Health and Disability Commissioner
Te Toihau Hauora, Hauātanga

A Decision by the Deputy Health and Disability Commissioner

(Case 21HDC02293)

Introduction

1. This report is the opinion of Deborah James, Deputy Health and Disability Commissioner, and is made in accordance with the power delegated to her by the Commissioner.

2. The report discusses the care provided to Mr A by Health New Zealand|Te Whatu Ora (Health NZ) Southern.

3. Mr A suffered an unwitnessed fall at his care home and was transported to Southland Hospital by ambulance. On arrival, an envelope containing information about Mr A's medications (including Coumadin/warfarin[1]) was misplaced, which meant that staff were not aware that Mr A was on warfarin, and they did not conduct a computed tomography (CT) scan of his head prior to his discharge. Sadly, Mr A died of a brain haemorrhage.[2]

4. The following issues were identified for investigation:

- *Whether Health New Zealand|Te Whatu Ora provided Mr A with an appropriate standard of care in 2020.*
- *Whether Dr C provided Mr A with an appropriate standard of care in 2020.*

[1] A medicine to prevent blood clots. Warfarin can cause serious side effects such as heavy bleeding.
[2] The Coroner's findings linked this to the fall suffered by Mr A.

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

5. The parties directly involved in the investigation were:

Mr B	Consumer's son
Southland Hospital	Group provider
Dr C	Provider/emergency department (ED) registrar

6. Further information was received from:

Coroner
Ambulance provider
Care home

Summary of events

7. At around 6.15pm on the evening of Day 1,[3] Mr A was found on the floor of his room at the care home having suffered a fall. He sustained a laceration to his head, and blood was noted on the floor. Mr A was observed to be conscious and cooperative and was not distressed. An ambulance was called and arrived at 9.35pm.

Ambulance handover

8. Two emergency medical technicians (EMTs) attended to Mr A at the care home prior to his transfer to hospital. The Ambulance Care Summary provided to HDC documented Mr A's medical history as Type 2 diabetes[4] and a heart murmur,[5] and noted that his current medications included Coumadin (warfarin) — a blood thinner. Warfarin is used to prevent blood clots from forming, but it can also increase the risk of heavy bleeding.

9. The care home told the coroner that when residents are transferred to hospital, a copy of their medication chart and their progress notes is sent with them in a yellow envelope and, on discharge from hospital, the reverse side of the yellow envelope would be completed by hospital staff. The care home said that Mr A's envelope was handed over to the ambulance staff who were transporting him to hospital. Both EMTs said[6] that they recall the care-home staff handing over Mr A's envelope. Mr A arrived at Southland Hospital at 10.09pm.

Emergency Department (ED) handover

10. Health NZ told HDC that there is a longstanding process for receiving information from care homes, whereby relevant patient data is supplied by the residential facility inside a yellow envelope and transported with the patient to the ED. Health NZ said that normally the ambulance staff keep the envelope with the patient and place the patient in the bed they have been allocated. However, Health NZ said that if the patient is placed in the waiting room, the envelope is put in the patient's ED notes, '[a]ll of which would follow the patient'.

[3] Relevant dates are referred to as Days 1–8 to protect privacy.
[4] Type 2 diabetes affects how the body uses sugar (glucose) for energy. It stops the body from using insulin properly, which can lead to high levels of blood sugar if not treated.
[5] Sounds — such as whooshing or swishing — made by rapid, choppy (turbulent) blood flow through the heart. The sounds can be heard with a stethoscope.
[6] In a statement to the coroner.

Health NZ said that the envelope includes information such as the patient's medication data. Health NZ stated: 'This process has been in place for many years and functions well.'

11. One of the EMTs said that they spoke to the triage nurse about where Mr A's paperwork should go. The EMT said that usually, if an ED bed was available for the patient, the paperwork (the envelope) would go into the cubbyhole at the ED workstation for the corresponding bed number. The EMT said that she was advised by the nurse to 'give it to the person working in the triage station in the waiting room'. The EMT stated that the ambulance service paperwork was also with the envelope (which also listed Mr A's medications), and this information was all handed over to the 'person working behind the glass screen in the ED waiting room known as the reception area'. The other EMT confirmed the above version of events regarding the handover of the envelope.

12. Statements were also provided to the coroner by two Southland Hospital ED administrators who were on shift when Mr A arrived in ED. One of the administrators said that she has no recollection of the night in question or of Mr A, nor does she recall being given any documentation by the EMTs. The other administrator said that the normal process for receiving paperwork from ambulance staff is for ambulance staff to give the paperwork and any relevant documentation to the nursing staff, or for it to go 'directly into the patient's bed number (cubby hole) at the nurses' station'. However, she said that she has no recollection of the events concerning Mr A, nor does she recall being given any documentation by the EMTs. She stated that it is not normal practice to receive paperwork from the ambulance staff, and if she had received this information, she would have placed it with the other notes that she generated for Mr A.

Assessment in ED

13. ED registrar Dr C said that Mr A was placed in a wheelchair in the waiting room and allocated a triage category of 4. A triage category of 4 on the Australasian Triage Scale means '[p]otentially serious, or potential adverse outcomes from delay > 60 min, or significant complexity or severity, or discomfort or distress'. The maximum clinically appropriate triage time is 60 minutes. In response to the provisional opinion, Dr C said that she was a registrar at the time of the events.

14. Dr C said that at approximately 2.00am (around four hours after Mr A's arrival in the ED) when she was calling another patient from the waiting room, she noticed that Mr A appeared distressed and was complaining of being too hot. She said: 'He also appeared to be upset by the presence of crying children in the waiting room.' Dr C said that she moved Mr A to the 'fast-track' area as it was quieter, and he would be more visible to staff.

Review by registered nurse

15. At approximately 4.31am (approximately six hours after Mr A's arrival in ED), a registered nurse undertook a set of initial observations. Mr A's Early Warning Score (EWS)[7] was

[7] A system that assists clinicians in their assessment, decision-making, and planning of care. It gives patients a score of severity based on their observations of respiratory rate, oxygen saturation, heart rate, blood pressure, level of consciousness, and temperature.

recorded as 0 (not of concern) and his Glasgow Coma Score (GCS)[8] was 15 (the most alert — not of concern). However, the notes also documented that while Mr A was oriented to date and time, he could not give his full birthdate (he got the day and year correct but could not give month) and was unable to say where he was, or what town/city he was in.

16. Health NZ told HDC that the delay of approximately six hours in Mr A's initial assessment occurred because the triage nurse was covering both the night-shift triage and the 'fast-track' area, and due to workload, '[the nurse] would not have been able to complete a secondary assessment until they were free to do so'.

Review by registrar

17. It is unclear when exactly Mr A was assessed by Dr C, but it was some time prior to 6.57am (around nine hours after Mr A's arrival in the ED). Dr C documented at 6.57am (notes written in retrospect) that Mr A had been waiting a long time to be seen and that he smelt strongly of urine and had a full catheter bag. She noted that Mr A had a regular radial pulse,[9] was well perfused peripherally,[10] had no spinal tenderness, and had normal sensation and power to his limbs. Dr C also noted that Mr A was not understanding assessment instructions and that he was 'slow and shaky' but had normal coordination of his upper limbs. Mr A's head wound was documented as being a 10cm laceration with no haematoma[11] or tenderness. She documented: '[H]ead injury, not on anticoagulation cognitive function likely at baseline plan: /head injury [observation]/urine sent for culture/aim to discharge.'

