MidCentral District Health Board
ENT Registrar, Dr C

A Report by the
Deputy Health and Disability Commissioner

(Case 19HDC01675)

Health and Disability Commissioner
Te Toihau Hauora, Hauātanga

Contents

Executive summary

1. This report concerns the care provided to an elderly woman when she presented to Palmerston North Hospital Emergency Department in 2018. The woman had been transferred to hospital via ambulance after suffering a fall at home. The woman had a history of mental health issues and comorbidities, including cardiorespiratory issues, and became agitated. She was administered sedatives to manage her behaviour, but she went into cardiorespiratory arrest and, sadly, she died four days later of a hypoxic brain injury.

2. The report highlights the importance of ensuring that sedation is performed only in an appropriately monitored area by staff who are skilled in recognising any complications and are able to intervene in the event of such complications. It also highlights the importance of coordination of care across different teams, and of ensuring that staff are provided with adequate support in respect of the application of relevant hospital policies.

Findings

3. The Deputy Commissioner considered that the ED was over-stretched and under-resourced, and lacked a system to guide staff in the actions to take when an agitated patient presented to the ED. As a result, there were significant deficiencies in the care provided to the woman, including inadequate monitoring, and the Deputy Commissioner found MCDHB in breach of Right 4(1) of the Code. The Deputy Commissioner considered that the lack of a system for management of an agitated patient within the ED did not allow for co-operation among providers across different teams and specialties to ensure quality and continuity of services, in breach of Right 4(5) of the Code.

4. The Deputy Commissioner found a registrar in breach of Right 4(1) of the Code for prescribing lorazepam and midazolam to the woman without input from senior medical staff.

Recommendations

5. The Deputy Commissioner recommended that MCDHB use an anonymised copy of this report as a basis for staff training, focusing on the breaches of the Code identified, and disseminate the learning and changes made as a result of this case via MCDHB's existing forums for nursing and medical staff. The Deputy Commissioner also recommended that MCDHB provide a written apology to the woman's family, provide a copy of the finalised guideline on sedation of agitated patients in the ED, provide an update on the implementation of the four pre-fabricated pods approved for the ED, and provide an update on ED staffing levels, including the additional emergency medicine specialist positions. The Deputy Commissioner acknowledged the changes the registrar has made to his practice, and recommended that he provide a written apology to the family.

Names have been removed (except Palmerston North Hospital, MidCentral DHB and the experts who advised on this case) to protect privacy. Identifying letters are assigned in alphabetical order and bear no relationship to the person's actual name.

Complaint and investigation

6. The Health and Disability Commissioner (HDC) received a complaint from Ms B about the services provided to her late mother, Ms A, by MidCentral District Health Board (MCDHB) in 2018. The following issues were identified for investigation:

- *Whether MidCentral District Health Board provided Ms A with an appropriate standard of care in 2018.*
- *Whether Dr C provided Ms A with an appropriate standard of care on in 2018.*

7. This report is the opinion of Deputy Commissioner Carolyn Cooper, and is made in accordance with the power delegated to her by the Commissioner.

8. The parties directly involved in the investigation were:

Ms B	Complainant
MidCentral District Health Board	Provider
Dr C	Provider/ ENT registrar

9. Further information was received from:

Dr D	Emergency medicine specialist
Dr E	Emergency medicine specialist

10. Also mentioned in this report:

Dr F	Otolaryngologist
RN G	Registered nurse
RN H	Registered nurse
RN I	Registered nurse

11. Independent expert advice was obtained from Dr Chris Thomson, an otolaryngologist and head and neck surgeon (Appendix A), and Dr Martin Watts, an emergency medicine specialist (Appendix B).

Information gathered during investigation

Introduction

12. Ms A was taken by ambulance to Palmerston North Hospital with a fractured nose after a fall at home. She was in her seventies at the time and had a history of psychiatric illness,

including schizoaffective/bipolar disorder, for which she was on regular antipsychotic medication.[1] Ms A also had a history of COPD,[2] a respiratory disease.

13. While at the hospital Emergency Department (ED), Ms A became agitated and was administered sedatives to manage her behaviour. Ms A suffered a cardiorespiratory arrest while in ED, and was resuscitated. Following surgery to control bleeding from her fractured nose, Ms A was transferred to the Intensive Care Unit (ICU). Sadly, it was determined that she had sustained hypoxic brain injury during the cardiorespiratory arrest, and Ms A's life support was withdrawn on Day 4[3].

14. The table below sets out the chronology of events from Day 1 to Day 4 in more detail:

Chronology of events according to clinical records

Day 1 3.17am	Ambulance staff arrive at Ms A's home following an emergency call. Ms A has suffered a fall, and staff find her lying in a pool of blood. Following assessment, the impression of staff is a nose fracture and epistaxis.[4] Ms A is transferred to Palmerston North Hospital ED by ambulance.
4.15am	Ambulance arrives at ED and transfers care to hospital staff. A nurse completes initial triage assessment, and notes that Ms A is not actively bleeding from her nose.
4.40am	The ambulance service contacts Ms A's daughter, Ms B, to notify her that Ms A is in ED.
5.50am	A nurse completes nursing assessment, including vital signs, and notes: "Daughter now in attendance, Patient sleeping, easily rousable, and irritable to investigations. Nil active bleeding but large clots/blood in right nostril." Early warning score is documented as being 0.[5]
6.57am	An ED senior house officer reviews Ms A and documents that she became distressed and combative during examination. The SHO's impression is: "[A]ltered behaviour and probably nasal [fracture] post fall. Care handed over to ED Senior Medical Officer (SMO) Dr […]."
8.03–8.15am	CT scan completed. At 8.15am, Dr E reviews the CT scan, which reports a fractured nose and septum,[6] but no acute head injury. Dr E notes: "[O]ngoing bleeding — oozing, behaviour made awkward by background

[1] Haloperidol and olanzapine.
[2] Chronic obstructive pulmonary disease.
[3] Relevant dates are referred to as Days 1-4 to protect privacy.
[4] A nosebleed.
[5] The Early warning score (EWS) is a tool used to identify patients at risk of deteriorating. A score of zero indicates normal vital signs.
[6] The cartilage in the nose that separates the nostrils.

	mental health issues." The plan is for Ms A's regular medication of haloperidol and olanzapine to be given and for an Ear Nose and Throat (ENT) doctor to review Ms A's nose.
8.45am	Intravenous (IV) haloperidol 5mg administered.
9–9.10am	ENT registrar Dr C is asked to review Ms A regarding her fall-related nose bleed. Ms A is moved from ED temporarily for the CT scan. When back in ED, Ms A's nose begins to bleed when a clot becomes dislodged, and she refuses to have her observations taken and refuses nursing assistance/instructions. The nose bleed cannot be controlled in ED. Dr C documents: "Patient acutely agitated, alert, no respiratory distress. Right nostril clots in opening nares,[7] swelling with fresh bleeding. Unable to examine." He notes the plan to discuss Ms A with ENT SMO Dr F and the acute mental health team. Olanzapine 10mg administered orally at 9.10am.
9.30am	Dr C discusses Ms A with Dr F. Dr C informs ED SMO Dr E and Ms B of the outcome of the discussion, which is that Ms A will likely need an operation to control her bleeding. The Acute Mental Health Service is contacted to carry out a psychiatric review.
10.30am	Two nurses from the Acute Mental Health Service (RN G and RN H) arrive in ED following the request for a psychiatric review. They tell Dr C that Ms A's presenting behaviours relate to the nose injury/pain, not her mental health. Ms B says that her mother is not complaining of any pain, but is scared. RN G's clinical notes (time not noted) document that Ms A "normally presents with an irritable edge and is argumentative[8]". Lorazepam[9] 1mg administered orally.
10.40am	Midazolam[10] 2.5mg administered intravenously to assist with managing Ms A's behaviour. The midazolam and previously administered lorazepam had been prescribed by Dr C. ED SMO Dr E is unaware that these additional medications have been given. Nursing notes state that Ms A remains agitated despite the midazolam. Around this time, RN I contacts Dr F for urgent review, and she recalls that no further advice or instructions were given by Dr F following his review.

