceptable.

38. RN H acknowledged that she did not document this conversation. Her recollection is that Ms A and her mother were very frustrated, and Ms A's mother was concerned that her daughter had not improved since her attendance at ED on 14 May. RN H told HDC that she does not recall Ms A's mother stating that her daughter was cerebrally irritated, and said that this would have raised a red flag for her clinically. A different nurse then undertook an assessment and recorded Ms A's blood glucose level and noted the presenting problem as ongoing numbness/tingling, right-sided weakness, headaches, and unsteadiness when standing or walking.

39. RN H told HDC that she was covering for the shift lead from 2pm to 4pm that day, and described that part of her role as to ensure safe, priority flow in the ED. She stated that often long waits in ED are caused by the hospital being at capacity, and an inability to move inpatients into hospital beds, but the acuity and number of the patients presenting at ED may also be an issue. She said that in the waiting room, triaged patients come under the care of the triage nursing team, who are required to take observations and make assessments, and escalate any concerns to the shift lead.

40. At 5.29pm, Ms A was reviewed by senior medical officer Dr I. He documented at 6.42pm, "Impression ?? TIA[19]/Stroke needs excluding," and planned for a CT scan of the brain. The CT scan was undertaken at 8.00pm, and the results found no evidence of intracranial haemorrhage. Dr D told HDC that a posterior circulation stroke is unlikely to be apparent on a CT scan.

[19] Transient ischaemic attack.

Second inpatient admission — 24 May to 15 June 2018

41. At 9.00pm on 24 May 2018, Ms A was admitted to MAPU and reviewed by a registrar. The plan was for a referral to the stroke team, an MRI scan of the brain, telemetry, and antiplatelet medication depending on the results of the MRI.

42. On 25 May 2018 at 8.40am, Dr D[20] reviewed Ms A and noted right-sided weakness and sensory changes that had not been present previously. Treatment with antiplatelet medication was commenced, and an MRI performed later that morning showed a posterior circulation stroke. Ms A was transferred to the ward around 3.35pm.

43. Dr D told HDC that he discussed the reasons for his first impression with Ms A and her mother. He acknowledged that he was incorrect in that assessment, and discussed Ms A's prognosis, rehabilitation plan, antiplatelet medication, risk factor reduction, diabetes control, health maintenance, hypertension control, and non-pharmacological treatments.

44. Ms A's mother told HDC that Dr D had explained that peripheral events and central events on first-time presentation can sometimes be difficult to diagnose. She told HDC that she thought that Dr D's explanation was "a poor attempt to reconcile earlier events with what was now being seen", and she felt "bereft and angry".

45. Dr D recalls speaking to Ms A and her mother, and told HDC that he thought that they had a good interaction. He said that he had been unaware that Ms A's mother was unhappy with the explanation and reasoning for her daughter's care.

46. On 28 May 2018, Dr D discussed the finding of the MRI with Ms A. Ms A's mother told HDC that Dr D described spots of plaque in the brain, and this had frightened her daughter, who then searched for information on the internet. Ms A's mother said that her daughter rang her distraught.

47. At 1.20pm, the clinical records note that Ms A's mother had expressed dissatisfaction that the MRI findings were discussed with her daughter when she was not present to offer support. The medical team offered to discuss the MRI findings and care plan with Ms A and her mother the next morning.

48. Ms A's mother told HDC that Dr D came back to explain his findings, and "chastised" Ms A for using the internet to research her condition. Dr D recalled his comment regarding "Google", and told HDC that he supports patients knowing about their condition, but in his experience, internet searches tend to scare patients more than help them. He told HDC that he "in no way intended to offend the patient".

49. On 1 June 2018, Ms A was seen by the stroke team and a physiotherapist. She had improved clinically, and was "feeling well" and "keen for physio". She was discharged to ATR[21] services at 1.17pm. The discharge summary recorded: "[Ms A is] usually independent however now requiring assistance to mobilise for the past week." The planning record notes that [Ms A] felt very tired and "need[ed] a long time to get dressed". The primary

[20] He had reviewed Ms A on her previous admission 10 days earlier.
[21] Assessment, Treatment, and Rehabilitation.

diagnosis recorded was a posterolateral medullary stroke, with secondary diagnoses of multifocal cerebral vessel disease, suboptimal control of hypertension, and diabetes.

50. The discharge summary from General Medicine to ATR services noted that Ms A's case was discussed with the Neurology team, but no neurosurgical intervention was available. The stroke team also had input into Ms A's management. The discharge summary noted that Ms A had on-going difficulties with balance and was using a frame to walk, and recommended a referral to rehabilitation before discharge home.

51. Ms A was discharged home on 15 June 2018, after two weeks on the STAR[22] 2 ward for rehabilitation and discharge planning. MCDHB told HDC that while on STAR 2, initially Ms A was using a walking frame and was independent with her personal cares. She made good progress, and upon discharge did not require any further social work input, as she continued to be independent with her personal cares and did not require any aids. The discharge plan from ATR included continuing medications as prescribed, and a sleep study test to investigate sleep apnoea.

Further information

Ms A

52. On 21 June 2019, a meeting was held via Skype between HDC, Ms A, her support person, and her mother. Ms A described her concerns and the impact the events have had on her. These concerns included an initial delay in diagnosis, and inadequate and inappropriate communication with Ms A, her mother, and her support person. All three recognised that the outcome may have been no different even had there been earlier intervention. Nevertheless, they remain concerned about the adequacy of the ED and inpatient assessments, the long wait in ED, the lack of communication, and the lack of advocacy afforded to Ms A.

MidCentral DHB

Delays in ED

53. MCDHB told HDC that the ED senior team was aware that there were delays in patient flow, and apologised for the delay Ms A experienced. MCDHB stated that in September 2018, the triage and waiting area of ED was being renovated, and an external agency was working with ED senior nursing and medical staff to explore the potential for new patient pathways. The purpose of this work was to trial new ways of working to improve the timeliness for the initial assessment of patients, and to improve the flow of patients through the waiting area.

54. MCDHB reviewed the capacity in the ED and the level of patient demand for the three occasions on which Ms A presented. The review showed that the ED was in code yellow or orange for most of the periods in question. Yellow indicates "early care capacity deficit (shortfall)", and orange indicates "significant care capacity deficit".

