

Man dies after delays in escalation of vascular symptoms in hospital

Introduction

1. The Health and Disability Commissioner (HDC) received a referral from the Coroner's Office raising concerns about the care provided to Mr A at Dunedin Hospital (operated by Health New Zealand | Te Whatu Ora Southern (Health NZ)) between 18 and 25 March 2021. Having considered all the information obtained during the investigation, I find Health NZ in breach of Right 4(1)¹ of the Code of Health and Disability Services Consumers' Rights (the Code) for the failure to arrange timely vascular review for symptoms of acute limb ischaemia (ALI; a medical emergency involving a sudden and severe decrease in blood flow that threatens limb viability).
2. Health NZ was invited to comment on the provisional decision and accepted that it breached the Code. Health NZ acknowledged that it did not meet the standard of care Mr A was entitled to receive and said it was committed to learning from this event.

Recommendations

3. Further to changes made since the events (outlined at the end of this report), I recommend that Health NZ:
 - a) Provide a written apology to Mr A's whānau for the breach of the Code found in this investigation. The written apology is to be sent to HDC within three weeks of this report for forwarding to Mr A's brother.
 - b) Provide HDC with a copy of the documented process/requirements for structured handovers/reviews during weekends, with an outline of whether Health NZ considers that the changes made address the issues identified with Mr A's care and whether any further changes or improvements have been/will be made. This is to be provided to HDC within three months of the date of this report.
 - c) Provide HDC with a copy of the documented process/requirements for inter-service referrals, with an outline of whether Health NZ considers that the changes made address the issues identified with Mr A's care and whether any further changes or improvements have been/will be made. To align with related ongoing quality improvement initiatives, this information is to be provided to HDC by 30 January 2027.
 - d) Make best endeavours to implement the Speaking up for Safety programme for staff at Dunedin Hospital or a similar programme that encourages and guides staff at all levels to speak up for patient safety. Evidence of implementation, or actions taken toward this, is to be provided to HDC within five months of this report.

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

Names have been removed (except Health New Zealand | Te Whatu Ora Southern) to protect privacy. Identifying letters are assigned in alphabetical order and bear no relationship to the person's actual name.

- e) Provide evidence, such as training material and staff attendance records, of the training on basic vascular assessments occurring for junior doctors and nursing staff. Evidence is to be provided to HDC within three months of this report.

Background

4. On 18 March 2021, Mr A presented to Dunedin Hospital with an elbow injury after a fall at home. He had an extensive medical history, including vascular surgery, cardiac surgery, diabetes, and peripheral vascular disease (PVD). Mr A underwent initial surgery on his elbow and remained in hospital on the orthopaedic ward to await further surgery.
5. On the morning of 19 March 2021, Dr B, orthopaedic house officer (HO), reviewed Mr A for concerns of left leg numbness and pain in the sole of the left foot. After examination and discussion with Mr A, Dr B noted that Mr A was known to the vascular service with a history of PVD and peripheral neuropathy (damage to peripheral nerves) and that Mr A reported that the leg numbness and foot pain were longstanding and 'basically at baseline', although the pain was 'slightly worse since [the] fall.' Dr B concluded, 'this is likely a chronic issue unlikely related to [the] fall.'
6. That afternoon, Mr A was seen by Dr C, orthopaedic senior medical officer (SMO), with Dr B in attendance. A physiotherapist had alerted Dr C that Mr A was unable to stand. Dr C recalls that, after examining Mr A's legs, he felt that the left leg was acutely ischaemic and required review by the vascular service. However, Dr B (who was documenting for Dr C) did not document Dr C's suspicion of ALL. The documented plan, as related to the left leg numbness/pain, was for 'vascular consult about PVD.'
7. Dr B then discussed Mr A with a vascular registrar. This was a telephone consult, and there is no documentation of the information that Dr B provided to the vascular registrar. The vascular registrar declined to arrange a vascular review. Dr B documented, 'Due to no new acute issues, [vascular service] will not come [and] see. For [outpatient] referral unless things worsen/progress.'
8. The next three days (20–22 March 2021) covered a long weekend because Monday 22 March was a public holiday. On 20 March, nursing staff documented that Mr A's left leg was 'cool, pale and numb' but that this was not new for him. Over 21–22 March, nursing staff documented progressively worsening concerns about Mr A's left leg.
9. On 21 March, nursing staff documented that Mr A was experiencing spasms and pain in his left leg and that his left leg was 'lighter and paler than his right leg – not like this yesterday.' Nursing staff arranged review by the on-call HO, who concluded that vascular review was not indicated at that stage as the vascular service would only see Mr A if his symptoms were 'worsening.' On 22 March, nursing staff documented that Mr A was unable to move his left leg and was experiencing severe pain requiring increased pain medication (intravenous fentanyl). The vascular service was not contacted.
10. On 23 March 2021, during the orthopaedic ward round, Mr A had no movement or sensation in his left leg. A vascular review was arranged, and Mr A was diagnosed with ALL, requiring amputation of his left leg. Mr A underwent surgery for an above-knee amputation that afternoon. Sadly, after surgery, Mr A experienced further complications and died in hospital a short time later. I offer my sincere condolences to Mr A's whānau for their loss.