[7] The nostrils.
[8] Ms A was known to the mental health service.
[9] A benzodiazepine medication that can be used to manage agitation.
[10] Sedation medication.

	However, Dr F recalls that he advised that Ms A be given supplemental oxygen and be sat up. Ms B, RN I, and Dr C all recall that RN H suggested that a further 2.5mg IV midazolam be given, and RN H recalls advising Dr C to contact the duty anaesthetist for dosage guidelines.
11.06am	A second dose of midazolam 2.5mg is administered intravenously (according to clinical notes), and it appears that Ms A's response to the medication is not monitored immediately afterwards, as both nurses have been called away. Ms B recalls that the two midazolam injections were given closer in time.
11.15am	RN I records that she has contacted the ED nursing shift coordinator, RN Sonya Rider, as Ms A's condition has been deteriorating. RN Rider reviews Ms A and advises to transfer her to the acuity area of the ED.
11.20am	Ms A's oxygen saturation decreases to 70%, and RN I asks Dr C to review Ms A. She is treated with supplemental oxygen. Her early warning score is now 8.[11]
11.30am onwards	Ms A is transferred to the ED acuity area, and shortly afterwards she is found unresponsive with no pulse. The emergency call bell is activated and CPR is performed successfully. Subsequently, Ms A is intubated and taken to theatre, where Dr F performs surgery under anaesthetic to stop the bleeding from Ms A's nose. Dr F's operation record notes that it has not been possible to treat the epistaxis conservatively "due to psychiatric intercurrent illness and lack of co-operation".
1.40pm	Following surgery, Ms A is transferred to ICU, where she is placed on life support. She remains there for the remainder of her admission.
Day 4	The decision is made to withdraw life-preserving measures. Sadly, Ms A passes away at 5.55pm. The death certificate records the cause of death as hypoxic encephalopathy.[12]

Information provided by MCDHB

15. MCDHB carried out a Serious Adverse Event Review into the care provided to Ms A. The review identified the root cause of Ms A's adverse outcome as being that sedation for the management of behavioural disturbances in ED was not under the control of the ED consultant. It noted that sedation, when under the control of the ED consultant, ensures

[11] An EWS of 8 indicates that a patient is unwell and may be deteriorating rapidly.
[12] Caused by a lack of oxygen to the brain.

that the correct environment, staff, equipment, and monitoring are in place prior to the administration of any sedative in the ED. The report found three further contributing factors:

1. Regarding the combination, route of administration, and the timing of antipsychotic and benzodiazepine medicines in ED, it was found that there appears to have been an "accumulative peak" of the medications Ms A was given that morning. The report notes that presumably Ms A had had her normal evening medications[13] prior to presenting to ED, and the additional drugs prescribed (further haloperidol, olanzapine, lorazepam, and midazolam) and the accumulative effect of the drugs, increased her risk of respiratory depression.[14]
2. There was no escalation by the ENT registrar to a senior medical officer (SMO), to advise on the use and dosage of midazolam.
3. Ms A was placed in an unmonitored bed space with no planned one-to-one nursing during and following the administration of IV midazolam. It was not appropriate to administer midazolam in a space with no permanent monitoring equipment and no direct line of sight to the main ED central station. Furthermore, there is no documentation to indicate that Ms A was due to be moved to a more suitable location in ED, or that reflects a nursing ratio of one-to-one for Ms A during the administration and post- administration period of midazolam.

Further findings

16. The review also noted the following:

- During interviews, it was identified that some staff are reluctant to call more senior staff too frequently.
- The ED has ongoing challenges with the space and design of current facilities, which are a risk for patient safety.
- It is accepted that ED medical staff take clinical responsibility while a patient is in the physical ED environment. If a patient has a consultation from another specialty area while in ED, generally either they are accepted by the specialty area or referred back to ED — or "this is where there can be confusion of clinical responsibility for the patient".
- There are several gaps in the clinical documentation, and the quality of information to reflect the care provided, is, in parts, below the expected standard.

17. MCDHB acknowledged that there were facility and workplace resource constraints within the ED at the time of these events, and advised that a number of actions have been completed or are underway to improve these.

[13] Haloperidol 5mg orally and olanzapine 10mg orally.
[14] Hypoventilation or respiratory depression occurs when breathing is slow and ineffective, resulting in higher levels of carbon dioxide and too little oxygen.

Information provided by Dr C

18. Dr C was a junior ENT registrar at Palmerston North Hospital at the time of the events. He was asked to review Ms A and provide an ENT perspective on how her persistent nose bleeding could be controlled. Dr C told HDC that Ms A was distressed and agitated at the time he reviewed her, and was shouting, trying to get out of bed, and lashing out physically. Dr C stated that he was unable to undertake a clinical assessment (including an endoscopic assessment[15]) as a result.

19. Dr C told HDC that his assessment was that Ms A required surgical intervention to stop the bleeding, and the consultant on duty shared that opinion. A psychiatric review was undertaken by a clinical nurse specialist (CNS), who had been involved with Ms A's psychiatric care previously. Dr C advised that the CNS recommended that he prescribe lorazepam[16] and intravenous midazolam[17] to settle Ms A's agitation, but that these were "unfamiliar medications which [he] does not usually prescribe".

20. Dr C told HDC that he was unable to locate an ED consultant to discuss this at the time, and asked the ED nurse to continue to observe Ms A and contact him if her condition deteriorated. Dr C stated that he was of the understanding that the CNS would stay and observe Ms A following the first dose of midazolam. He said that he was not aware of any MCDHB guideline on the use of sedation in the ED.

21. Dr C stated that he did not consider that Ms A needed to be in a resuscitation bay, as she was not showing signs of a lower level of consciousness or hypoxia.[18] Dr C said that he attended to review Ms A immediately when her oxygen saturation levels dropped below 85% after receiving the second dose of midazolam, and at that time he decided to give supplemental oxygen via a mask, and to sit her up to help with oxygenation to minimise the risk of hypoxia. He also asked the consultant anaesthetist on duty to attend urgently.

22. Dr C told HDC that Ms A's case and outcome has had a significant effect on him and his practices, and expressed his sincere condolences to Ms A's family. Dr C stated:

> "At the time I felt significant pressure to stop [Ms A's] bleeding, which required getting her agitation under control, and from there moving to theatre. I certainly appreciate that aspects of my management of [Ms A] should have been different."

23. Dr C acknowledged that in the event of any uncertainty, he should have requested advice from an ED consultant or anaesthetist prior to administering the midazolam, and said that this was his usual practice at the time. Dr C stated that he has made changes to his practice accordingly (see paragraphs 68–70 below) and is now committed to seeking appropriate support from senior doctors if he feels uncertain or would like confirmation. Dr C told HDC

[15] A procedure to view the inside of the nasal passages.
[16] Benzodiazepines used to treat anxiety and agitation, and to cause sedation.
[17] 2.5–5mg was charted.
[18] An absence of enough oxygen in the tissues to sustain bodily functions.

that he now ensures that he seeks out hospital protocols prior to prescribing medication with which he is unfamiliar.

Information provided by Dr D

24. In a further response provided by Dr D, an emergency medicine specialist at Palmerston North Hospital, it was noted that the ED did not have guidelines directly relevant to the sedation of agitated patients, and were working with the mental health team to develop such guidelines. Dr D advised that the administration of midazolam in addition to other previously administered sedating medications led to Ms A's respiratory and then cardiac arrest. Dr D stated:

> "[T]hese medications had a cumulative effect and resulted in excessive sedation and compromise of the airway and breathing of a patient with advanced COPD and upper airway obstruction."