55. RN H acknowledged that the length of time that Ms A waited to be seen, especially on her second and third visits, was very long, and for that reason unacceptable.

[22] Services for Treatment, Assessment, and Rehabilitation.

56. Dr F, the Clinical Director, commented that the long waiting time experienced by Ms A on her third visit to ED was likely due to her triage category 4. Dr F told HDC:

> "[Ms A] should not have been a triage category 4 on her third presentation on 24 May 2018. She should at least have been a category 3, but may have qualified as a category 2 given her symptoms and the fact that this was her third presentation in 10 days for similar symptoms."

Diagnosis and treatment on first ED presentation

57. Dr F offered his apologies to Ms A for the incorrect diagnosis given to her on her first ED visit on 14 May 2018, and for any distress caused to her by her experiences in the MCDHB ED.

58. Dr F described Dr G's neurological examination of Ms A as cursory, and told HDC that the lack of nystagmus suggested something other than a peripheral cause for Ms A's dizziness, and that Dr G's conclusion of a diagnosis of benign positional vertigo was not entirely justified.

Dr G

59. Dr F had several informal conversations with Dr G — an overseas locum — about his adjustment to New Zealand medical practice. There was concern from the ED consultants that he was having some difficulty adjusting to the style of practice and expectations of him in New Zealand.

60. Dr G decided to resign and then returned overseas, and could not be contacted by MCDHB despite efforts to communicate with him.

61. MCDHB provided HDC with the ED orientation programme[23] that Dr G was given as part of his induction training and support. MCDHB also provided his orientation schedule and the Medical Council of New Zealand Supervision Report. As Dr G was a senior medical officer, no direct supervision was in place.

62. MCDHB acknowledged that Dr G's assessment of Ms A and treatment of her blood pressure was not in line with the expected standard of care. MCDHB told HDC that no formal investigations were undertaken at the time, and Dr G had left the organisation by the time the letter from Ms A was received. Therefore, no formal processes to address this were put in place at that time.

63. MCDHB told HDC that it has no specific guideline for the management of blood pressure in the ED, and that specific blood pressure management is discussed in documents relevant to specific conditions.

Further changes made

64. Changes made since the events in May 2018 include the following:

[23] "Survival Guide to [the] Emergency Department for Consultants".

a) A work programme was undertaken to reduce the length of stay in the ED, with support enhanced patient flow across the inpatient areas and improved outcomes for patients presenting to ED. Electronic patient boards were installed in 2018, enabling more accurate visualisation of patient numbers across the hospital, and advanced planning for patient movement.

b) Recent changes to the ED facility have resulted in improved utilisation of the available space.

c) Regular meetings are held with the Medical Leads for General Medicine and ED.

d) Holding orders have been implemented, confirming the management of patients in ED awaiting transfer to medical wards.

e) Leadership development and support has been put in place.

f) Funding has been approved for additional nursing staff in ED, and primary options for acute care (POAC) has been implemented.

65. In September 2019, MCDHB told HDC that despite these changes, waiting times remain unsatisfactory, and MCDHB has established a medical team in MAPU to improve patient flow and alleviate some of the wait times. However, MCDHB acknowledges that the increase in the volume of patients presenting to the ED continues to place a strain on the service.

66. In March 2020, Dr F told HDC that he was "cautiously optimistic" that adding pods onto the ED for an expanded ED observation area and larger MAPU will help with access block. He said that the team is also working closely with primary care to establish outpatient follow-up teams, with the aim of facilitating earlier, safer discharges.

67. MCDHB told HDC that "staff provide quarterly teaching sessions on dizziness and vertigo". Dr F commented that in the ED, regular presentations about vertigo are given to junior doctors, and a guideline for the evaluation and management of acute vertigo is being written based on these presentations. Nursing staff have an open invitation to attend RMO teaching, and the presentations about vertigo are shared with both medical and nursing staff in the ED.

68. Dr F stated that MCDHB will prepare a presentation about acute blood pressure control in the ED, with a review of recent literature, which will be shared with all levels of ED medical and nursing staff.

69. Dr F said that although currently there is a category on the ED triage sheet giving consideration to "events preceding presentation", a separate category specifically for "re-presentation" is to be used, to encourage the triage nurse to up-triage a patient to a higher (more acute) category should the patient return to ED with similar symptoms.

70. Dr F further commented that currently there is no mechanism to up-triage patients to a higher category if they have waited for an excessively long period of time, and a protocol for this is being considered, with the understanding that its implementation will put a too-

small department that is chronically under-staffed and constantly experiences access block under even greater strain.

Responses to provisional opinion

71. MCDHB was given an opportunity to respond to the provisional opinion, and advised that it had no further comments and would follow through on the recommendations made.

72. Ms A and her mother were given an opportunity to respond to the "information gathered" section of the provisional opinion. Where appropriate, their comments have been incorporated into the report above.

73. Ms A's mother stated:

> "We all agree that the outcome may not have been any different had [Ms A] been diagnosed and treated earlier for a stroke, but as I said, they never looked, they never treated, so we will never know will we."

74. Ms A's mother said that there was a lack of understanding of the need for Ms A to have an advocate. She told HDC:

> "I'm appalled that [Ms A] was having a cerebral event but many medical and nursing staff treated her as if she understood or comprehended everything. She struggled to comprehend much of what happened and to this day has little memory of that time."

Opinion: MidCentral DHB — breach

Introduction

75. MCDHB had a duty to provide services to Ms A with reasonable care and skill. This included responsibility for the actions of its staff in ED, and an organisational duty to facilitate reasonable care.

76. Ms A presented to MCDHB ED three times over the course of 10 days in May 2018. I have a number of concerns about the care provided to Ms A relating to long delays in ED, the adequacy of the assessment on her first presentation, and the triage categorisation on her third presentation.

Delays in ED

77. Ms A presented to MCDHB ED in May 2018 with symptoms of vertigo, nausea and vomiting, and falling to the left when trying to walk.