18. Dr C told HDC that she does not recall the exact time she assessed Mr A and stitched his wound, but that at 'approximately 6.57 am [she] retrospectively documented her assessment and management of [Mr A]'. Dr C said that her usual practice during busy shifts working out of one assessment bay would have been to complete those tasks as soon as possible — bringing patients through, completing their assessments/treatments as efficiently as she could, and either discharging patients from there or sending them back out to the waiting room if they had to wait for further investigations, including, for example, bloods or X-rays. Dr C said that when she first saw Mr A appearing distressed in the waiting room at approximately 2.00am, she had been going to call in a different patient, but she chose to bring in Mr A instead.

<u>Information regarding warfarin</u>

19. Dr C told HDC that during Mr A's presentation she was unaware that he was on warfarin.

20. Dr C said that when patients are transferred from care homes, her usual practice is to review the information contained in the yellow envelope. She said that she noticed that there was

[8] A tool used to describe the extent of impaired consciousness objectively in all types of acute medical and trauma patients. The scale assesses patients according to three aspects of responsiveness — eye opening, motor responses, and verbal responses.
[9] A pulse taken on the wrist.
[10] Sufficient blood flow to the core and extremities.
[11] An area of blood that collects outside the larger blood vessels.

no envelope from the care home, but Mr A had a medication dosette with him, which did not contain any anticoagulant medication.

21. The ambulance transfer notes also documented that Mr A was on warfarin. Dr C said that it is her usual practice to review the ambulance transfer notes, particularly when the patient is not able to tell her reliably what has happened. She stated that she would also review digital medical records when they are available, but she cannot recall whether she had access to the digital records at the time. Dr C said that she presented Mr A's case at a Morbidity & Mortality meeting in September 2020, and during this presentation she noted the ambulance transfer documentation, which 'suggests to [her] that at the time of preparing this presentation [she] recalled reading the ambulance notes on [Day 1]'. However, Dr C said that she cannot be sure (four years after the event), and it is possible that she read the ambulance notes but did not note the medication list.

22. As Dr C was unaware that Mr A was on anticoagulants, she did not conduct a head CT scan. Dr C said that had she been aware of Mr A's warfarin therapy, her 'usual practice would be to perform a CT of his brain prior to discharge'.

Discharge from ED

23. Dr C said that after Mr A's head was sutured, he was kept in ED for observation. However, due to the limited availability of beds, Mr A was kept in a wheelchair. Dr C said that Mr A remained stable, and following the morning handover meeting, a nurse contacted the care home and was advised that Mr A's mobility had been deteriorating recently. Dr C told the coroner:

> 'They said that he required the assistance of two people to mobilise with a walking frame. During his overnight stay in ED [Mr A] required the assistance of two people to stand, but only supervision to walk with a low walking frame. He was slow to answer questions but oriented when given time to answer. He was felt to be at his baseline; rest home staff accepted him for transfer home.'

24. In response to the provisional opinion, Dr C told HDC that she discussed Mr A's care with the morning consultant at the handover meeting around 8.00am. Dr C said that she told the consultant that Mr A was a man in his eighties with cognitive impairment, and that he had suffered an unwitnessed fall and sustained a head wound with no other injuries identified. Dr C said that she advised that Mr A's wound had been sutured, that he had been kept in ED overnight for observation, and that he remained stable. Dr C said that the consultant checked whether Mr A was on anticoagulants and Dr C confirmed her belief at the time that he was not. Dr C told HDC: 'The plan from the handover meeting was … to facilitate [Mr A's] discharge back to [the care home].' Dr C said that her understanding from the conversation was that further review by another doctor was not required prior to Mr A's discharge. She told HDC that the conversation was not documented in the notes as there was no change of plan following the handover discussion with the consultant.

25. Subsequently, Mr A was discharged back to his care home at 10.01am on Day 2.

Subsequent events

26. On Day 3, the care home referred Mr A to his general practitioner (GP) because Mr A was unwell with increased confusion and shakes. Mr A's GP told the coroner that he had not received a discharge summary from Southland Hospital, and it appears that the ED discharge summary was sent to Mr A's previous GP. Mr A's GP stated: 'I am not sure why this was, given our practice details are listed on [the system] as his current GP practice and all recent other hospital communication has been addressed to me.'

27. In relation to its communication with the GP following Mr A's discharge, Health NZ said that it is reliant on the information in its hospital computer system being correct to ensure that correspondence is directed to the correct GP practice. It said that there is no automatic process for updating GP information, but the system is updated whenever correspondence is received, and it is a requirement that patients are asked to confirm their GP practice whenever they attend the hospital. Health NZ noted that this does rely on a manual process, and human factors (such as when a patient has a cognitive deficit and is unable to confirm their GP reliably) mean that it is not 'watertight'.

28. Care-home nursing notes show that on Day 8 there was a further decline in Mr A's health, and he could now not open his eyes, talk, or move his limbs. A further referral was made to the GP, and Mr A was transferred to Southland Hospital following a drop in his GCS (to 9 — moderate).

29. An urgent head CT was performed, which showed that Mr A had suffered an intracranial haemorrhage.[12] It was discovered that Mr A was on warfarin, and so warfarin reversal was commenced, with Mr A's GCS improving from 9 to 13 (mild). Mr A was admitted to Southland Hospital and his enduring power of attorney (EPOA) was activated, as it was believed that his condition would likely be terminal. Sadly, Mr A died.

Further information

Dr C

30. Dr C said that if she were to see Mr A in her current practice, 'there is no doubt in [her] mind that [she] would conduct a head CT scan'. She stated that in Southland Hospital ED at the time, doctors working in the ED overnight were discouraged from requesting CT scans unless immediate management would change (for example, a patient with a reduced GCS potentially requiring transfer to a neurological centre). Dr C said that this was due to a combination of factors, including that the radiographers needed to be called in from home (affecting staffing levels the following day), and that reporting of the scans was outsourced overnight. Dr C told HDC:

> 'Due to this it was not unusual to keep a stable patient with a head injury in the ED overnight to have a CT scan done the following morning with the expectation that the patient would be able to be discharged if the scan was normal.'

[12] A brain bleed.

31. Dr C said that it is possible that when she first assessed Mr A, she felt that he could wait until the morning for a head CT, and that 'by the time [she] was writing [her] notes [she] was falsely reassured by his remaining stable on neurological observations and did not then request the head CT'. She told HDC:

> 'I accept … that given [Mr A's] level of functioning and situation that a CT Head scan was indicated and I regret and am sincerely sorry for not arranging for this prior to [Mr A's] discharge. This case and the resultant reflections and learnings continue to, and will always, inform my practice.'