25. Dr D stated that while it is clear from the medical records that Dr C wished to sedate Ms A with IV midazolam to facilitate examination of her broken nose, this meant that the administration of midazolam became procedural. Procedural sedation should be performed only in an appropriate bed space by an emergency medicine specialist or an emergency medicine registrar under the direct supervision of an emergency medicine specialist. Accordingly, Ms A should have been administered IV benzodiazepines in a monitored bed.

26. Dr D noted that it is clear from reviewing the medical records that the different services involved (emergency medicine, ENT, mental health) have different definitions of sedation, and were all administering sedative medications with different intent. Furthermore, Dr D commented that it appears that the escalation to the ED SMO occurred only after Ms A had suffered a cardiorespiratory arrest. The ED SMO appeared not to be aware that the mental health team had become involved in Ms A's care, or that IV midazolam was being given in an assessment bed space.

27. Regarding the coordination of care between the different services involved, Dr D stated:

> "The coordination of care between the different services involved was inadequate. There does not appear to have been direct communication between mental health, ENT, and emergency medicine prior to [Ms A's] cardiac arrest."

Information provided by Dr E

28. In a further written response, the ED SMO at the time of the events, Dr E, advised that administration of midazolam for behavioural control is considered a reasonable strategy if the conditions are right, for example, in controlled circumstances with close observation and frequent monitoring. Dr E noted that neither of these conditions were present in Ms A's case.

29. Dr E stated that the administration of haloperidol and olanzapine for behavioural control was consistent with Ms A's regular medications, and it was acceptable to administer these regular medications in a bed space where there was a primary care nurse and portable

monitor present. However, he stated that the subsequent charting and administration of lorazepam and IV midazolam should have been administered in a resuscitation bed space, where constant monitoring and closer observation is possible.

30. Dr E advised that he was unaware of the plan to use further medication for behavioural control, and he was not made aware that Dr C had sought advice from mental health services regarding the use of such medications. Dr E stated that unfortunately, he did not have the opportunity to reassess Ms A after prescribing her regular medications, and although he felt that the process of Ms A's management and referral between the different teams was appropriate, coordination with more senior medical staff was lacking.

Policies and guidelines

31. MCDHB provided copies of several relevant policies.

32. The MCDHB "Administration of Medicines" policy (dated 4 August 2015) exists to ensure the safe and effective administration of medicines to patients at MCDHB, and states that prescribers have a responsibility to "seek advice when the circumstances of the administration of a medicine is unfamiliar to the administrator or when the administrator feels uncertain". It also states:

> "3. *Roles and Responsibilities*
>
> All health professionals are to follow their own professional scopes of practice, conditions, and competency as they apply to prescribing and administration of medicines."

33. The MCDHB policy "Educational and Clinical Supervision of Doctors in Training" (dated 22 July 2014) states:

> "5. *Process*
>
> No trainee should be required to perform or assume responsibility for a clinical, operative, or other technique in which they have insufficient experience and expertise."

Responses to provisional opinion

Ms B

34. Ms B was given the opportunity to respond to the "information gathered" section of the provisional opinion. Ms B did not make any further comments.

MCDHB

35. MCDHB was given the opportunity to respond to the provisional opinion. MCDHB advised that it accepts the proposed findings and recommendations, and has no further comments.

Dr C

36. Dr C was given the opportunity to respond to the provisional opinion. Dr C accepted the proposed findings and recommendations, and provided a letter of apology for Ms A's family.

Opinion: MidCentral District Health Board — breach

Introduction

37. Public hospitals have a duty to provide services of an appropriate standard. This includes providing adequate support to staff in respect of the application of relevant policies, and ensuring that staff are able to work together and communicate effectively. Ms A had presented to Palmerston North Hospital ED with an acute and moderately severe nosebleed following an unwitnessed fall. Her age and history of psychiatric illness and respiratory disease meant that she was a particularly vulnerable patient who required close monitoring. Unfortunately, despite these factors, the care provided to Ms A in Palmerston North Hospital ED was deficient in several respects.

Workforce constraints

38. Dr C, a registrar from the ENT service, was asked to review Ms A in the ED and assist with her persistent nosebleed. In response to Ms A's agitation, and in consultation with nursing staff from the acute mental health team, he prescribed Ms A lorazepam and midazolam in the ED. Dr C said that he was unable to find the ED consultant to discuss the prescription at the time. MCDHB's Serious Adverse Event review found that the root cause of Ms A's outcome was that sedation for the management of behavioural disturbances in ED was not under the control of the ED consultant.

39. Both my expert advisors, emergency medicine specialist Dr Martin Watts and otolaryngologist/head and neck surgeon Dr Chris Thomson, noted the workplace pressures that existed in the ED.

40. Dr Watts commented that as Ms A was in the ED when she received these medications, the ED should have had overall responsibility for the safety of the patient. He noted that there was an imbalance between the resource and demand in the ED, and stated:

> "It is clear from the response of [Dr E] regarding 'ED overcrowding' and case load frequently exceeding resources that the inability to find an ED SMO for advice was likely due to workload pressure and demand within the Department."

41. Dr Watts advised that in these circumstances it can be difficult for the ED to maintain control and oversight of patients when they are receiving active treatment from other specialist services.

42. Similarly, Dr Thomson said that many of the pressures placed on Dr C in this case were the likely result of an over-stretched and under-resourced hospital system with an apparent unavailability of senior staff at a critical time. In addition to Dr Watts' and Dr Thomas's comments, I note that MCDHB has also acknowledged that there were facility and workplace resource constraints within ED at the time of these events.

43. I am concerned about the lack of senior ED medical officers available to provide oversight of Dr C at the time of these events. In my opinion, it is MCDHB's responsibility to ensure

adequate staffing of its ED, and I am concerned that its failure to do so was a contributing factor in this case.

Adequacy of clinical monitoring

44. Ms A was administered several different medications following her presentation to the ED, including haloperidol, olanzapine, midazolam, and lorazepam, over a period of approximately two hours. Dr Watts considers that Ms A was given excessive sedation in an unsuitable area of the Emergency Department.

45. Dr Watts advised that although the medications are commonly used, the doses (particularly the accumulated doses) were much higher than would normally be used. The use of midazolam intravenously was inappropriate, as there was not enough time to allow the lorazepam to take effect, and Ms A was not in an appropriate area for monitoring, given the predictable risk of sedation and respiratory depression. Dr Watts advised that had Ms A been in an appropriately monitored area, these common and predictable side effects could have been detected earlier.

46. Dr Watts advised that given Ms A's significant cardiorespiratory risk factors, and the sedative effect of the above medications, she required monitoring in an appropriate bed space with close supervision and resuscitation equipment available. He considers that the failure to administer the medication in an appropriately monitored area was a significant departure from expected standards.

47. The Serious Adverse Event Review also acknowledged that Ms A was placed in an unmonitored bed space with no planned one-to-one nursing during and following the administration of midazolam. It found that it was not appropriate to administer midazolam in a space with no permanent monitoring equipment and no direct line of sight to the main ED central station. It also found that there were ongoing challenges in the ED with the space and design of current facilities, which are a risk for patient safety.

48. I agree with Dr Watts and the findings of the Serious Adverse Event Review. Sedation should be performed in an appropriately monitored area by staff who are skilled in recognising any complications and are able to intervene in the event of such complications. Ms A suffered respiratory depression,[19] which could have been detected earlier in an area with close monitoring and resuscitation equipment and staff available.