78. On Ms A's second presentation to the ED at 4.52pm, she was triaged and then had a very significant delay waiting in ED before being seen by Dr E at 10.34pm. My emergency medicine specialist advisor, Dr Shameem Safih, commented that the clinical assessment, management, and referral to General Medicine was appropriate. However, he advised that

Ms A's long wait in ED of about five and a half hours for non-resolution of significant symptoms is a severe departure from the expected standard.

79. On her third presentation to ED, Ms A was triaged as a category 4 — to be seen within 60 minutes. There is further comment on the triage assessment in the section below. There was a delay of over three and a half hours for her to be assessed medically. Dr Safih advised that Ms A was assessed appropriately by Dr I, and acknowledged that the ED was very busy that day. However, Dr Safih stated: "I regard the incorrect triage category and the long waiting time to be a severe departure from the expected standard of care."

80. I acknowledge the comment from Ms A's mother that "[t]he waiting times in ED for a suspected cerebral event were unacceptable on all three occasions".

81. I note MCDHB's acknowledgement that there were patient flow issues in ED at the time, and I accept that an ED waiting room can be a busy and demanding environment, and that the occupancy of the hospital has an impact on the waiting time for a medical review. I note that the information provided by MCDHB indicates that there were issues with high acuity in the ED. I also acknowledge that MCDHB has undertaken measures to try to improve patient flow and reduce patient waiting times.

82. Nonetheless, a busy environment under pressure does not remove the obligation to provide appropriate services, and does not remove provider accountability for ensuring that appropriate steps are taken. I am very concerned about the long wait times experienced by Ms A, and accept my expert's advice that this is a severe departure from accepted practice.

Triage assessment on third ED presentation

83. On her third presentation to ED, Ms A was assigned a triage category of 4 — to be seen within 60 minutes. I note MCDHB's acknowledgement that the triage category should not have been a 4, but rather a category 2 or 3. Dr F told HDC:

> "[Ms A] should not have been a triage category 4 on her third presentation on 24 May 2018. She should at least have been a category 3, but may have qualified as a category 2 given her symptoms and the fact that this was her third presentation in 10 days for similar symptoms."

84. I am critical of the quality of the triage category assignment, considering that the assessment recorded Ms A's left-sided facial numbness, right-sided weakness, unsteady gait and headaches, and her admission 10 days previously. The ATS is a tool to ensure that patients presenting to the ED are treated in the order of their clinical urgency. In Ms A's case, the incorrect category was assigned, and this contributed to her delay in being assessed medically.

Assessment at first ED presentation

85. Initially, Ms A was diagnosed with peripheral vertigo and treated for this, but on her third presentation to ED a stroke or TIA was suspected, and further investigation confirmed a diagnosis of a posterior circulation stroke.

86. I note Dr Safih's observations about the difficulty of differentiating between a peripheral or central cause of vertigo:

> "Vertigo (a sensation of spinning) is a very common presentation in the ED. It can be caused by a peripheral cause (middle ear related) or a central neurological cause (including stroke). It is critically important to differentiate between the two causes. However it is not always easy to clearly differentiate between the two …
>
> The exact subtleties of different syndromes and presentations of a posterior circulation stroke are beyond the scope of practice of a general emergency physician …
>
> [Ms A] had a postero-lateral medullary infarct on the left … The diagnosis is often missed by non-neurologists."

87. I acknowledge that the diagnosis can be a difficult one to make, and am not critical of the diagnosis. However, I note that Dr Safih and MCDHB are both critical of the assessment performed by the locum consultant, Dr G, at the first ED presentation.

88. Dr Safih was moderately critical that Dr G overlooked the presenting symptom of falling to one side when walking as a red flag, and did not take a good history or perform a thorough examination, and that the discharge information provided appears inadequate, as Dr G gave no specific discharge instructions except for Ms A's GP to re-check her blood pressure in a week's time. Dr Safih was mildly critical of Dr G's treatment of Ms A's blood pressure with intravenous metoprolol, and MCDHB agrees. Dr Safih advised that this treatment was not appropriate because Ms A's blood pressure had actually dropped, and there was a potential for harm in the setting of an ischaemic stroke.

Dr G

89. I note comments from MCDHB that there were informal discussions with Dr G about how he was managing, and there were issues with him settling into New Zealand practice. Dr G chose to resign a few weeks into his contract with MCDHB, and worked in the ED only for a short time. I also note that Dr G returned overseas and could not be contacted by MCDHB despite efforts to do so. In all the circumstances, I am critical of Dr G's management of Ms A.

90. MCDHB provided the ED orientation programme[24] that Dr G was given as part of his induction training and support. It also provided his orientation schedule and the Medical Council of New Zealand Supervision Report. As Dr G was a senior medical officer, no direct supervision was in place. I am satisfied that appropriate induction and orientation was provided by MCDHB to Dr G, and accept that as Dr G was a senior medical officer, no direct supervision was required.

[24] "Survival Guide to [the] Emergency Department for Consultants".

Conclusion

91. I acknowledge that even if there had not been a delayed diagnosis of stroke, the outcome for Ms A may have been no different. However, I am concerned that aspects of the care provided across three presentations to ED were suboptimal. In particular:

a) The initial assessment by the locum consultant at the first ED presentation on 14 May 2018 was inadequate;

b) At the second presentation to ED on 14 May 2018, Ms A had a long wait of five and a half hours;

c) At Ms A's third presentation to ED on 24 May 2018, she had a long wait of three and a half hours; and

d) The triage categorisation at Ms A's third presentation to ED on 24 May 2018 was inadequate.

92. While individual staff members hold some degree of responsibility for their failings, cumulatively, I consider that the deficiencies outlined above indicate a pattern of poor care. Accordingly, in my opinion, MCDHB failed to provide services to Ms A with reasonable care and skill, and, as such, breached Right 4(1) of the Code of Health and Disability Services Consumers' Rights.[25]

Communication — other comment

93. Ms A and her mother raised communication concerns, and concerns about a lack of support and advocacy available to Ms A at times. My Internal Medicine advisor, Dr David Spriggs, commented:

> "It is clear that the communication with [Ms A] and the medical staff caused considerable concern to the mother. The mother was not able to be available to act as [Ms A's] advocate at times of the ward round. The mother was spoken to on at least 2 occasions by [Dr D]. The use of the word 'plaque' clearly caused some confusion and upset. [Dr D] recognises that his comments about Google may have caused upset and he 'in no way intended to offend the patient'."