32. In relation to her formulation that Mr A was at his 'baseline' prior to discharge on Day 2 (see paragraph 23), Dr C said that the care home was contacted in the morning by a member of the nursing team, and she believes that the content of that conversation is where that assumption came from. She stated:

> 'Unfortunately reading the [ED notes] there is no documentation of this conversation with [the care home] staff. I do not remember whether I made any attempt to contact [the care home] myself overnight. Transfer documentation from rest homes can provide some indication of a patient's baseline, however, I never saw [Mr A's] transfer documentation.'

Health NZ

Handover of envelope

33. Health NZ told HDC:

> 'We do not believe that it is possible to provide a completely standardised process that accounts for the wide variety of clinical scenarios, together with meeting the needs of [the ambulance service] and the ED, beyond that which is already in place. For some reason on this occasion the yellow envelope could not be located, however this is felt to be an isolated incident and not a reflection of a process that is significantly flawed.'

Overnight CT scans

34. In relation to overnight CT scanning, Health NZ told HDC that at the time of the events, it ran an 'on-call' service for patients who required urgent CT scans late in the evening and overnight. It said that clinicians were therefore asked to reserve their requests for scans for only those patients whose immediate management would be dependent on the results of the scan. Health NZ said that this was to ensure that the day-time running of the service was not 'unduly affected' by requests for CT scans that were not time critical.

Adverse Event Review (AER)

35. Southland Hospital conducted an AER. The event was given a Severity Assessment Code (SAC)[13] of 2.[14] The review identified the following:

- The diagnosis of an intracranial haemorrhage was delayed by a week due to the failure to perform a CT scan during the first ED visit. The CT scan would have almost certainly been requested had staff known Mr A was taking warfarin.
- Being unaware that Mr A was on anticoagulant medication while being assessed was identified as a root cause, with contributory factors including that it was a very busy night in ED, there was no bed space available to observe Mr A, staff were under pressure, and there was no standardised process for receiving yellow envelopes.

36. The following recommendations were made as a result of the events:

- The Strategy, Primary & Community (SPC) team circularise all Residential Care Facilities to publicise and re-emphasise the role and importance of the correct usage of the 'yellow envelope' when transferring patients to and from hospital.
- That SPC contact the Ambulance Service to emphasise the role and importance of correct usage of the 'yellow envelope' when transferring patients to and from hospital.
- That the ED undertake a review of the information requested on the 'yellow envelope' with a view to the development of suggestions for improvement to SPC.
- That an education session for ED staff confirm why warfarin is not included in dosette packaging. This education was to include where to source medication information in the absence of it being supplied.
- That the ED, as part of its review, develop a system or process for ensuring handover of the 'yellow envelope' to clinical staff and associated clear documentation (including absence of such).

37. On 2 August 2023 Southland Hospital confirmed its completion of the recommendations.

Responses to provisional opinion

Mr B

38. Mr B was given the opportunity to respond to the 'summary of events' section of the provisional opinion. He told HDC that it is clear that there were several shortcomings in the care provided to his father after his initial fall, including the lack of knowledge about his father's warfarin therapy. He said that this raises some questions about the systems in place at Southland Hospital, including the yellow envelope process, ambulance documentation,

[13] A numerical rating that assesses the severity of a patient adverse event and determines the level of reporting required and the type of review to be undertaken for the event.

[14] The Health Quality and Safety Commission (HQSC) defines a rating of 2 as: 'Permanent major or temporary loss of function, not related to the natural course of the illness, differs from the immediate expected outcome of the care management, can be sensory, motor, physiological, or intellectual.'

and access to digital records — which he notes would have given some indication as to the warfarin therapy. In addition, he told HDC:

> 'It would also seem that resourcing at Southland Hospital at the time was thin, but the suggestion of CT scan referrals being limited due to staff shortages appears to place budgetary concerns ahead of patient care and this is disappointing. It is not clear if earlier intervention with a CT scan and knowledge of the blood thinner medication would have altered the ultimate outcome of [Mr A's] fall, but this doesn't mask the fact that it should not have happened this way. We have no desire for any of the parties to this tragedy to suffer undue consequences, and it would seem that [Dr C] has made some significant steps to improve her practices going forward. The best that we can hope for is that these lessons are taken seriously so they may prevent any future tragedies.'

Health NZ

39. Health NZ was given an opportunity to respond to the provisional opinion. Health NZ stated:

> 'We have no specific comment or concern regarding your provisional report on the above-named case. We accept the recommendations that relate to Health New Zealand, Southern and plan to commence implementation of these immediately.'

Dr C

40. Dr C was given an opportunity to respond to relevant sections of the provisional opinion. Dr C stated that '[f]our years on', she 'recognises that the family of [Mr A] require closure'.

41. Dr C said that she recalls feeling very overwhelmed by the number of patients waiting to be seen and the lack of spaces in which to see patients. She stated that usually if the ED waiting room was full at the start of the night shift, this would have been cleared by the morning handover. However, in this case, her recollection (not documented) is that at the handover the following morning, the ED remained overcrowded with long wait times to be seen, access blocks to wards, and ED patients with incomplete care being handed over to the day team.

42. Dr C's statement included:

> 'The night in question was however an exceptionally busy night in the ED at Southland Hospital with severe resourcing issues impacting on staff doing their best to deliver appropriate best practice care to every patient. Opportunities that were not the sole responsibility of [Dr C] were missed. [Dr C] did not identify that [Mr A] was on Warfarin, nor did she ensure that a head CT scan was conducted prior to discharge. [Dr C] accepts that regardless of whether [Mr A] was thought to be on anticoagulants given [Mr A's] level of functioning and situation that a CT Head scan was indicated and she regrets and is sincerely sorry for not arranging for this prior to [Mr A's] discharge. This case and the resultant reflections and learnings continue to, and will always, inform her practice'.

43. Dr C agreed to provide a written apology to HDC for forwarding to Mr A's family.

Opinion: Health NZ Southern — breach

Introduction

44. Two key issues are at the centre of this complaint. The first is that the yellow envelope from the care home, which contained information about Mr A's warfarin therapy, was misplaced at the hospital and was not made available to the clinicians in charge of Mr A's care. In addition, Mr A did not undergo a head CT scan despite his age, fragility, confusion, and head injury, which put him at risk of intracranial injury (in line with the Canadian Head CT rules). It is also evident that there was overcrowding in the ED on the night of the events.

45. As part of my assessment of this complaint, I sought independent clinical advice from Dr Shameem Safih, an emergency physician.

46. As discussed further below, there were several issues, including those discussed above, with the care provided to Mr A, which together contributed to the unfortunate outcome for Mr A.

Environment in ED

Handover of yellow envelope

47. Dr Safih advised that care home staff usually provide a set of documents that summarise the patient's presenting concern, the patient's background (which usually includes a list of current and past medical problems, contact numbers for the general practitioner, allergies, and an advanced care plan). Dr Safih advised:

> 'This information is critical to the acute assessment and management of the patient in the hospital. This is especially so as the rest home patient is often unable to provide the information due to illness, some form of incapacitation or cognitive impairment.'