Coordination of care

49. Dr Watts advised that the coordination of Ms A's care in the ED was very poor. He noted that neither the nursing staff nor Dr C appear to have been familiar with IV sedation with benzodiazepines, particularly in elderly people with comorbidities. Furthermore, staff were not supervised when those medications were administered, and an ENT registrar should not have been asked to administer sedation to an agitated elderly patient. Dr Watts noted that this was inconsistent with the MCDHB policy on Educational and Clinical Supervision of doctors in Training, which states: "No trainee should be required to perform or assume

[19] A breathing disorder characterised by slow and ineffective breathing.

responsibility for a clinical, operative, or other technique, in which they have insufficient experience and expertise."

50. Dr Watts also commented that the communication and coordination of Ms A's care by staff in the ED, ENT Department, and Psychiatry Department was poor, and there was no overall care plan. He stated:

> "The ED SMO was involved early, prescribing initial sedation and referring [Ms A] to a specialist ENT service. The review by ENT was a junior, non-training registrar and later by a psychiatric clinical nurse specialist. Neither appeared to be aware of [hospital] policies for sedating an agitated patient, or had familiarity with the medications [used] and potential risks. The ED SMO had prescribed medication to control an agitated patient, but did not appear to re-assess the response to this treatment."

51. Dr Watts advised that the poor coordination and communication between the various departments involved in Ms A's care would be viewed as a moderate to severe departure from the accepted standard of care.

52. I accept Dr Watts' advice. As found by MCDHB in the Serious Adverse Event report, and referred to by Dr D in his response, communication between the different disciplines involved in Ms A's care was poor, and there was inadequate escalation to the on-duty SMO. This lack of communication contributed to Ms A receiving care that fell below accepted standards.

Lack of policy regarding sedation of agitated patients in ED

53. MCDHB provided copies of several relevant policies in place at the time. However, many of these relate to procedural sedation. Dr D confirmed that there were no guidelines directly relevant to the sedation of agitated patients in ED. As noted by Dr Watts, procedural sedation was not appropriate in this instance and is fundamentally different to the control of an agitated patient in the ED. Dr Watts noted that visibility of policies in the ED was poor, and was critical of what he described as a "high level of confusion and lack of clarity regarding the difference between procedural sedation and the care of an agitated patient".

54. Dr Watts advised that standard practice is for an ED to have guidelines directly relevant to the sedation of an agitated patient, and the absence of such guidelines would be viewed as a severe deficit in the system of care.

55. I accept this advice, and I am critical that at the time of these events, MCDHB did not have in place guidelines that were available to guide staff working in ED, regarding sedation of agitated patients.

Conclusion

56. The above failings reflect significant systemic issues present within Palmerston North Hospital at the time of Ms A's admission, culminating in a provision of care that fell below expected standards. Dr Watts and Dr Thomson both identified a series of moderate to severe departures from accepted practice, including an over-stretched and under-resourced

ED, inadequate monitoring, and the lack of any system in place to guide staff in the actions to take when an agitated patient presents to the ED. I note Dr Watts' advice that a DHB would be expected to have such a policy. As such, I consider that the above deficiencies amount to a failure to provide services with reasonable care and skill, for which ultimately MCDHB is responsible. Accordingly, I find that MCDHB breached Right 4(1) of the Code of Health and Disability Services Consumers' Rights (the Code).[20]

57. Right 4(5) of the Code stipulates that every consumer has the right to cooperation among providers to ensure quality and continuity of services. While I acknowledge the changes made by MCDHB since these events, including the implementation of clear guidelines around the sedation of agitated patients in the ED, it is clear that the system in place at the time regarding the management of an agitated patient within the ED did not allow for co-operation among providers across different teams and specialties to ensure quality and continuity of services. It follows that I also find MCDHB in breach of Right 4(5) of the Code.

Opinion: Dr C — breach

Introduction

58. At the time of the events, Dr C was an ENT registrar. He reviewed Ms A in the ED and subsequently prescribed her lorazepam and IV midazolam. As identified above, there were several systemic issues present within Palmerston North Hospital at the time, and clear failings in the care provided by the DHB as a whole. However, my independent advisor, Dr Christopher Thomson, an otolaryngologist and head and neck surgeon, was critical of the following aspects of the care provided to Ms A by Dr C.

Sedation

59. The MCDHB "Administration of Medicines" Policy exists to ensure the safe and effective administration of medicines to patients at MCDHB, and states that prescribers have a responsibility to "seek advice when the circumstances of the administration of a medicine is unfamiliar to the administrator or when the administrator feels uncertain".

60. The Medical Council of New Zealand statement on good prescribing practice (November 2016) advises practitioners to:

> "Make the care of patients your first concern. You should only prescribe medicines or treatment when you have adequately assessed the patient's condition, and/or have adequate knowledge of the patient's condition and are therefore satisfied that the medicines or treatment are in the patient's best interests. Alternatively you may prescribe on the instructions of a senior colleague or a practice colleague who can

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

satisfy the above criteria, as long as you are confident that the medicines or treatment are safe and appropriate for that patient."

61. Dr Thomson advised that he considers it reasonable that Ms A was prescribed her usual medications via IV bolus.[21] Regarding the additional IV administration of midazolam, as charted by Dr C, Dr Thomson advised:

> "I believe [Ms A] should not have been administered IV midazolam without careful consideration, given her previous history of COPD, the lack of monitoring, and lack of staff supervision. The deterioration of [Ms A's] status was compounded by the decision to give further IV midazolam despite her hypoxia and agitation, again without any monitoring in place and with apparent total lack of supervision by the nursing or medical staff at times."

62. Dr Thomson considers that Dr C's prescription of the intravenous sedation administered to Ms A, and the lack of adequate monitoring, was a serious departure from expected standards of care. Dr Thomson advised that regardless of Dr C's level of experience in IV sedation, the decision to sedate was inappropriate in this case, as the environment was unsafe, and the sedation should have been overseen by an anaesthetist or an ED specialist. I accept this advice, and I am concerned that Dr C proceeded to prescribe lorazepam and midazolam despite being unfamiliar with these medications. Despite having consulted the CNS from the Acute Mental Health Service, as the prescriber of the medication, Dr C held responsibility for ensuring that the medication was in Ms A's best interests, and he needed to be confident that the medicine was safe and appropriate, and he needed to arrange for suitable monitoring after its administration.

Failure to escalate to senior consultant

63. Notwithstanding the above advice, Dr Thomson noted that Dr C was a relatively junior registrar at the time, and that he had sought and followed the advice given to him by an on-call consultant, and direction from the CNS. Dr Thomson advised:

> "Although there appeared to be brief ED consultant involvement early on in [Ms A's] presentation, critically, [Dr C] was unable to locate the ED consultant immediately prior to administration of IV benzodiazepines. At this point [Ms A] was very agitated and bleeding heavily, and there was a firm and confident recommendation from the senior psychiatric nurse that [Ms A] should be administered IV sedation."

64. Dr Thomson acknowledged that Dr C was unable to locate an ED consultant to discuss the administration of IV midazolam, and was forced into a position where he had to make a pressured decision, guided by the advice of the CNS, in the face of a bleeding, agitated, and uncontrolled patient, and in the absence of support from a consultant. Furthermore, the protocol for IV sedation in the ED was not available to assist Dr C.

[21] A large volume of fluid or a dose of a drug given intravenously and rapidly at one time.

65. As noted by Dr Thomson, earlier direct involvement of senior staff would have almost certainly led to a different management plan and outcome. Unfortunately, many of the pressures placed on Dr C in this situation were likely the result of an over-stretched and under-resourced hospital system with an apparent unavailability of senior staff at a critical time. Notwithstanding such factors, I agree with Dr Thomson that the administration of sedation should have been overseen by an anaesthetist or an ED specialist, and I consider that Dr C should not have prescribed the sedation medication until he had had an opportunity to consult with senior medical staff.