94. I commend Ms A's mother for being a strong advocate for her daughter. Communication is an important part of care, and this case is a reminder of the value of having a support person present, especially where the patient is vulnerable or may require help in navigating the information provided. I take this opportunity to reiterate the importance of listening to families, and of ensuring that communication is clear and that consumers have access to support and advocacy if they require it.

Inpatient admissions — no breach

95. Dr Spriggs reviewed the management of Ms A by the General Medicine team, including the assessments, working diagnoses, management plans and discharge decision and follow-up plan, and safety-netting advice. Dr Spriggs advised that "the management of [Ms A] was in keeping with current standards of practice".

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

96. I note Dr Spriggs' comment that "[t]he differentiation between peripheral (to do with the ear) and central (to do with the brain) vertigo is notoriously difficult", and that "it was reasonable for Dr D to diagnose a peripheral vertigo" in the circumstances of the first inpatient admission.

97. Dr Spriggs advised that when Ms A re-presented a week later, new neurological symptoms were present and a central (brain) pathology was recognised, and dual antiplatelet therapy was prescribed and an MRI performed. Dr Spriggs said that Ms A "was not disabled enough to warrant consideration for clot retrieval and the time course was not appropriate for use of thrombolysis".

98. I accept Dr Spriggs' advice and am satisfied that the care provided to Ms A during her inpatient stays was appropriate and in line with accepted practice.

Recommendations

99. In response to the recommendation in my provisional opinion, MCDHB provided a written formal apology to Ms A for the breach of the Code identified in this report. The apology has been forwarded to Ms A.

100. I recommend that MCDHB undertake the following, and report back to HDC within three months of the date of this report:

a) Use an anonymised version of this report as a case study, to encourage reflection and discussion during education sessions for ED staff, including consideration of the difficulty in diagnosing a posterior circulation stroke.

b) Develop a guideline for the assessment and management of acute onset vertigo, and ensure that doctors working in ED and the general medical unit are made aware of the guideline.

c) Educate ED nursing staff on the appropriate triage category for a suspected stroke.

d) Review the waiting times for patients to be seen in ED. If there are still issues with waits longer than expected, MCDHB is to provide HDC with a plan of action to improve the situation.

e) Consider providing training to staff on the importance of clear communication with consumers and the value of enabling access to support and advocacy for consumers.

Follow-up actions

101. A copy of this report with details identifying the parties removed, except the experts who advised on this case and MCDHB, will be sent to the Ministry of Health and the Stroke Foundation New Zealand, and placed on the Health and Disability Commissioner website, www.hdc.org.nz, for educational purposes.

Appendix A: Independent advice to the Commissioner

The following expert advice was obtained from Dr Shameem Safih:

"Ref: C18HDCC01465

My name is Shameem Safih. I am a fellow of the Australasian College of Emergency Medicine (1997).

The Health and Disability Commissioner has asked me to provide an opinion in the case of treatment provided to [Ms A] in May of 2018 at [the public hospital].

I have read the following documents:

1. Letter of Complaint
2. The DHB's responses dated September 2018
   a. The response from [Dr F], the Clinical Director
   b. The response from [the operations executive]
   c. The response from [Dr D], general physician
3. The clinical records relevant to the presentations

[Ms A] presented three times to [the public hospital].

She had suffered a stroke which was not diagnosed in the first two presentations.

At her 3rd presentation 8 days after being discharged from the first admission she represented with obvious abnormal neurological signs and underwent an MRI which showed a posterior circulation stroke, specifically an infarct, in the posterolateral left medulla.

In relation to each of these presentations The Health and Disability Commissioner has asked for comment on:

1. The adequacy of triage and assessment
2. Whether further testing should have been undertaken
3. The appropriateness of discharge and the information provided upon discharge and
4. Any other matters that amount to a departure from standards of care

For each question the HDC has asked for advice on

1. The standard of care/accepted practice
2. If there was a departure from standard of care or accepted practice, how significant this was
3. How it would be viewed by my peers
4. Recommendations for improvement

[Ms A] was a [woman in her late thirties] who presented with a 2 day history of constant vertigo, nausea and vomiting, and falling to the left when trying to walk.

Vertigo (a sensation of spinning) is a very common presentation in the ED. It can be caused by a peripheral cause (middle ear related) or a central neurological cause (including stroke). It is critically important to differentiate between the two causes. However it is not always easy to clearly differentiate between the two. A degree of clinical judgement is often involved. There are clinical examination findings which can assist with this differentiation. HINTS (Head Impulse, Nystagmus and Test of Skew) is a very sensitive 3 part physical examination looking at eye movements. It can be done fairly quickly and ED doctors should be familiar with it.

To illustrate the difficulties in diagnosis

1. The incidence of stroke in the group of patients presenting with vertigo is very small (0.7% in one study)
2. Up to 0.5% (1 out of 5000) patients diagnosed with a peripheral cause of the vertigo are readmitted within 7 days with a stroke
3. Of all cases in which the final diagnosis is of cerebellar stroke about 28% to 59% are initially misdiagnosed in the ED.

Depending on where the exact lesion is the presentation can be quite variable. The exact subtleties of different syndromes and presentations of a posterior circulation stroke are beyond the scope of practice of a general emergency physician.

It is important that risk factors and red flags are recognised, as this may influence the decision regarding imaging and referral to a specialist.

CT scan is not very sensitive for a posterior ischemic stroke but is able to rule out a bleed and most masses as a cause of symptoms. An MRI may pick up more subtle and earlier strokes but also may miss the diagnosis in the first 48 hours.

[Ms A] had a postero-lateral medullary infarct on the left. This is a pathological entity which falls within the spectrum of vertebrobasilar stroke syndromes, a central cause of vertigo.

The diagnosis is often missed by non-neurologists.

There is a broad range of signs and symptom, from mild or subtle to very obvious. Disequilibrium or falling to one side will often be seen in such stroke syndromes but can also be seen with peripheral causes of vertigo.

Review [Ms A's] presentations

1st presentation 14th May

Triaged at 0855.