48. I have reviewed several statements from staff (both EMTs and clinical staff) that indicate that the environment in ED on the day of Mr A's admission was less than ideal. All parties agree that when a bed is available in ED, the envelope would go into the cubby hole in ED for the corresponding bed or be placed with the patient in their bed. The uncertainty arises when no bed is available. An EMT recalled asking a triage nurse about where Mr A's paperwork should go and being advised to 'give it to the person working in the triage station in the waiting room [also known as the reception area]'. This was confirmed by the other EMT.

49. On the other hand, Health NZ said that if a bed was not available and the patient was placed in the waiting room, the envelope would be put in the patient ED notes — all of which would follow the patient.

50. Both administrative staff working in the ED on the night of Mr A's presentation told the coroner that they have no recollection of being given any documentation by ambulance staff. One of the administrators said that it is not normal practice for them to receive paperwork from ambulance staff, and that if she had received this information, she would have placed it with the other notes that she generated for Mr A.

51. Based on the fact that the EMTs can clearly recall handing the yellow envelope to administrative staff in the reception area, and that both administrative staff do not recall the night in question, I accept that the yellow envelope was handed over to administrative staff by the EMTs. I also note that the registered nurse who reviewed Mr A at 4.30am (discussed below) documented 'see TF notes'. However, I am unable to confirm whether the nurse was referring to the envelope or to the ambulance transfer notes.

52. In this case, the lack of bed availability meant that the usual process was not followed, with the envelope being handed to administrative staff. This was a deviation from all parties' understanding of the process.

53. Dr Safih advised that usual practice when handing over an envelope and ambulance notes would be for the EMTs to hand the information to the triage nurse in the ED, and a variation of this practice could be to hand the notes to a receptionist, but in any case, the notes would accompany the new chart created for the patient and would then be accessible to the clinicians providing care.

54. With the above in mind, I am not satisfied that Health NZ had an appropriate and universal process in place for handover of the yellow envelope, as evidenced by the fact that both the EMTs and administrators were clear on the process when a bed was available in the ED, but there were differing accounts of what should have occurred when a patient needed to go to the waiting room. In my view, this was the responsibility of Health NZ rather than any individuals, and I am critical of Health NZ's failing in this regard.

Bed availability

55. Dr Safih advised that the failure to place Mr A in a bed represents a mild departure from an appropriate standard of care. However, he noted that 'it would have been due to factors entirely beyond the control of the nursing and medical staff on duty at that time'. He advised:

> 'The onus of developing strategies and providing enough resources to avoid hospital and ED access block, ED overcrowding, and meeting surges in demand falls on [Health NZ] and ultimately the government, and the immediate governing body of the hospital, as well as senior clinicians and managers in the hospital.'

56. I agree. While I accept that it may have been unavoidable that demand outweighed capacity in the ED on the night of Mr A's admission, I consider that Health NZ should have anticipated, and planned for, such a situation, which is not uncommon in an ED setting. It is Health NZ's responsibility to ensure that appropriate systems are put in place to mitigate any potential risks associated with overcrowding in EDs, particularly when it comes to patients being transferred from care homes, when patients may have several comorbidities and current medications that need to be communicated to clinical staff in the ED.

Assessment in ED

57. Mr A was allocated a triage category of 4 and placed in a wheelchair in the ED waiting room. Dr C told HDC that at approximately 2.00am, when she was calling another patient, she

became aware of Mr A, as he appeared distressed and complained about being too hot. Dr C took Mr A to the fast-track area, as it was a quieter area where he would be more visible to staff. Mr A waited until approximately 4.30am, when he was assessed by a registered nurse (a total wait of around six hours).

58. The nurse undertook a set of initial observations, which showed Mr A's Early Warning Score (EWS) as 0 (not of concern). The nurse also documented Mr A's Glasgow Coma Scale (GCS) as 15 (the most alert). However, the nursing notes also show that while Mr A was oriented to date and time, he could not give his full birthdate (he was able to get the day and year correct but could not give the month) and was unable to say where he was, or what town/city he was in.

59. Health NZ said that the delay in Mr A's initial assessment was due to the triage nurse covering both the night-shift triage and fast-track area, and that due to workload, 'they would not have been able to complete a secondary assessment until they were free to do so'.

60. Dr Safih advised that the six-hour delay in the initial assessment of Mr A was 'suboptimal and against standard recommendations', and that the documentation from the review was sparse. Dr Safih stated:

> 'The long delay to first set of observations is below [an acceptable] standard of practice … This is a significant (severe) departure from standard of practice, but once again this is entirely a systemic issue due to crowded and access blocked EDs, not in any way due to the involved nursing or medical staff.'

61. I agree. Mr A was an elderly man who had been transferred via ambulance to the hospital for a fall that had resulted in a head laceration. Due to a lack of available beds, he had to wait for four hours in the ED waiting area, where clearly he was distressed (as per Dr C's account), and then a further two and a half hours in the fast-track area before he was seen for initial observations, despite the triage category of 4, meaning that he should have been seen within an hour. This is unacceptable care of a patient with a head injury, irrespective of whether it was known at that time that he was on warfarin. I agree with Dr Safih's comments that this was a systemic issue due to the environment in the ED at that time, which meant that staff were unable to get to Mr A sooner to conduct his initial observations. I am very critical of Health NZ in this regard.

Missed opportunities to identify Mr A's warfarin therapy

62. As discussed in paragraphs 47–54 above, I am critical that Health NZ allowed a situation in which Mr A's yellow envelope was not accessible to key clinical staff involved in his care. This meant that the most accessible source of information that contained details of his warfarin therapy was not available. However, in my view, there were several other missed opportunities for staff to identify that Mr A was on warfarin at the time of his presentation in ED. Some of these missed opportunities were the responsibility of key staff, including that Dr C or the nursing staff could have read the ambulance notes or called the care home to gather more information. Dr Safih also advised that in his view, the triage nurse could have

asked ambulance staff directly whether Mr A was on anticoagulant medication. Dr Safih considered that these omissions represented a moderate departure from accepted standards.

63. Although these missed opportunities may represent individual failings, I consider that they are a result of failings at a systemic level, given that there were failings by different members of staff to undertake these important actions.

64. I am concerned that several Health NZ staff failed to identify that Mr A was on warfarin, and that this omission affected decisions about the care he received.

Conclusion

65. Right 4(1) of the Code of Health and Disability Services Consumers' Rights (the Code) provides that every consumer has the right to have services provided with reasonable care and skill. In my view, Health NZ failed to provide an appropriate standard of care to Mr A in the following respects:

- Health NZ did not have a clear or well understood process in place for ambulance staff to hand over the yellow envelope when there were no available beds in the ED, resulting in Mr A's yellow envelope being misplaced.
- Mr A was not assessed for initial observations until approximately six hours after his arrival in the ED, due to overcrowding and a lack of staffing.
- Several clinicians in the ED failed to identify that Mr A was on warfarin.

66. I consider that Health NZ was responsible at a service level for its system and communication breakdowns, and therefore I find Health NZ in breach of Right 4(1) of the Code for failing to provide Mr A with an appropriate standard of care.