Conclusion

66. I agree with Dr Thomson's advice. I consider that by prescribing lorazepam and midazolam to Ms A without input from senior medical staff, Dr C provided services that fell below the accepted standard of care, and, accordingly, he breached Right 4(1) of the Code.

67. However, I acknowledge the difficult situation in which Dr C found himself, including that a senior medical officer was not immediately available. I also acknowledge the ongoing impact this event has had on him personally. I note the changes Dr C has made to his practice following these events.

Changes made

68. Dr C advised that he now ensures that he calls an appropriate senior doctor for support if he feels uncertain about any decision. Dr C told HDC that he has attended multiple professional workshops to enhance his clinical decision-making. These have included leadership courses, decision-making courses, and how to deal with crisis or emergency clinical scenarios.

69. Dr C has made himself more familiar with hospital protocols, including the Palmerston North Hospital protocol governing sedation, and the sedation protocol of the hospital at which he is now employed. He ensures that he discusses any situation where sedation is required with the referring team, and confirms with the consultant on duty whether his proposed action is appropriate, or seeks further support where required.

70. Dr C told HDC that he has familiarised himself with, and ensures that he abides by closely, the Australian and New Zealand College of Anaesthetists Guideline for use of sedation for diagnostic, interventional, medical, dental, and surgical procedures (2014). Dr C noted that his clinical performance is audited on a six-monthly basis, and he meets with the director of training consultant to discuss his performance, and no concerns have been raised regarding his management of patients who have needed sedation.

71. MCDHB told HDC that it has undertaken the following:

a) Updated its policies and procedures for procedural sedation in the hospital ED, and introduced a "Sedation in the Emergency Department" policy.

b) Ensured that expectations of clinical documentation were disseminated to staff, with staff supported to use the safety "CODE" when there are concerns regarding any aspect of a patient's care.

c) The Medical Lead of the Emergency Department, and the Clinical Executive of the Mental Health and Addictions Service have developed a guideline directly relevant to the sedation of agitated patients.

d) The ED has invested in further fixed and mobile monitoring equipment to enable cardiac monitoring within more of the department, allowing for more increased capacity to monitor high-acuity patients centrally. A business case has also been approved for establishing four "pre-fabricated pods" adjacent to the ED at Palmerston North Hospital consisting of 20 acute medical assessment beds/chairs and 10 observation beds/chairs.

e) Five extra emergency medicine specialist positions have been created, allowing for better clinical oversight of junior doctors. Departmental numbers of registered nurses have also been increased, resulting in a lower nurse-to-patient ratio, and enabling closer assessment and observation of patients.

Recommendations

72. I note that following these events, MCDHB made several changes and improvements to its processes and resourcing. Nevertheless, in light of this complaint and the findings made, I recommend that MCDHB:

a) Use an anonymised copy of this report as a basis for staff training at MCDHB, focusing on the breaches of the Code identified, and disseminate the learning and changes made as a result of this case via MCDHB's existing forums for nursing and medical staff. MCDHB is to provide HDC with evidence that this has been completed within three months of the date of this report.

b) Provide a written apology to Ms A's family for the breaches of the Code identified in this report. The apology is to be sent to HDC, for forwarding to Ms A's family, within three weeks of the date of this report.

c) Provide a copy of the finalised guideline on sedation of agitated patients in the ED within three months of the date of this report.

d) Provide an update on the implementation of the four pre-fabricated pods approved for the ED, and an update on ED staffing levels, including the additional emergency medicine specialist positions. This update should be provided within three months of the date of this report.

73. I acknowledge the changes Dr C has made to his practice in the time since these events, and that no further concerns have been raised regarding his management of patients with sedation, or needing sedation. In response to my recommendation in the provisional opinion, Dr C provided a written apology to Ms A's family.

Follow-up actions

74. A copy of this report with details identifying the parties removed, except the names of Palmerston North Hospital, MidCentral District Health Board, and the experts who advised on this case, will be sent to the Medical Council of New Zealand, and it will be advised of Dr C's name in covering correspondence.

75. A copy of this report with details identifying the parties removed, except the names of Palmerston North Hospital, MidCentral District Health Board, and the experts who advised on this case, will be sent to the Ministry of Health and the Health Quality & Safety Commission, 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 expert advice was obtained from Dr Martin Watts, an emergency medicine specialist:

"**Report To: The Health and Disability Commissioner *Te Toihau Hauora, Hauatanga***

Date: 10th August 2020

Complaint: [Ms B]/MidCentral Health

Reference: C19HDC01675

Report provided by Dr Martin Watts, MB, ChB, DCH, FACEM, Emergency Medicine Specialist. Emergency Medicine Consultant with 14 years clinical practice at Specialist level, including time as Emergency Department Clinical leader.

I have read the HDC Guidelines for Independent Advisors and have followed them. I am not aware of any conflict of interest related to this case.

Thank you for referring this case for review. My findings are based on the clinical notes and further information provided to me by the HDC.

Executive Summary:

The patient was given excessive sedation in an unsuitable area of the Emergency Department (ED). The drugs were prescribed by a Junior ENT Doctor inexperienced in using these medications in conjunction with a Mental Health Clinical Nurse Specialist, who could not prescribe them. The drugs were given by an ED Nurse. This event occurred in a fully staffed ED during daytime hours when an Emergency Senior Medical Officer (SMO) should have been available at any time. The ED SMO was aware that the patient was in the Department. At no point during the later phase of care was the ED SMO consulted or made aware of the clinical decision to further sedate the patient. Appropriate guidelines appear to be lacking. These factors led to a devastating outcome for the patient and family.

Reviewing the case has raised concerns regarding high level systems. There is a lack of clarity and insight particularly regarding the differences between procedural sedation and the care of an agitated patient which need addressing.

Whilst a policy such as MDHB-6786 Educational and Clinical Supervision of Doctors in Training Policy is clear and well worded, it is of no use unless it is implemented and becomes part of an Organizational culture.

1. **The appropriateness of the administration of medicine within the ED, the amount, timing and type.**

Listed below are the medications given prior to the acute deterioration of the patient.

Medication	***Dose/route***	***Time***	***Comment***
Haloperidol	5mg intravenous	**0845**	**ED SMO**
Olanzapine	10mg oral	0910	ED SMO
Midazolam	2.5mg iv x 2	1040 and 1106?	Timing of doses?
Lorazepam	1mg oral	1040 (1030?)	1040 on med chart 1030 on timeline

Haloperidol — 5mg is a reasonable dose in this case. The patient was normally on this medication regularly as 5mg oral. Although the onset is more rapid and the drug has better availability intravenously, as the patient was acutely distressed this was appropriate.

Olanzapine — 10mg orally was the patient's usual medication, given twice daily, so this was appropriate. Lorazepam — 1mg orally. An appropriate initial dose in the clinical situation.

Midazolam — 5mg intravenous total. High dose for an elderly lady with known respiratory disease, compounded by the previous medications taking effect.

Comment: The Haloperidol and Olanzapine use seems appropriate given the patient's usual medication and the clinical situation at the time. When these failed and the patient remained agitated it was appropriate to try oral **Lorazepam at** the prescribed dose. The use of another benzodiazepine intravenously in a high dose in an elderly lady with comorbidities was inappropriate given; (a) there was not enough time given to allow the Lorazepam to take effect, and (b) the patient was not in an appropriate area for monitoring given the predictable risk of sedation and respiratory depression.

a. The actual medications are commonly used and accepted practice. The doses and particularly the accumulated doses are higher than would normally be used.
b. The medication administered doses might be required in clinical care. However giving these doses should be in a well monitored environment. Not doing so is a moderately severe departure from acceptable standard of care
c. These medications used in a non-monitored area would be viewed as significantly below the level of care of peers. In an appropriate area they could be normal practice.
d. Sedation should be performed in a monitored area by staff skilled in recognizing and being able to intervene in the event of complications.