Triage notes say she was unwell from the previous day with a left sided lean on walking which was getting worse. Blood pressure measured initially was 200 mmHg systolic.

She was assigned a triage category of 3 (to be seen within 30 minutes).

This triage assessment and category assigned was reasonable.

She was then seen by [Dr G] who noted 2 days of progressive vertigo, with a sensation of falling to the left. He also noted that she had nausea and vomiting and a slight headache.

From his documentation his neuro examination was limited to looking for nystagmus (abnormal rapid eye movements), which he found to be absent, and partially examining for upper limb strength. He also noted the high systolic blood pressure.

He concluded that she had benign paroxysmal positional vertigo (BPPV). However there is no clear description of clinical features of this entity. Episodes of vertigo in BPPV tend to be triggered by motion, and certain positions of the head, and are short lived (usually under a minute), and may be accompanied by nausea and vomiting. There is no attempt to confirm this by performing the Dix Hallpike manoeuvre (physical positional manoeuvres designed to reproduce vertigo and nystagmus in BPPV). The clinical director's response reflects that this was a poorly made diagnosis.

He treated her vertigo and vomiting with intravenous prochlorperazine which was appropriate.

He elected to treat the high blood pressure with intravenous metoprolol. Treatment of systolic blood pressure of 200 with IV beta-blockers in the setting of an ischemic stroke is potentially dangerous. A rapid drop in blood pressure can decrease cerebral perfusion and worsen the stroke. He discharged [Ms A] on diazepam and meclizine (anti vertigo/nausea medication) which was appropriate. However he gave no specific discharge instructions except to recheck her blood pressure with the GP in 1 week.

Comment

The triage category was appropriate.

The medical assessment was limited.

Discharge information was probably inadequate.

The standard of care entails:

1. Accurate history taking.
2. Thorough neurological exam documented with HINTS, in particular looking for signs of cerebellar involvement, such as testing for coordination, testing for abnormal gait and performing Dix Hallpike manoeuvre.
3. It is not standard of care to try and reduce a systolic blood pressure of 200 mmHg in this setting. Before the medication to reduce blood pressure was given her blood pressure had spontaneously dropped to 170/100, therefore there was no indication for blood pressure management and there was a potential for harm.
4. Considering red flags which include the presence of continuous vertigo of two days duration, not particularly triggered with position change or head movement, and

with the sensation of leaning over to the left. Other risk factors of stroke could have been considered (obesity, hypertension and diabetes).
5. A good set of instructions and a good follow up plan upon discharge.

I do not know if a senior was consulted or if a senior actually reviewed [Ms A]. My recommendation would be that a junior MO should be supervised, and their patient reviewed by a senior ED physician as appropriate.

Not making the right diagnosis was challenging in [a person in their late thirties] and so I am not critical of that.

BPPV was not the diagnosis here, and even based on his level of experience arriving at that diagnosis and not taking a good history, not doing a thorough examination and not discussing with a senior represents a moderate departure from standard of care.

Second visit

2nd presentation 14th May

Triaged at 1652.

[Ms A] returned to the ED half an hour after having been discharged.

The triage nurse noted that she represented because she had ongoing dizziness and vomiting.

The triage category assigned was 4.

Her symptoms were unresolved or worse, but if she wasn't distressed at the time of triage then this is not an unreasonable triage category.

Medical assessment

I cannot find the notes for this assessment but I note from [Dr F's] summary that

1. [Dr E] saw her at 11.02 pm — which is a very significant (6 hour) delay from arrival
2. He found no cranial nerve abnormality, speech was not slurred and there was no focal weakness
3. However he was unable to do a complete neurological examination because of her persistent vomiting
4. He was concerned about a posterior circulation stroke
5. He referred her for further management by the medical team
6. In [the public hospital], the procedure for late presentations of stroke is generally to refer them onto the inpatient team for imaging and further management.

Comment

This assessment appears to be reasonable, and the concern about a central cause ie a stroke, was appropriately raised. The referral to the General Medical team was based on pre-established agreed pathways.

There was a very long delay from arrival to being seen, about 6 hours.

In my opinion this does not meet the expected standard of care. The DHB in its response says they are trying to address patient flow issues.

The clinical assessment, management, and referral to General Medicine was appropriate.

It is important to note that during this admission, [Dr D], a General Physician, did a thorough examination on [Ms A] in the ward, and found no focal neurology. The only red flags (apart from the risk factors of a stroke) would have been the inability to sit, and walk, the complaint of leaning to the left, and the need to have assistance to be able to walk to the toilet. This was thought to be due to a vestibular cause, which can occur. Imbalance and gait disturbance out of proportion to dizziness will often suggest a central cause as more likely, though clinical judgement is often involved.

The ambulance officers noted prior to bringing her in the first time that she was unable to sit up straight without support.

The admitting medical registrar notes that her gait was unsteady but not ataxic — I am not sure what difference he is exactly implying. During this admission an entry by [a nurse] says clearly — 'unsteady on feet, needing walking aid and supervision'.

A referral to physio describes 'very poor balance'.

It appears to me that there was some gait ataxia which a. improved and b. was attributed to a vestibular cause.

The admission plan was to consider an MRI if symptoms did not improve with medications and time.

Because of the absence of any hard cerebellar signs or neurological signs based on a thorough examination by the physician, and because her symptoms appeared to be improving, it was thought that the cause of her vertigo and loss of balance was peripheral. She was discharged without any imaging. She was given instructions to watch out for neurological symptoms and to return if any of those were to occur.

3rd visit

24th May (10 days after discharge)

[Ms A] represented on the 24th of May with persistent symptoms and new neurological symptoms:

'Loss of balance and veering to the left'. This was present initially

'Ataxic gait, very unsteady still, like she is drunk'

'Right facial sensory change, right torso arm and leg sensory change'

'Right arm and leg weakness'

'Diplopia (double vison) improving'

'Right eye appears larger than left'.

She was admitted and had a CT scan which was normal. She therefore proceeded to have an MRI which showed the posterolateral medullary infarct.

I will not comment on her management on the ward by the General Medical team as this would be more appropriate coming from one of their own peers.