Opinion: Dr C — breach

Introduction

67. Dr C was responsible for Mr A's care on Days 1–2. Dr C said that she first noticed Mr A at 2.00am in the waiting room as he appeared distressed and complained about being too hot. Dr C took Mr A to the 'fast-track area' as it was quieter, and he would be more visible to staff.

68. It is important to note at the outset that due to an administrative error (discussed above), the yellow envelope was not available to clinical staff, which meant that Dr C was unaware of Mr A's warfarin therapy.

69. On review of all the information gathered and the independent clinical advice from emergency physician Dr Safih (which Dr C was given an opportunity to comment on), I commenced a formal investigation into the care provided to Mr A by Dr C.

Failure to conduct head CT scan

70. Dr C assessed Mr A and documented that he had a regular radial pulse, was well perfused peripherally, with no spinal tenderness, and had normal sensation and power to his limbs. She also noted that he was not understanding assessment instructions, and that he was 'slow and shaky' but had normal coordination of his upper limbs. Dr C documented that Mr A was not on anticoagulation medication and that his cognitive function was likely at baseline. Mr A's head wound was sutured, and the plan was to observe him with an aim to discharge him. Dr C told HDC that as Mr A was felt likely to be at his baseline, the care home accepted him for transfer home on Day 2.

71. Dr C said that had she known that Mr A was on warfarin, she would have conducted a head CT scan.

72. Dr Safih advised that irrespective of whether Mr A was on warfarin, his age, fragility, confusion, plus the head injury (a fall with an obvious significant scalp laceration) put him at high risk for intracranial injury and was enough to warrant a CT scan (in line with the Canadian Head CT Rules). Dr Safih advised:

> 'The fact that he did appear to be confused and his baseline cognitive level was not clearly known was a further indication. Therefore a CT scan should have been done regardless of whether or not [Mr A] was thought to be on anticoagulants.'

73. The Canadian Head CT Rules state that patients with minor head injuries should receive a CT scan if one or more of a set of criteria are met, including if a patient is aged 65 years or older. Dr Safih said that it would be reasonable for a stable patient to be admitted overnight, and then undergo a CT in the morning, provided it was felt that the result of the CT would not affect the patient's immediate management. He said that in this case, conducting a CT in the morning would have facilitated a safe discharge.

74. Dr C told HDC that at the time of the events, clinicians in Southland Hospital ED were discouraged from requesting CT scans overnight unless immediate management would change. Dr C said that it was not unusual to keep stable patients in overnight to have a CT scan done the following morning. She said that in light of this, it is possible that when she assessed Mr A, she felt that he could wait until the morning for a head CT, and 'by [the] time [she] was writing [her] notes [in the morning] … [she] was falsely reassured by his remaining stable on neurological observations and did not then request the head CT'. Dr C accepted that a head CT was indicated for Mr A, and she apologised for not arranging this prior to his discharge from hospital.

75. Dr Safih advised that assuming that Mr A was at his baseline without searching for corroborating evidence, not taking into account Mr A's age when considering the need for a head CT scan, and ultimately not undertaking a head CT scan, represents a moderate to severe departure from an accepted standard of care. I agree. As discussed above, irrespective of whether Mr A was on warfarin, he had met the threshold for a head CT given his age and injury, and I am critical that Dr C did not ensure that Mr A underwent a head CT scan before discharging him from hospital.

76. I acknowledge Dr C's comments that she discussed Mr A with the consultant after the morning handover, and that the consultant had agreed with the plan to discharge Mr A home without a head CT. During that discussion Dr C confirmed to the consultant her belief that Mr A was not on anticoagulants. This is discussed further below.

77. In my view, it was Dr C's responsibility as the registrar with ultimate responsibility for Mr A's care, to ensure that he received a head CT. I can find no evidence that this occurred. I accept Dr Safih's advice that not undertaking a head CT, as well as other factors in the care provided to Mr A, amount to a moderate to severe departure from an accepted standard of care. Accordingly, I remain critical of this aspect of Dr C's care.

Missed opportunities to identify Mr A's warfarin therapy

78. Dr C assessed Mr A sometime before 6.57am. She told the coroner that her initial assessment of Mr A was limited due to his cognitive impairment, and she found that there was no transfer letter (yellow envelope) from the care home, but that a medication dosette packet had been sent with Mr A. Dr C said that the dosette packet did not contain any anticoagulant medication, and she was unaware that Mr A was on warfarin. Dr C stated that it was her usual practice to review the ambulance transfer notes (which documented that warfarin was one of Mr A's usual medications), particularly when the patient was not able to tell her what had happened reliably (as with Mr A). She said that usually she would also review the transfer notes from the care home (noting that these were not available at the time) and digital medical records when these were available.

79. Dr C said that she presented Mr A's case at a Morbidity & Mortality meeting (M&M meeting) in September 2020 and noted that the ambulance patient report form stated that Mr A had been found on the floor in the doorway of his room. Dr C said that this 'suggests to [her] that at the time of presenting this presentation [she] recalled reading the ambulance notes on Day 1'. However, Dr C advised that she cannot be sure four years after the events, and it is possible that she read the ambulance notes but did not note the medications list.

80. Dr Safih noted that Dr C took a history from Mr A but found he was disoriented and 'confabulating' (making things up to fill gaps in his memory). Dr Safih advised that it is standard practice not to include warfarin in a dosette pack, as the daily dose varies according to blood test results. Dr Safih said that as Mr A could not give a reliable history, the acceptable standard of care would be to get a more accurate history from another source, and, as the yellow envelope had been misplaced, a telephone call to the care home may have been appropriate. However, Dr Safih said that as Mr A's medications were listed in the ambulance handover notes, Dr C should have read these notes, which would have informed her that Mr A was on warfarin. Dr Safih also advised that a list of current medications is available via an electronic portal, which shows a patient's prescribed and dispensed medications.

81. I have considered Dr C's account that she cannot recall whether she reviewed the notes, or whether she reviewed the notes and did not see the medication list. I also acknowledge that based on her presentation at the M&M meeting, she considers it possible that she did

review the notes on Day 1. In any event, it is my view that regardless of whether Dr C reviewed the notes, she did not identify that Mr A was on warfarin, a fact that was clearly documented in the ambulance transfer notes. Accordingly, I accept Dr Safih's advice that Dr C's failure to review the ambulance notes constitutes a mild departure from accepted standards. I also note that Dr Safih considered there to be a total of six missed opportunities to identify that Mr A was on warfarin. With regard to Dr C, Dr Safih said that Dr C could have read the ambulance notes, she could have called the care home, and she could have looked at the electronic system. Dr Safih advised that cumulatively, 'missing these opportunities [constitutes] a moderate departure from standard practice'. I accept this advice, while acknowledging that this criticism encompasses other missed opportunities that were not the sole responsibility of Dr C.