2. The adequacy of clinical monitoring, including the allocation of a bed space.

The patient was not in an appropriately monitored or viewable bed space when given medication that could be reasonably expected to cause sedation and respiratory depression. She was initially in Assessment space F, prior to being moved to Resuscitation 5. Whilst monitoring was clearly difficult due to patient behaviour, this was an unmonitored bed space not in the direct line of vision from the ED main central station.

Comment: Even though the medications given noted in item 1 caused the patient to have respiratory depression, had the patient been in an appropriately monitored area, these predictable side effects could have been detected earlier. Interventions to 'rescue' the situation and prevent further deterioration could have been performed.

a. Standard of care and accepted practice are for sedation to be performed in an appropriate area with close monitoring and resuscitation equipment and staff available.

b. This is a significant departure from standard of care.

c. As for item 1, the medications should have been used only in a monitored area.

d. Local guidelines and policies should be introduced and circulated.

3. Whether the co-ordination of care in the ED was adequate.

The care co-ordination was very poor. The sedation was charted by an ENT Registrar on the advice of a Psychiatric Clinical Nurse Specialist (CNS) and given by an ED Nurse. None of these staff appear to be familiar with intravenous sedation with Benzodiazepine medication, particularly in the elderly and with background Respiratory disease. These clinicians were not supervised during the period when these medications were given. Although the patient had been referred to both the ENT service and the acute Mental Health service, she remained in the ED and under the care of the ED staff, particularly the direct care of the ED Nursing staff.

Comment: Adequate co-ordination would have involved the oversite of the ED SMO.

a. The standard of care would be for the ED SMO to be available to coordinate the care, particularly where other, more junior staff are being asked to work outside their usual areas of expertise.

b. Bearing in mind the SMO has a busy department to oversee and multiple competing tasks they often rely on junior staff and Nursing staff to alert them of any potential issues of patient safety. This has not occurred and is a moderate departure from standard of care.

c. This would be viewed as a failure to alert the SMO to significant patient events in the ED.

d. Sedation performed in the ED should be protocol or guideline driven, including appropriate medication, monitoring, staff and oversight.

4. Whether the escalation for senior medical advice was sufficient

The ENT Registrar was unable to access the ED senior medical officer for advice. Being unable to access the ED SMO, the ENT registrar prescribed medication for sedation which they were unfamiliar with. The ED Nurse caring for the patient repeatedly contacted the ENT Registrar when it would have been more appropriate to call the ED SMO. The escalation for SMO advice was inadequate. The advice required would have been regarding the treatment of the patient's agitation. This would have required SMO input, and would most effectively have been provided by the ED SMO.

Comment: the escalation for senior medical advice was not sufficient.

a. This was below accepted standard of care.

b. This was a significant departure from accepted standard of care.

c. This would be viewed as a serious failure of the system.

d. Clear guidelines should be in place.

5. The interface and overall care plan with other specialties.

The Emergency Department SMO was involved early on in this case, prescribing initial sedation and referring the patient to a specialist (ENT) service. The review by ENT was from a junior, non-training Registrar and later by a Psychiatric Clinical Nurse Specialist. Neither appeared to be aware of local policies for sedating an agitated patient or had familiarity with the medications that were chosen and the potential risks. The ED still should have had overall responsibility for the safety of the patient. The ED SMO had prescribed medication to control an agitated patient, but did not appear to re-assess the response to this treatment.

Comment: the interface with other specialties was superficial and there was no overall care plan.

a. Standard of care for the treatment of the injuries was good. However the interface between ED, ENT and Psychiatry was poor.

b. Multiple departments interfaced poorly and communication was lacking. This is a departure from standard of care that is moderate to severe.

c. This would be viewed as a serious concern by peers.

d. The system has clearly failed — see item 10 Educational and Clinical Supervision of Doctors in Training Policy. However a policy such as this is worthless if it is not part of Organizational culture.

6. Visibility and compliance with relevant policies.

Visibility of policies was poor. It is still not clear from the documents provided, that the ED has a written policy for the control of the agitated patient. See the response to point 9 for further discussion on this.

7. The standard of documentation.

The overall clinical record keeping is of a good standard and allows the case to be investigated based on these records plus later interviews. There is some dispute as to the timing of some of the medication doses given.

a. The documentation meets accepted standards.

b. Issues regarding the timing of medication are relatively minor.

c. This would be viewed as acceptable.

d. Reminding staff of the need for clear timing of records.

8. The patient assessment issues, including history.

The patient assessment and history available were of a good standard. The important medical issues such as chronic lung disease and psychiatric history were well documented. Appropriate imaging, in this case a CT scan was performed. The patient's significant background medical and psychiatric history was well documented.

9. The adequacy of policies, including their accessibility.

The policies provided were for Procedural Sedation. At no point was this patient considered for Procedural Sedation in the ED. Procedural Sedation was not appropriate. Procedural sedation is the sedation of a patient in ED in order to perform a clinical procedure. It was never planned to do a procedure in ED to control the epistaxis. Procedural Sedation is fundamentally different from the control of the agitated patient in the ED. Procedural Sedation is a technique which can be deferred or declined, unlike the need for controlling an agitated patient who is a danger to themselves or others.

Based on the above, Appendix 4 and Appendix 5 in the notes — ED Procedural Sedation Procedure March 2017 and Sedation: General Overview of Procedural Sedation in ED (New Draft Policy and Procedure) — are not relevant to this case.

Another document — Management of Acute Behavioral Disturbance in Adults for MCH Mental Health Services — is also provided. This document is applicable to the Mental Health Services and is not suited to ED use. It clearly states that it is applicable to Palmerston North Hospital acute adult mental health inpatient settings. It does not discuss intravenous sedation at all. I would not expect an ENT Registrar to be aware of, or familiar with this document. The document is not an ED document although the patient was in the ED being cared for by ED staff.

Comment: No policy is provided for the treatment of the agitated patient in the ED. The patient was not suitable for procedural sedation in ED, and the ENT procedure was planned for the main operating theatre under general anesthesia. The Mental Health service document is not ED suitable.

Safe sedation of an agitated patient, from whatever cause, must be able to be performed in an ED. This is to protect the patient from their own behaviour, and also for the safety of staff.

a. Standard practice is for an ED to have guidelines directly relevant to sedation of an agitated patient. There does not appear to be such a policy or guideline. There appears to be high level confusion and lack of clarity regarding the difference between **Procedural Sedation** and the **Care of the Agitated Patient.**
b. This is a severe deficit in the system of care.
c. This would be viewed as a significant deficiency by peers.
d. A policy or guideline should be introduced. There are multiple published guidelines available which would be suitable to adapt to local resources. Some examples are given in the references. Staff education is clearly needed.

10. Any other matters.

The following local policy has clearly been breached; **MDHB-6786 Educational and Clinical Supervision of Doctors in Training Policy.** 'No trainee should be required to perform or assume responsibility for a clinical, operative or other technique in which they have insufficient experience and expertise.' Asking an ENT Registrar to sedate an agitated elderly patient clearly breaches this policy.

During the review of the case, there were two questions which I also considered and was unable to answer satisfactorily:

- Why was the ED SMO not contacted by the ED Nurse caring for the patient? This would have been preferable to calling a junior ENT Registrar to sedate the patient. Is there a culture or other issues within the organization that prevented this? This is a question I am unable to answer.
- An agitated patient is not at all an uncommon problem in an ED. Does the hospital not have the ability to 'special' a patient (provide one on one care, often with a Nurse Aid or Security Staff)? If not, why not? Why was this not even considered or mentioned in any of the documents? Again I am unable to answer.