In summary, with regard to the ED presentations:

At the first presentation to ED aspects of assessment and management did not meet standard of care. I would regard that as a moderate departure from standard given the importance of an adequate history and examination at such presentations. [Ms A] was seen by a junior doctor. It is uncertain how well he was supervised. [Ms A's] neurological examination was incomplete, and an erroneous diagnostic impression was made. However the General Physician's assessment which was more accurate and was thorough, did not find any specific focal neurological signs, highlighting the challenges in differentiating benign from more sinister causes in such cases. The management of the blood pressure in the acute context is questionable. Her systolic blood pressure had actually dropped to 170 prior to administration of the antihypertensive drug, which increased the risk of a sudden severe drop in blood pressure in this setting. This represents a mild to moderate departure from the expected standard.

At the second presentation, which was shortly after discharge from the first, she was assessed more thoroughly although neurological examination was still incomplete. She was admitted with the right concern of a posterior circulation stroke.

Recommendations for the future

My recommendation would be to

1. develop a clinical guideline to support RMOs in examining, documenting and decision making on patients presenting with Dizziness and Vertigo (if there is none in [the public hospital]), and
2. to review RMO supervision policy within the ED

Shameem Safih
Emergency Physician
11/04/2019"

The following further advice was received from Dr Safih:

"1. The 6 hour delay to be seen for someone returning to the ED for non-resolution of significant symptoms is a severe departure from standard.

2. First presentation: It has now been pointed out that the doctor who saw [Ms A] at her first presentation was in fact a Senior Medical Officer. His credentials are not given. Was he an Emergency Physician with an Australasian qualification? Nevertheless if he was working as a Senior Medical Officer then his assessment and management fell short of standard. I did not criticise him for missing the diagnosis as it is a difficult diagnosis to make. I do criticise him for being superficial in his neuro examination, and for arriving at the diagnosis of Benign Positional Vertigo without eliciting and documenting the clinical features that would support this diagnosis. He did not do any clinical tests for cerebellar function, which he should have. These tests may have been normal, as they were normal when examined by the general physician upon admission. Nevertheless, due process when examining someone for vertigo is to test for cerebellar function. He treated the raised systolic blood pressure which was not at a level that would mandate treatment. The presenting symptom of falling to one side when walking was overlooked as a red flag. Therefore I regard his assessment as a moderate departure from standard of care. My recommendation would be that [Dr G] reflect upon the learning points in this case and improve his future assessment of a patient presenting with vertigo.

3. Recommendations: I had recommended that Junior medical officers should be supervised. I accept that in this case the Senior Medical Officer examined the patient the first time and arrived erroneously at the diagnosis of Benign Positional Vertigo. I also accept that at the return presentation it was a junior medical officer who raised the question of possible posterior circulation stroke and referred [Ms A] to the medical team. However, although not directly applicable in this case, and certainly not a recommendation that would result directly from this review, it is still a good general rule that Junior Doctors in ED should be supervised.

4. Recommendation: I had also recommended that a clinical guideline should be developed to help RMOs in managing patients presenting with dizziness and vertigo. I would re affirm this recommendation.

5. Further I would recommend that the DHB address the waiting time to be seen as 6 hours is too long a wait for a patient to be seen.

Shameem Safih
FACEM"

The following further advice was received from Dr Safih:

"Thank you for asking me to provide further comments around the management of [Ms A] at MidCentral Health on May of 2018.

[Ms A] was a [woman in her late thirties] who presented to the ED at [the public hospital] with continuous and worsening vertigo and vomiting for a couple of days. At her first presentation on the 14th of May 2018 she was seen by a locum emergency physician who discharged her with the diagnosis of Benign Positional Vertigo. She returned to the ED on the same day. She was examined by another doctor who was

concerned about the possibility of a stroke. He referred her to the inpatient medical team for further investigation. She was admitted and discharged after a few days without further imaging because there were no hard neurological signs and her symptoms appeared to improve.

She returned to the ED on the 24th of May with worsening of her symptoms. She now had signs and symptoms of a stroke. She initially had a CT scan which was reported as normal. She was admitted and proceeded to have an MRI which showed she had suffered a posterior circulation ischaemic stroke. Thus the diagnosis of stroke had been delayed by 10 days.

My original comments were

1. The diagnosis of Benign Positional Vertigo was made erroneously by a junior doctor who had not been supervised by an ED consultant
2. [Ms A] had raised blood pressure which was not managed in a manner consistent with current best practice
3. At the second presentation she was seen after a 6 hour delay: this delay to be seen is a severe departure from standard recommendation

MidCentral DHB has provided a response to the first comments from the HDC.

My instructions are to

1. Comment on the third presentation, in particular the waiting time to be seen
2. Consider whether any of the information provided alters my original advice
3. Review and comment on the policies provided, and make any recommendations for improvement
4. Comment on any other matters that I might consider as amounting to a departure from standard patient care

The following documents have been provided

1. MidCentral DHB's response dated 30th August 2019
2. Statements from [Dr E] and Associate Charge Nurse [RN H]
3. ED notes from 24th May 2018
4. Statements from [RN C] and [RN B]
5. Orientation guidelines for senior medical officers
6. Triage document

My responses to the HDC request are as follows:

1. Comment on the third presentation

[Ms A] presented for the 3rd time on the 24th of May 2018 at 1352 hours. She was given a triage category of 4. However, the triage nurse had recognised that [Ms A] was potentially presenting with a stroke. She has made a note of facial numbness, right sided weakness, unsteady gait and headache. The appropriate triage category for a suspected stroke is Category 2 (to be seen within 10 minutes).

[Ms A] was seen by a Senior Medical Officer, [Dr I] at 17.29 (a delay of over 3 and a half hours). [Dr I] found that [Ms A] had deteriorated significantly. On neurological examination she still did not have nystagmus, and did not have cerebellar signs but she had reduced sensation and power on the right side of her body.

A CT scan was obtained to rule out a stroke, and she was referred to the general medical team. The CT scan was normal and an MRI was later organised by the general medical team.

[Dr I] provided appropriate management of [Ms A] on this presentation.

The question has been asked about the waiting time of 3 and half hours in the ED.