82. As the transfer letter from the care home was not available to Dr C, she should have taken further steps to confirm Mr A's current medication, particularly due to the associated risks when a patient on blood-thinning medication has suffered a head injury. A ready source of Mr A's medical history and medications was the ambulance transfer notes, and I am concerned that Dr C did not review the notes thoroughly and identify that Mr A was on warfarin. I am also concerned that she did not review the electronic system or attempt to contact the care home to confirm Mr A's medications, and that she recorded in the clinical notes that Mr A was not on anticoagulant medication when this had not been investigated or confirmed.

Conclusion

83. Right 4(1)[15] of the Code provides that every consumer has the right to have services provided with reasonable care and skill. Dr C was the clinician in charge of Mr A's care and did not identify that he was on warfarin. In addition, she did not ensure that a head CT scan was conducted prior to Mr A's discharge from hospital following his head injury. In my view, Dr C failed to provide services to Mr A with reasonable care and skill and, accordingly, breached Right 4(1) of the Code.

Changes made since events

Health NZ Southern

84. Health NZ Southern said that the Radiology Department at Southland Hospital has changed its rostering so that now there is always a medical imaging technologist (MIT) on site able to undertake CT scans.

85. Health NZ Southern said that since these events, it has increased the number of nurses on the night shift from five to seven, which 'has improved [Health NZ Southern's] ability to provide care to all [its] patients in the department, including those in the waiting room'.

[15] Right 4 of the Code stipulates that every consumer has the right to services of an appropriate standard. Right 4(1) provides that '[e]very consumer has the right to have services provided with reasonable care and skill'.

Dr C

86. Dr C said that she has reflected on this case and 'how the learnings have informed [her] practice over the last (nearly) four years'. She said that she now does the following in her current practice:

- She uses the Canadian CT Head Tool for the assessment and treatment of minor head injuries.
- She ensures that her notes are written contemporaneously when seeing patients.
- She exercises caution regarding medication reconciliation. She stated: 'I am now very aware that medications with variable doses for rest home patients are not stored in dosette packets.'
- She passes on her learnings from this case to trainees when reviewing their cases and during formal teaching sessions to ensure that elderly patients who have fallen have a head CT.
- She now includes stroke in the differential diagnosis for elderly patients presenting with a fall of unknown cause.
- She is more aware of the risks associated with cognitive overload and now takes steps to reduce her cognitive burden, such as reallocation or reprioritisation of tasks. She also passes on these tools to trainees.

Recommendations

Health NZ Southern

87. I recommend that Health NZ Southern:

a) Provide a written apology to Mr A's family for the failings identified in this report. This apology is to be provided to HDC for forwarding, within three weeks of the date of this report.

b) Create and document a standardised process for handling of the yellow envelope. This process is to include what to do when there are no beds available in the ED and is to be circulated to staff and EMTs from the ambulance service. Health NZ Southern is to provide this updated process to HDC within six months of the date of this report, with evidence that it has been circulated to the appropriate parties.

c) Use an anonymised version of this report to provide training to staff on the importance of identifying whether a patient is on warfarin when they have suffered a head injury, and steps that can be taken by staff when that information is not readily available. Health NZ Southern is to provide evidence of this training to HDC within three months of the date of this report.

Dr C

88. I acknowledge the changes that Dr C has already made to her practice as a result of these events. Accordingly, I recommend that Dr C provide a written apology to Mr A's family for

the failings identified in this report. The apology is to be provided to HDC, for forwarding, within three weeks of the date of this report.

Follow-up actions

89. A copy of this report with details identifying the parties removed, except Health NZ Southern, Southland Hospital, and the advisor on this case, will be sent to the Medical Council of New Zealand, and it will be advised of Dr C's name.

90. A copy of this report with details identifying the parties removed, except Health NZ Southern, Southland Hospital, and the advisor on this case, will be sent to Health NZ and placed on the Health and Disability Commissioner website, www.hdc.org.nz, for educational purposes.

Appendix A: Independent clinical advice to Commissioner

The following independent advice was obtained from Dr Shammem Safih, an emergency medicine physician:

'My name is Dr Shameem (Mohammed) Safih.

I'm a Fellow of the College of Emergency Medicine (1997) and I'm currently in practice as an emergency physician.

Ref: 21HDC02293

I've been instructed by the Health and Disability Commissioner to provide my opinion on the care provided by Te Whatu Ora Southern to [Mr A] (deceased) in [2020].

I've read the following documents:

1. Information from the Coroner dated 22 September 2021, including:

a) Statement from [a] (Te Whatu Ora Southern ED administrator)

b) Statement from [a] (Te Whatu Ora Southern ED administrator)

c) Statements from … Emergency Medical Technicians (EMTs)

d) Report from [general practitioner]

e) SDHB report from [consultant physician]

f) SDHB report from [Dr C] (ED registrar)

g) Letter to Coroner from [the care home]

h) Copy of transfer form template (yellow envelope)

i) Copy of [Mr A's] medimap medications

j) Copy of clinical/progress notes from [the care home]

k) Copy of ED clinical sheet

l) Ambulance handover report

Summary of event as given by the HDC office

At the time of these events, [Mr A] was a resident of [the care home]. It is of note that [Mr A] had dementia. On [Day 1], [Mr A] suffered an unwitnessed fall, resulting in a wound to the back of his head. He was transferred to Southland Hospital via ambulance. [The care home] said that a yellow envelope containing a copy of [Mr A's] medication chart and progress notes was handed over to [ambulance service] staff prior to [Mr A] being transferred to hospital.

[Ambulance service] EMTs corroborated that [care home] staff provided them with [Mr A's] paperwork in an envelope, and that on arrival at Southland Hospital, one of them

handed the envelope to the "person working behind the glass screen in the reception area". Southland Hospital Emergency Department (ED) registrar [Dr C] said that [Mr A] arrived in ED without any transfer documentation from [the care home], and that only a dosette[1] of medication was sent with him.

[Dr C] said that in this case, the medication dosette packet from the rest home was used as a sole source of medication reconciliation. She said that warfarin, and other medications with potentially variable dosing are not included in these packets. As [Mr A] had dementia, staff were unable to get information directly from him regarding what medication he was taking at the time.

ED administrators at Southland Hospital said that they had no recollection of the events on [Day 1]. They said that the normal process for receiving paperwork from the ambulance staff is that the staff give the paperwork and any relevant documentation to the nursing staff, or it goes directly into the patient's bed number (cubby hole) at the nursing station. It is of note that there was no bed available in ED, so ambulance staff said that they were instructed to take [Mr A] to the waiting room.

At the time of the events, [Mr A] was receiving warfarin therapy. However, as the yellow envelope was not available to the staff in ED, they were not aware of this at the time of his assessment on [Day 1] and as such, a CT head was not conducted as part of the examinations. [Dr C] said that had she been aware of [Mr A's] warfarin therapy, her usual practice would have been to conduct a CT scan of his brain prior to discharge.

Following assessment in the ED, [Mr A] was discharged back to the care home on [Day 2]. On [Day 8], [Mr A] was noted to have a reduced level of consciousness by rest home staff, and he was returned to Southland Hospital. A CT scan was performed, and an intracranial haemorrhage was noted. [Mr A] was admitted under General Medicine for comfort cares. Sadly, [Mr A] passed away as a result of the brain haemorrhage.