I am happy to discuss the above responses and give further advice if required.

Dr Martin Watts, MB ChB, DCH, FACEM

(1) Management of patients with Acute Severe Behavioural Disturbance in Emergency Departments. Queensland Health Guideline https://www.health.old.eov.au/data/assets!pdf file/0031/629491/oh-ed1-438.pdf
(2) Pharmacological management of agitation in emergency settings Emergency Medicine Journal https://eml.bmi.com/content/20/4/33911th February 2021

In response to the further information provided on case 19HDC01675, there are no major changes to my previous report based on these responses, other than to clarify a few points as discussed below.

I have not studied and critiqued in detail each of the many policies and guidelines provided (some of which are multiple versions of and some out of date). These are likely to have some degree of site specific advice. Overall they appear good quality. There is further comment in response to Appendix 7.

MDHB Response:

The DHB have acknowledged an issue, that there are/were 'facility and workforce constraints within the ED'. The intended response is to increase resources significantly, notably by increasing physical resources in terms of space and (monitoring) equipment, but also in terms of additional SMO coverage and Nursing staffing in the ED.

The Business case for this was signed off in May 2020, and would have taken some time to complete; it includes significant physical and personnel increases and will undoubtedly be costly. Making the department a safer place for patients and staff is a good aim but suggests that at least to some degree the ED was in fact unsafe.

In my initial report, item 10; any other matters, I asked the question below. It appears the issue raised has been acknowledged by this response and identified as an imbalance between resource and demand in the ED.

- Why was the ED SMO not contacted by the ED Nurse caring for the patient? This would have been preferable to calling a junior ENT Registrar to sedate the patient. Is ***there a culture or other issues within the organization that prevented this***? This is a question I am unable to answer.

Appendix 1:

Copies of relevant X-ray, CT scan and Laboratory reports. Documentation of Nursing care in ED and Variance Response Management Guideline.

Appendix 2:

I am in agreement with the response, but would like to highlight a couple of points.

2a. Treating an agitated patient should be an ED led process. Working with the Mental Health services on a sedation protocol for agitated patients is commended. However not all agitated patients have Mental Health issues (Head injury, Post-ictal, Drug intoxication etc.). I note that in the MCDHB response (page 7) Medicine and Pharmacy are also included in this process.

2c. There is some variance here with Appendix 4. [Dr D] states that the ENT Registrar wished to sedate the patient in order to examine her broken nose, and that the sedation was given in order to facilitate this examination. In Appendix 4 [Dr C] views this

differently and had already decided that the patient would need to go to Theatre for treatment.

8. In a developing Specialist led ED service it can take years to safely wrest control of procedures such as sedation from other services which have previously performed them in the ED.

Appendix 3:

DHB Correspondence. No comments.

Appendix 4:

The Junior Specialty Registrar recognised the need for Theatre to treat the patient. Unfortunately they were then left to try and control the patient's agitation without access to an ED SMO, but with advice from a Psychiatric Nurse on sedation.

The Registrar should have declined to prescribe medication they were unfamiliar with. However, in a system under pressure and unable to access assistance immediately they did prescribe medication they were unfamiliar with. This was a mistake.

As a further comment, respiratory depression is the commonest and most feared side effect after administration of sedative (Benzodiazepine) medication, and this is well known. This is taught in all basic and clinical pharmacology courses within medicine and should be known by every Doctor in every Specialty.

It is unclear exactly how actively the ENT Registrar attempted to find the ED SMO on duty for advice. The Registrar could or should have tried harder in this situation.

Appendix 5:

I am in agreement — Sedation should not be performed by a Surgeon in a case such as this. ENT Specialists were consulted and expected to deal with nasal injuries and the epistaxis. The decision to treat in Theatre was quite appropriate.

Appendix 6:

Documentation of Nursing Care in ED Clinical Guideline.

Appendix 7:

Multiple DHB Guidelines and Policies are provided. These are all complex, long and in depth documents. Pre-knowledge of these and familiarity with them is required before any rapid action can be taken based on these documents.

Appendix 8:

It is clear from the response of [Dr E] regarding 'ED overcrowding' and case load frequently exceeding resources that the inability to find an ED SMO for advice was likely due to workload pressure and demand within the Department. This does not seem to

be a new issue and may have been a problem for some time. This is concerning but not at all unusual in the current Health System.

With ED overcrowding and long stays in ED becoming common, it can be difficult for the ED to maintain control and oversight of patients when they are receiving active treatment from other Specialist services that have been consulted/referred to.

Other comments are all accepted and clarify the background to this case."

Appendix B: Independent clinical advice to Commissioner

The following expert advice was obtained from otolaryngologist and head and neck surgeon Dr Christopher Thomson:

> "Thank you for asking expert advice to the HDC regarding the above patient. I can confirm that I have read and agreed to the guidelines for independent advisors.
>
> I am an Otolaryngologist, Head and Neck Surgeon and hold the FRACS in Otolaryngology Head and Neck surgery. I have practiced as a consultant Otolaryngologist in Christchurch for 23 years. I have been in full time private practice over the last 3 years. My scope of practice is confined to adult and paediatric rhinology and paediatric otolaryngology. I have extensive experience in the management of acute and elective sinonasal disorders.
>
> The Commissioner has instructed me to provide expert advice regarding the care of **[Ms A].**
>
> The following report is based on the detailed information surrounding the case submitted by the HDC office.
>
> I have been specifically asked to comment as to whether I consider the care provided to [Ms A] by the MCDHB ENT clinicians was reasonable in the circumstances and why. In particular I have been asked to comment on the following issue:
>
> *The adequacy of care provided by ENT clinicians, including registrar [Dr C] and consultant [Dr F] to [Ms A] on [Day 1] and in particular whether [Dr C] should have spoken to a consultant prior to prescribing benzodiazepine. I have also been asked to pass comment on any matters in this case that I consider relevant.*
>
> I will consider the adequacy of care provided by [Dr C] and [Dr F] separately.
>
> **[Dr C]**
> *I consider that there has been a serious departure from the standard of care for accepted practice by [Dr C], specifically in his prescription of and lack of adequate monitoring of intravenous sedation administered to [Ms A].*
>
> As a background, I note that this patient is elderly and has a significant history of COAD and chronic Type II respiratory failure. As noted in the documentation provided, she had presented with acute and moderately severe epistaxis as a result of blunt trauma to the nose sustained during an unwitnessed fall. Because of her altered mental state on presentation and the history of an unwitnessed injury CT scanning was performed to both document the status of the nose and to look for any intracranial complication of her fall. The scan excluded an intracranial bleed.

I consider it reasonable that she was prescribed her medications that were usually taken orally as an intravenous bolus, specifically the haloperidol that was administered at 0845 hours on [Day 1] and the olanzapine that was administered at 0910 hours. I also note that she was administered 1 mg of lorazepam at 1030 hours. Although the notes for review do not specify detail around the decision to prescribe lorazepam, I note that the drug chart for this medication bears [Dr C's] signature.

It appears that there were conflicting reports of the patient's status from shortly after the time that she received her oral lorazepam. According to her daughter's recollection she became quiet and was confined to her bed thereafter but RN4 recalled that her level of agitation appeared to be fluctuant and there were difficulties in settling the patient's epistaxis and in the patient being able to cooperate with interventions for this in the ED.

On the suggestion of the RN5, psychiatric nurse, [Dr C] was encouraged to chart 5 mg IV midazolam as a single dose with the aim of rendering the patient more manageable. It was subsequently agreed to change this to an initial dosage of 2.5 mg IV following concerns voiced by RN3 (ED nurse) who voiced reservations about the suggested initial dosage in light of the patient's age and risk factors, presumably referring to her history of COAD.