Key issues

11. Information was obtained from Health NZ, including a Clinical Incident Report (CIR), a response to HDC, and Mr A's clinical records. HDC also received information from the Coroner, including expert medical advice. Review of this information identified the following issues.

Communication breakdown between staff

12. On Friday 19 March 2021, Dr C felt that Mr A's left leg was acutely ischaemic and required vascular review. However, when discussing Mr A's case with the vascular service, Dr B did not convey an acute concern or Dr C's expectation of vascular review. At some point, the concern changed from requiring review of a worsening ischaemic state needing vascular input to review of a patient with a stable ischaemic limb. This resulted in the vascular service declining to see Mr A as an inpatient unless things worsened/progressed.
13. Health NZ's CIR concluded that a vascular SMO review should have been arranged on 19 March 2021.

No vascular assessment

14. No initial basic vascular assessment was undertaken (eg, Ankle-Brachial Pressure Index (ABPI), which compares the blood pressure in each ankle with the blood pressure in the arms to assess for narrowing or blockage of the arteries in the legs). Therefore, no baseline measures of circulation, sensation, pain, or movement by which progressive changes could be measured were available.
15. On 21 March, an on-call HO reviewed Mr A, and the clinical plan included '[ABPI] if able.' There is no evidence that this was carried out. A nursing note on 22 March repeated the plan 'for [ABPI] if able' and noted that Mr A had a split cast on his left arm. Again, there is no evidence that an ABPI assessment was carried out.

'Directive' regarding vascular involvement

16. Dr B's documentation on 19 March 2021 stating that the vascular team would only conduct a review if Mr A deteriorated was subsequently interpreted as suggesting that the team was unwilling to see Mr A and became a 'directive' that was not challenged over the next three days.
17. Mr A's leg issue was assumed to be the continuation of a chronic condition rather than an acute-on-chronic event (ie, the abnormal was normalised). As Dr B did not document the information provided to the vascular registrar with the verbal referral, the weekend team had no reference of the clinical picture relayed at the time of referral, and, therefore, the basis on which it had been decided that the issues were not new or acute.

Handover

18. On the morning of Saturday 20 March 2021, an orthopaedic registrar reviewed Mr A. He noted Dr B's documentation about the vascular registrar telephone consult, but he did not examine Mr A's legs or follow up on how his symptoms had progressed. The orthopaedic registrar discussed Mr A's case with the orthopaedic SMO afterwards but did not discuss the vascular referral. The orthopaedic registrar then finished his shift without completing a handover of Mr A to the weekend team.

19. No formal orthopaedic review was scheduled for over the long weekend, so Mr A's next review by the orthopaedic team was expected to be on Tuesday 23 March 2021.