Expert advice requested

I've been asked to review the documentation provided and advise whether I consider the care provided to [Mr A] by Te Whatu Ora Southern was reasonable in the circumstances, and why. The Health and Disability commissioner has asked me to specifically comment on:

1. The usual practice/protocol for handing over medication envelopes between ambulance staff and ED staff when no beds are available in the department, in particular patients arriving from rest homes. I've been asked to advise, based on the information and different accounts available, whether the appropriate steps were followed by ED staff in this case.

2. Whether the care provided to [Mr A] in the ED on [Days 1 and 2] was appropriate in the circumstances.

3. Whether the care provided to [Mr A] by [Dr C] was appropriate in the circumstances, including whether, based on the clinical information available at that time, she should have ordered a head CT scan.

4. Whether I consider that there were any missed opportunities by ED staff to identify that [Mr A] was on warfarin therapy.

5. Any other matters in this case that warrant comment.

For each question, please advise:

a. What is the standard of care/accepted practice?

b. If there has been a departure from the standard of care or accepted practice, how significant a departure (mild, moderate, or severe) do you consider this to be?

c. How would it be viewed by your peers?

d. Recommendations for improvement that may help to prevent a similar occurrence in future.

After having read the information my advice and comments are as follows:

The usual practice/protocol for handing over medication envelopes between ambulance staff and ED staff when no beds are available in the department, in particular patients arriving from rest homes. Rest homes frequently refer patients to hospital. The patients are transported to the hospital by ambulance. The first handover occurs between the RH staff (doctor or nurse or other health care provider) and the ambulance officer at the RH when the ambulance picks the patient up. The first assessment after handover is done by the ambulance staff. The ambulance officers have a very well structured template in which they put appropriate times, clinical problems, their findings, their initial treatment of the patient and relevant though brief medical history, including current medications.

This information is later handed over to the triage nurse verbally, and then entered electronically on the electronic medical record. As part of the referral process a doctor or nurse practitioner may have called the appropriate consultant in the hospital (Emergency Medicine specialist or a registrar or consultant of the relevant speciality) but this is not common and did not occur in this case.

The RH staff provide a set of documents that summarises their concern, the problem they are referring the patient for, the patient's background — which usually includes a list of current and past medical problems, an assessment of the cognitive and physical functionality, current medications, contact numbers for the GP, the family or next of kin or POA, allergies and a resuscitation status and or the advanced care plan. This information is critical to the acute assessment and management of the patient in the

hospital. This is especially so as the rest home patient is often unable to provide the information due to illness, some form of incapacitation or cognitive impairment.

Upon arrival at the ED ambulance officers hand the patient over to the ED Triage nurse. When they are unable to unload the ambulance because there is no space in the ED they have to park and look after their patients in the back of the ambulance in the ambulance bay (known as ambulance ramping or delayed (ambulance) offload) until such a time as a space becomes available. An undesirable outcome of access block is delayed care, and often inappropriate placement of the patient in the ED such as in a corridor space, or in the waiting room when the patient should be in a monitored cubicle. The consequence of this can be suboptimal care and adverse clinical outcome for the patient.

In this case [Mr A] was placed in the waiting room, which for [a person in their eighties] with a head injury requiring close observation is not an ideal place. As stated above the ambulance officers usually hand the RH documentation over to the triage nurse in the ED. A variation of practice could be to hand the notes over to a receptionist. Whichever the case the notes then accompany the new chart created for the acute episode of care. These notes (if they were provided) are then accessible to the doctor providing care. Other clinical information may also be available from electronic health records from a previous visit to the hospital, and sometimes hard copies of clinical notes from previous visits. A list of current medications is also available via an electronic portal that allows medications prescribed by the GP and dispensed by community pharmacists to be seen by the caring doctor.

The question of whether appropriate steps were followed in [Mr A's] case

[Mr A] went through the ED process of Handover from the ambulance Triage Placement in ED waiting room

Nursing assessment

Observations Assessment by a doctor

Investigations Management

Disposition, which in this case was discharge back to the rest home

Advice given for follow up

With regards to each of these steps

Handover by the ambulance at the hospital

This would be verbal with the triage nurse.

There is a brief record by the triage of presumably what the ambulance officers would have told her, under "presenting problem".

The ambulance officers state they handed the rest home notes to someone behind the counter. This is certainly "usual practice" but in this instance cannot be fully corroborated. I can't determine if the handover occurred across a desk or across the patient in the ambulance reception area.

If it had occurred across the patient the ambulance staff would usually hand the notes over to the nurse at that time.

The ambulance officer gave the history.

Pertinent to the fall and head injury would be whether the patient was on anticoagulants — this will be a commonly asked question.

The ambulance officers have recorded the list of drugs [Mr A] was on.

They have recorded that [Mr A] was on Coumadin, which is Warfarin, a blood thinner.

They have also recorded that he had diabetes and a heart murmur.

The information about warfarin is not recorded in the triage notes.

I cannot comment on whether it was verbalised to the triage nurse or not.

Triage

A triage category of 4 was assigned at 2220 on [Day 1]. This implies the patient's status was such that he did not need to be seen immediately or within 10 or 30 minutes but could wait for an hour.

No vital signs were taken at triage.

Vital signs may have been provided by the ambulance at hand over but not recorded by the triage nurse. This step is within standard of practice.

Placement in ED

[Mr A] was placed in the waiting room. The reason for this was there was no other space, and he did not appear distressed to the triage nurse. The placement of [someone in their eighties] with a head injury in the waiting room, who would require close observations, is not ideal. When there is no other option then this does occur. Though not desirable it is a frequent practice in overloaded EDs. The onus of developing strategies and providing enough resources to avoid hospital and ED access block, ED overcrowding, and meeting surges in demand falls on Te Whatu Ora and ultimately the government, and the immediate governing body of the hospital, as well as senior clinicians and managers in the hospital. Overcrowding and access block have not been resolved in any hospital in Australasia. Placement of [Mr A] in the waiting room is not recommended practice. It would be a departure from optimal practice but in no way the fault of any of the ED nursing or medical staff. So whilst this could be described in

this case as a mild departure from the expected standard of care it would have been due to factors entirely beyond the control of the nursing and medical staff on duty at that time. As stated earlier this is now a common practice in many EDs throughout New Zealand.

Secondary nurse assessment

This occurred 6 hours after arrival at 0420 on [Day 2]; this delay is suboptimal and against standard recommendations. Documentation is sparse. In the body of the clinical notes there is an entry by [a nurse]. For medications of note the nursing entry says "see TF notes". TF notes refers to transfer notes. This suggests the nurse was aware there were transfer notes from the RH (that appeared to have gone missing). A set of vital signs are taken at 0420. These are normal. The long delay to first set of observations is below standard of practice. This is a significant (severe) departure from standard of practice, but once again this is entirely a systemic issue due to crowded and access blocked EDs, not in any way due to the involved nursing and medical staff.