Reading the new documents provided it appears that the department was very busy at the time. The DHB has a 5 step colour coded capacity vs workload ranking scale. For the days in question the DHB was mostly close to the top end of the scale. This indicates they did not have the resource to meet the needs of all patients in a timely fashion. While this may explain the delay to be seen by a doctor, it falls well below standard. If she had been appropriately triaged as a 2 or even a 3 she may have had a better chance of being seen earlier (even if the outcome may not have changed).

I regard the incorrect triage category and the long waiting time to be a severe departure from the expected standard of care.

The DHB has engaged and has undertaken measures to try and improve patient flow. They have engaged the help of a consulting company, are engaging their medical teams with regular meetings, and are increasing nursing staffing. These are important steps and if they do not help they will need to continue to find solutions for the increasing work load.

2. Changes to my previous advice based on new information provided.

I have been informed that [Dr G] was a locum consultant from overseas. He therefore did not require supervision. Therefore my previous comment on the DHB's failure to supervise this doctor is incorrect. Juniors as a general rule should be supervised but I don't consider there has been any departure from standard here.

However a better level of assessment and management is expected as he was a consultant. I would say that the care he provided at [Ms A's] first visit was a moderate departure from the standard of care expected of an ED consultant.

Comment re management of raised blood pressure:

On both the first and the second presentations [Ms A] was administered medications to lower the blood pressure acutely. Current guidelines while not very prescriptive do not support aggressive lowering of blood pressure in this scenario. I therefore regard the management of blood pressure in this setting to have been a mild departure from current standards.

3. Review of policies provided: The orientation information for new consultants (and RMOs) gives good guidelines for practice within the ED and the DHB. The triaging template is useful. The information provided re work on improving patient flow and reducing waiting time is encouraging.

4. Recommendations for improvement: My recommendations are a) the DHB should write a guideline for the assessment and management of acute onset vertigo. Doctors working in the emergency department and the general medical unit should be made aware of the guideline. b) ED nursing staff should be educated about the appropriate triage category for a suspected stroke. And c) the DHB should continue their effort to improve patient flow and reduce waiting times for sick patients in the ED.

Yours sincerely

Shameem Safih FACEM"

Appendix B: Independent advice to the Commissioner

The following expert advice was obtained from Dr David Spriggs:

"I have been asked by the Commissioner to provide expert advice on the care provided by [the public hospital] (Mid-Central District Health Board) to [Ms A] in 2018.

I practise as a General Physician and Geriatrician at Auckland District Health Board and am vocationally registered in Internal Medicine. I have been a Fellow of the Royal Australasian College of Physicians since 1993. I have no conflict of interest in regard to this case and have read and understand the Commissioner's guidelines for independent assessors.

I have been provided with:

1. Letter of complaint […]
2. MidCentral District Health Board's response dated 7 September 2018.
3. Clinical records from MidCentral District Health Board.

My instructions from the Commissioner are to review the enclosed documentation and advise whether I consider the care provided to [Ms A] by the general medicine team at [the public hospital] was reasonable in the circumstances, and why.

In particular, I have been asked to comment on:

1. **Each** general medicine assessment carried out on [Ms A] and advise whether the assessments, working diagnoses and management plans were appropriate.
2. The appropriateness of the decision to discharge [Ms A] on 16 May 2018, the follow-up plan and safety-netting advice provided.
3. Any other matters in this case that you consider warrant comment.

Background:

[Ms A] was admitted to [the public hospital] at 20:18hrs on Monday 14/05/18. On the night of Sunday 13/05/18 she had developed nausea and dizziness. When she turned her head to the left the room began to spin. She noticed a fullness in her left ear without any earache. There was no limb weakness or numbness and no speech problems. She denied any headache. [Ms A] has a background history of hypertension, type 2 diabetes and is overweight. She has sleep apnoea. She was living with her son. She stopped smoking about a month prior to this admission. On admission she was hypertensive initially with a blood pressure 200/110. The medical examination by a doctor whose name I can't read showed that she was comfortable lying on the right side. She became nauseated when she moved. Looking in the ear it was normal. Neurologically the exam did not demonstrate any focal neurology but it was impossible to assess [Ms A's] gait because she was too nauseated even on trying to sit up. However she did manage to mobilise to the toilet, but was unsteady on her feet but 'not ataxic'. A differential diagnosis of viral labrynthitis and benign paroxysmal positional vertigo (BPPV) was made and [Ms A] was admitted and given some IV fluids.

At 9.45am on 15/5/18 she was assessed by [Dr D]. He reviewed the history. On examination she was not thought to be ataxic, but was unsteady. There was no focal neurology. He performed a Dix-Hallpike manoeuvre which was positive. This is consistent with BPPV. A diagnosis of 'acute peripheral vertigo' was made. She was given fluids and antiemetics.

On 16/05/18 [Ms A] was reviewed by [Dr D] on the ward round. She remained hypertensive, the blood pressure being 207/101. She had a negative Romberg's and was walking. The neurological examination was normal. She was generally looking brighter. It was noted that her diabetes was poorly controlled as was the hypertension. There was an increase in her antihypertensives and antidiabetic drugs, and it was arranged for her to be discharged with follow up by her family doctor in a week for hypertension and diabetes.

At 1420hrs the nurse recorded that the patient's mother and son arrived, they were met by the house officer and the patient was happy to go home.

[Ms A] was discharged on:

cyclizine, ondansetron, prochlorperazine and betahistine for the nausea,

lisinopril and amlodipine for the hypertension,

glipizide and metformin for the diabetes.

The discharge summary states 'if you experience any numbness, tingling, weakness, loss of continence, increased headache, chest pain, fever or any worrying symptoms please seek medical attention'.

On the 24/05/18 [Ms A] was readmitted at 20:18hrs. On this occasion she continued to have loss of balance and veering to the left, she was noticed to be ataxic but also noticed some left facial sensory change and right sensory changes of the body. She gave a history of double vision and the right eye appearing bigger than the left. She was feeling very tired and her diabetes was under poor control. On admission her blood pressure was adequately controlled at 152/86, the general examination was normal. Neurologically she had a left sided Horner's syndrome, a decreased sensation on the left side of the face, diplopia looking to the left, decreased light touch on the right arm and leg. [Ms A] needed help to stand and had a positive Romberg's test. The clinical diagnosis of a posterior circulation stroke was made. The CT of the head was essentially normal and she was admitted to the general medical ward. The admitting registrar suggested that she needed an MRI scan. Her blood tests were unremarkable.