Escalation of patient changes

20. Despite nursing staff repeatedly documenting progressively worse symptoms and raising this as an acute change to the medical team, there was uncertainty about Mr A's baseline PVD status and no clear escalation pathway from surgical HO to vascular registrar. The wording on every patient's Early Warning Signs (EWS) observation chart states: 'Escalate Care for any patient you, they or their family are worried about, regardless of vital signs or EWS.' There is no evidence that the recorded nursing concerns about Mr A's deteriorating condition were escalated to registrar or SMO level.
21. On Sunday 21 March 2021, Mr A was seen by an on-call HO, to whom Mr A was not known. The on-call HO's clinical note states that the nursing staff felt the patient was at baseline pain and discomfort. This conflicts with the morning nurse's documented request for a review for his pain and new spasm and the afternoon nurse's documentation that his leg was lighter and paler than the day before. The on-call HO concluded that Mr A's symptoms were due to 'longstanding PVD.' The clinical plan included the note 'Not for vascular review at this stage as they will only see if worsening.'
22. The instruction to contact the vascular team if the condition was 'worse' added uncertainty. There were no instructions or plans about what would be considered 'worse' and need escalation.
23. Mr A was described as 'difficult' and 'non-compliant' on several occasions in the clinical records, but there was no consideration of this being suggestive of a deteriorating condition due to an ischaemic limb.
24. Expert medical advice to the Coroner identified delays in referring Mr A to vascular services on 21 and 22 March 2021. The advisor stated: '[O]n 21 and 22 March I believe there were indications that the circulation to [Mr A's] left leg was seriously compromised to the extent that the vascular service should have been called then.'

Decision: Health NZ – breach

25. Under Right 4(1) of the Code, Health NZ had a duty to ensure that services were provided to Mr A with reasonable care and skill.
26. Having reviewed all the available information, I consider that this did not occur. It is unacceptable that Mr A was not reviewed by the vascular service until four days after Dr C identified that his leg appeared acutely ischaemic.
27. I acknowledge that Mr A had a history of chronic PVD, which made assessment of his leg symptoms difficult. However, Dr C did consider the possibility of ALI on 19 March 2021, and nursing staff clearly recognised his deteriorating condition over the period 21–22 March 2021.
28. As previously described, the delay in escalation and diagnosis of Mr A's symptoms was a result of a series of failings involving multiple staff, including inadequate documentation and communication of SMO concerns, inadequate documentation of the vascular referral, no documented basic vascular assessment to determine a baseline by which progressive changes could be measured, no follow-up of Mr A's

symptoms by the orthopaedic registrar before the shift change to the weekend team, no written or verbal handover to the weekend team, a plan to escalate if symptoms were 'worse' without clear instruction of what 'worse' would be, and a lack of a clear escalation pathway from surgical HO to vascular registrar.

29. Although I consider that the individual staff carry some responsibility, in my view, Health NZ is ultimately responsible for this at a service level. Accordingly, I find Health NZ in breach of Right 4(1) of the Code for the failure to ensure timely vascular assessment and diagnosis of Mr A's ALI.

Changes made

30. Health NZ Southern made the following changes, as recommended in the CIR report:
- SMO discussions and directions must be recorded with a note in the patient's clinical file.
 - A structured handover/review is required for long weekends so that the care plans for all existing patients are clear to the on-call weekend team.
 - Inter-service referrals need to be documented using the internal referrals system so that both the request and response information are clearly documented.
 - Nursing team leaders and managers are empowered in the escalation process to ensure issues are raised to Senior Registrar or SMO level as appropriate for a given patient.
 - Junior doctors and appropriate nursing staff are required to undertake training in basic vascular assessments.

Distribution

31. A copy of this report with details identifying the parties removed, except Health New Zealand Southern, will be placed on the HDC website, www.hdc.org.nz, for educational purposes.

Dr Vanessa Caldwell

Deputy Health and Disability Commissioner