[Dr C] saw [Mr A] at 0211 hours. She took a history from [Mr A]. She found he was disoriented and "confabulating" (i.e. making things up to fill gaps in his memory, probably due to the dementia he suffered), and denied any injury to the head, when there was clear evidence of head injury. This means that a history from [Mr A] was unreliable. [Dr C] did not record a medication history. She did not record co-morbidities. She did a good physical examination.

She found [Mr A] did not understand instructions that would allow a neurologic assessment. She found a full thickness 10 cm laceration on the scalp toward the right side of the back of the head. She sutured this appropriately. She charted paracetamol, and metformin. She arranged for a period of neuro observations prior to discharge. With regard to the head injury and anticoagulation she stated [Mr A] was not on anticoagulants. She also assumed without searching for corroborative evidence that his cognitive function was likely his baseline. She arranged for [Mr A] to be discharged after a period of observation. Discharge instructions were a post head injury care advice sheet. She chose not to do a CT given that [Mr A] was not on an anticoagulant. The most critical decision in [Mr A's] case was not doing a CT on the basis of the mistaken knowledge that he was not on an anticoagulant.

There are several things incorrect here. The blister pack was examined and it did not have warfarin in the pack so an assumption was made that [Mr A] was not on warfarin. This is understandable. It is standard practice not to include Warfarin in a blister pack as the daily dose varies according to blood test results (INR). [Mr A] could not give a reliable history as he appeared to be slightly confused. In this circumstance standard of care would be to get a more accurate history from another source. Since the RH notes had been misplaced, a phone call to the RH staff may have been appropriate. The history was also written in the ambulance handover notes. [Dr C] should have read the ambulance notes. This would have informed her that [Mr A] in fact was on warfarin. [Mr A] did not necessarily need to be on an anticoagulant to warrant a CT brain.

His age, frailty, confusion plus the head injury (fall and obvious significant scalp laceration) put him at a high risk for intracranial injury, and was therefore enough to warrant a CT Scan. The fact that he did appear to be confused and his baseline cognitive level was not clearly known was a further indication. Therefore a CT scan should have been done regardless of whether or not [Mr A] was thought to be on anticoagulants. I consider [Dr C] not reading the ambulance notes a mild departure from standard of practice. Standard of care would have been to obtain a CT brain regardless of whether he was on warfarin or not (Ref Canadian Head CT Rules). I consider not doing a CT scan a moderate departure from standard of care.

Whether the care provided to [Mr A] in the ED on [Days 1–2] was appropriate in the circumstances.

Appropriate care would have meant the placing of [someone in their eighties] in a comfortable bed, doing early and regular observations, performing timely assessments and obtaining a CT scan. In all three aspects there has been a departure from standard of care. Inappropriate placement is a mild departure which was a direct result of lack of space, delaying observations by 6 hours is a severe departure (both of these are systemic issues) and not obtaining a CT scan is a moderate departure from accepted standard of care (clinical decision).

There are CT scan rules which serve as guidelines for when to do a CT scan of the brain when there has been an injury to the head (Canadian Head CT rules, New Orleans Criteria, and Nexus II criteria). These are well validated. Old age is an independent risk factor for significant intracranial injury. Older age is an explicit criteria for obtaining CT scan in minor head injury. The Canadian CT Scan rules apply to patients with a Glasgow Coma Scale (GCS) of 13 to 15 (which more or less refers to patients who are only from being slightly drowsy or confused to being fully awake and alert) and at least one of the following:

Loss of consciousness.

Amnesia to the head injury event.

Witnessed disorientation.

Exclusion criteria: Age <16 years. Blood thinners. Seizure after injury.

Age over 65 on its own is considered to put the older patient at a medium risk for significant head injury.

Ref 1. UpTodate, Geriatric trauma, Head Injury.

2. MedCalc

Whether the care provided to [Mr A] by [Dr C] was appropriate in the circumstances, including whether, based on the clinical information available at that time, she should have ordered a head CT scan.

[Dr C] got [Mr A] out of the waiting room, requested observations to be done, examined him, and sutured his large scalp laceration. This was very well done, and meets the standard of care.

He was conscious but confused. He was [in his eighties]. Assuming his state was the normal baseline without searching for corroborative evidence, ignoring his age in the consideration of a CT scan, and not obtaining a CT scan represents a moderate to severe departure from standard of care.

4. Whether I consider that there were any missed opportunities by ED staff to identify that [Mr A] was on warfarin therapy.

As discussed above, yes.

The ambulance could have included this in their verbal handover.

The triage nurse could have specifically asked the ambulance staff whether [Mr A] was on anticoagulants.

[Dr C] could have read the ambulance notes.

[Dr C] could have rung the rest home nurse to find out about medications, co-morbidity and the usual cognitive level (rather than making an assumption) or looked at previous electronic notes including looking at the GP portal for medication (if available).

So I believe there were about 6 missed opportunities.

Missing these opportunities are a moderate departure from standard practice.

Any other matters in this case that warrant comment

The elderly are often under triaged and their trauma and illness underestimated because of change in physiology and anatomy that affect the clinical manifestations of trauma and illness. Many clinical decisions for investigation and intervention on the elderly from the rest home are influenced by the usual quality of life of the resident. Given [Mr A's] level of functioning and situation a CT scan was indicated.

Recommendation for the future to prevent a similar occurrence

I recommend the RMOs familiarise themselves with the CT Head guidelines and these are followed. Given the ED was very busy and full causing delay to care and inappropriate placement of [Mr A] I suggest that the hospital addresses resources (staffing and space), and hospital access block.

Shameem Safih FACEM 19th December 2023'

The following further advice was received from Dr Safih on 17 April 2024:

> '[Dr C] has written a very rational response and acknowledged and agreed with the comments and recommendations I made.
>
> She says that she did not do a CT scan because
>
> 1. There was no deterioration in the status of [Mr A] after several hours in the ED
> 2. She was not aware he was on warfarin
> 3. CT was a restricted service where they had to call technicians in from home, and get scans reported remotely, and CT scans would only be done if it was going to change immediate management.
>
> At the same time she acknowledges that a CT scan was indicated (according to the Canadian CT scan guidelines) regardless of the period of observation in ED.
>
> Because of restricted services it is acceptable to admit a stable patient overnight and perform a CT prior to discharge in the morning.
>
> [Mr A] had already been in ED for about 6 hours prior to being seen so it would have been reasonable to wait till the morning.
>
> The third point is completely understandable as well. CT remains a controlled and limited resource in some hospitals.
>
> I also agree that one of the main reasons for doing an urgent CT brain is to influence immediate management.
>
> A negative CT done in the morning would have facilitated safe discharge.
>
> If a bleed had been found on a scan that night or prior to discharge [Mr A] (who was a rest home resident with a degree of dementia) may not have been a candidate for operative management.
>
> However in the event of a bleed, the least one would have done is reversed the effects of Warfarin to reduce further bleeding. This may not have made a difference to the outcome.
>
> The CT scan also would have given a diagnosis and allowed for a meaningful discussion with the family or power of attorney regarding further management.
>
> It may be that further intervention would not have been indicated or would have been futile and a ceiling of care would have been agreed upon.
>
> These thoughts are fair but need to be documented.'