[Dr D] reviewed [Ms A] at 08:40 on 25/05/18. He reviewed the history noting the new neurology, requested an MRI scan and started her on dual antiplatelet treatment. The MRI was performed sometime in the middle of the day, the time is not stated. The MRI confirmed an 'acute or acute-to-subacute infarct postero-lateral left medulla'. There was a significant amount of atherosclerosis elsewhere in the blood vessels to the brain. She returned to the ward at 1320hrs. She was reviewed by the physiotherapists at 1630hrs that day.

On 26/05/18 the on-call house officer reviewed her as the blood sugars were a little low and the glipizide was withheld. She was subsequently reviewed by the General Medicine registrar on Monday 28/05/18. He/she discussed the findings of the MRI scan and the total glipizide dose was reduced. As the blood pressure was high, the amlodipine was increased. An echocardiograph was ordered. I note that [Ms A's] mother expressed her 'dissatisfaction' with the fact that the patient had been advised of the findings of the MRI without the mother present. That note is made at 13:20hrs on 28/05/18.

On 29/05/18 [Dr D] performed his consultant ward round and reviewed [Ms A]. At that stage he discussed with [Ms A's] mother the diagnosis and atherosclerosis. The term 'plaques' had been used when talking to [Ms A]. [Ms A] had apparently looked these up on the internet and had become alarmed that the plaques were indicative of Alzheimer's disease. This was further discussed with the mother. It is not clear whether [Ms A] was present at that stage.

On 30/05/18 the house officer reviewed [Ms A], by this stage she was mobilising with a frame and feeling fatigued. The blood sugars and blood pressure were satisfactory. She was reviewed by Older Peoples Health in the afternoon of the 30/05/18 and put on the waiting list for transfer to Star 2 rehabilitation ward. She was further reviewed by the general medical registrars on 31/05/18 and 01/06/18. On 01/06/18 at 11:35hrs she was transferred to rehabilitation.

I note in the letter of complaint by [the] (mother of patient). She feels that she was given inadequate information at the time of [Ms A's] initial discharge on 16/05/18. At that stage the mother felt that there was a difference in temperature between the right thigh and the left. After discharge [Ms A] did not generally improve. She was reviewed by the local medical centre on 22/05/18 and 24/05/18. On 25/05/18 [Ms A's] mother met with [Dr D], [Dr D] 'explained that peripheral events and central events on first time presentation can sometimes be difficult to diagnose'. [Ms A's] mother 'challenged that statement' as she felt there were 'clear signs of a suspected cerebral event from Day 1'. [[Ms A's] mother's] complaint letter then goes on to say that on 28/05/18 '[Ms A] phoned me distraught that [Dr D] had been to see her. He described spots of plaque in the brain'. It was after this conversation with [Dr D] that [Ms A] accessed the Net and came to details of dementia. [Ms A's mother] said that [Ms A] was 'chastised' for using Google to research her condition.

OPINION:

[Ms A] was admitted late in the evening of 14/05/18 with symptoms of dizziness. She is at high risk of atherosclerosis. At that stage the clinical examination did not show any focal neurology, she was diagnosed with a peripheral vertigo, treated in the standard fashion and discharged a couple of days later. She represented after a week with deteriorating symptoms and on this occasion had clear focal neurology. An MRI confirmed a stroke. She was treated in the usual fashion for that stroke.

The differentiation between peripheral (to do with the ear) and central (to do with the brain) vertigo is notoriously difficult. In the absence of focal neurology and the

presence of symptoms lateralising to one ear ([Ms A] had 'fullness' in the left ear) and a positive Dix-Hallpike manoeuvre, it was reasonable for [Dr D] to diagnose a peripheral vertigo. The Dix-Hallpike manoeuvre and the 'head thrust' test are both bedside tests that are commonly used to attempt to distinguish between peripheral and central vertigo. Neither of these tests is particularly sensitive and specific and in general it is felt that these tests only have about 80% chance of distinguishing peripheral from central vertigo. The literature is very varied on this point particularly as most studies have either a very high or very low pre-test probability for peripheral vertigo.

The management of [Ms A's] diabetes and hypertension with the ongoing nausea was in keeping with current standards of practice.

On discharge there is clear written information to [Ms A] about her diagnosed condition and what had been done about her blood sugar and blood pressure. She is also instructed to 'seek medical attention' if she develops further neurological symptoms. There are also clear instructions to the GP.

She presented a week later with new neurology. There is nothing to suggest that these neurological signs were present while she was in the hospital the first time. The new neurology was appropriately recognised as indicating a central (brain) pathology and subsequent imaging with MRI confirmed that this is related to stroke disease. Even prior to the MRI scan she was prescribed dual antiplatelet therapy which would be the standard practice in this context. She was not disabled enough to warrant consideration for clot retrieval and the time course was not appropriate for use of thrombolysis.

It is clear that the communication with [Ms A] and the medical staff caused considerable concern to the mother. The mother was not able to be available to act as [Ms A's] advocate at times of the ward round. The mother was spoken to on at least 2 occasions by [Dr D]. The use of the word 'plaque' clearly caused some confusion and upset. [Dr D] recognises that his comments about Google may have caused upset and he 'in no way intended to offend the patient'.

SUMMARY:

On reviewing the information as above I feel that the management of [Ms A] was in keeping with current standards of practice.

I recognise that it is unfortunate that the presenting symptoms on 14/05/18 were misdiagnosed as representing peripheral vertigo. Sadly this is an error that many general physicians recognise as being easily made despite careful examination. From the information provided, [Dr D] and the General Medical team acted in keeping with current standards.

I believe the decision to discharge [Ms A] on 16 May 2018, the follow-up plan and safety-netting advice provided were in keeping with current standards.

[Dr D] acknowledges that the quality of communication with [Ms A] and her mother certainly caused upset.

Please get back to me if you require any further information.

Yours sincerely,

David Spriggs, MBChB, FRCP(Lond), FRACP, MD
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