Prior to this the Otolaryngology registrar, [Dr C], had discussed the patient's presentation with [Dr F], consultant Otolaryngologist, who was in outpatient clinic. He advised that arrangements should be made for the patient to be taken to the operating theatre for definitive management of the epistaxis under general anaesthesia and that an anaesthetic and mental health review prior to this would be sensible and appropriate. On reading the supplied notes there appears to have been no discussion with [Dr F] at any stage regarding [Dr C's] intent to administer intravenous midazolam nor was there any suggestion from [Dr F] that this should occur. Furthermore it appears that at no stage was the planned administration of intravenous midazolam sedation discussed with the ED consultant (Dr 4) whom I understand had been involved in some of the initial triaging process with the patient and the plan to undergo CT scanning.

I note that following the oral lorazepam, [Ms A's] daughter recalls [Ms A] requesting oxygen and states that she 'never got off the bed' after this.

At 1040 hours 2.5 of intravenous midazolam was given. Although baseline observations were performed early in the patient's ED stay (pulse, heart rate, blood pressure and oximetry) there were no baseline observations performed immediately prior to administration of the midazolam nor was there was any continuous monitoring in place once this drug was given. It appears that the patient developed increased agitation following the initial 2.5mg dose of midazolam. It seems likely that the patient's increased agitation was due to hypoxia (which was subsequently noted on oximetry, with oxygen saturations of 70% on room air and improving to 88% following administration of 4 litres of oxygen per minute by a Hudson mask).

It appears that RN3 (ED nurse) paged [Dr C] at this point but subsequently left the patient in the care of RN3 (psychiatric nurse), who then suggested further intravenous sedation. This led to a second 2.5 mg bolus of intravenous midazolam being administered at 1106 hours. Even at this point it appears that no ongoing continuous oximetry was performed (as far as I can determine from the patient notes) and following the second dosage RN5 (psychiatric nurse) left the cubical, RN3 was apparently attending to other patients and the patient was left unsupervised, unmonitored and solely in the presence of her daughter. I also understand from the notes that [Dr C] was absent at this point. At this point the patient was likely to be severely hypoxic and obtunded.

I believe that this patient should not have been administered intravenous midazolam without careful consideration, given her previous history of COAD, the lack of monitoring and the lack of staff supervision. The deterioration of the patient's status was compounded by the decision to give further intravenous midazolam despite her hypoxia and agitation, again without any monitoring in place and with apparent total lack of supervision by the nursing or medical staff at times.

In light of the above summary, *I believe that adequacy of care provided by [Dr C] represents a serious departure from accepted practice and would not be favourably viewed by [Dr C's] peers.* I agree with [Dr F's] comments that the administration of intravenous sedation is not a core part of the RACS Otolaryngology syllabus. Even if [Dr C] had significant prior expertise in intravenous sedation the decision to sedate was inappropriate in this case and the environment in which she was sedated was unsafe.

In terms of recommendations for improvement that may help prevent a similar occurrence in the future, it appears that this has been already largely attended to by the MCDHB and there are new and clear guidelines placed for the sedation of agitated patients in the emergency department. Under resourcing of staffing and a lack of physical space and monitoring equipment in the emergency department has been highlighted in this case and may have influenced [Dr C's] decision to not discuss the planned sedation with the ED consultant.

[Dr F]

In my opinion [Dr F] provided sensible and appropriate advice to his registrar when the case was discussed with him. He was not informed of [Dr C's] decision to give intravenous sedation and therefore had no opportunity to prevent the consequences of this decision. He correctly comments in his report that the administration of intravenous sedation is not part of the syllabus for the FRACS in Otolaryngology.

I consider that there was no departure of the standard of care/accepted practice by [Dr F].

Further comment

The management of acute epistaxis typically involves suction clearance of blood clot from the nose, administration of topical vasoconstrictor sprays to the nasal cavity, endoscopy and diathermy in an outpatient or inpatient setting and at times temporary packing of the nose (none of which was practicable with this patient's lack of cooperation), correction of acute hypertension and reversal of anticoagulant therapy where appropriate. Thrombogenic agents may also be administered locally or systemically. In patients where examination and treatment under local anaesthesia is not possible or appropriate then examination and surgical treatment under general anaesthesia is indicated. In the case of [Ms A] once she attended theatre she received appropriate surgical management which identified and treated the source of the bleeding.

In my personal experience the antihypertensive drug clonidine (which has a mild sedating side effect) is the most commonly used drug for heavy epistaxis, most often in a postoperative setting following nasal surgery. This is administered under a protocol in a carefully monitored setting. I have not seen Midazolam used as a treatment for acute epistaxis and I assume that in [Ms A's] case that this was given with the intent of treating her agitation and lack of cooperation, rather than to primarily treat her epistaxis. Therefore I believe that this should have been overseen by either an Anaesthetist or an ED Specialist. Otolaryngologists and ORL trainees do not have the relevant expertise.

Yours sincerely

Chris Thomson MBChB FRACS
Otolaryngologist, Head and Neck Surgeon"

The following further advice was received from Dr Thomson:

"Thank you for your correspondence regarding further comments from [Dr C] with respect to the case of [Ms A] reference number 19HDC01675. I apologise for the delay in replying.

As detailed in my original report, I considered that *there had been a serious departure from the standard care for accepted practice by [Dr C], specifically in his prescription of and the subsequent lack of adequate monitoring of intravenous sedation that was administered to [Ms A]*. This was an unfortunate case that ultimately led to a hypoxic brain injury and patient death. My original opinion stands. However, after reading and considering his further detailed correspondence, I believe that there are a number of mitigating factors that should be taken into account prior to making a final finding against [Dr C] in this case.

I have a number of sympathies for [Dr C], considering some of the circumstances around the care of [Ms A]. [Dr C] attended the patient promptly. He was a relatively junior registrar. He sought and followed the advice given to him by his on-call consultant.

Despite his efforts, throughout the care of [Ms A], there was no direct psychiatric registrar or consultant involvement as they were unable to attend acutely for reasons unspecified. In their absence a senior psychiatric nurse, who was familiar with [Ms A], attended.

Although there appeared to be brief ED consultant involvement early on in this patient's presentation, critically, [Dr C] was unable to locate the ED consultant immediately prior to administration of intravenous benzodiazepines. At this point the patient was very agitated and bleeding heavily and there was a firm and confident recommendation from the senior psychiatric nurse that she should be administered intravenous sedation. There appeared to be no senior ED medical staff input into this decision nor were senior ED medical staff able to be located.

In my original report I was critical that the planned administration of intravenous midazolam sedation had not been discussed by [Dr C] with the ED consultant, whom I understand had been involved with some of the initial patient triage. [Dr C's] further correspondence clarifies that this was not possible as the ED consultant could not be located. I had incorrectly made the presumption in my report that [Dr C] had not attempted to discuss intravenous sedation with the ED consultant. As [Dr C] was not able to locate the consultant he was forced into a position where he had to make a pressured decision, impacted upon by the advice of a senior psychiatric nurse, in the face of a bleeding, agitated and uncontrolled patient and in the absence of ED and anaesthetic consultant or support. It is not clear whether anaesthetic input was sought early on. If an anaesthetist had attended acutely then I would expect it likely that [Ms A] would have been sedated and intubated and transferred to the operating theatre for acute surgical management of her epistaxis.

The Otolaryngology consultant, [Dr F], was tied up in the otolaryngology outpatient clinic and could not attend immediately. He did not have an opportunity to see the patient directly to make an assessment and he would not be expected to be familiar with the acute administration of intravenous sedation. He reasonably recommended that both anaesthetic and psychiatric input should be sought and that the patient needed to come to the operating theatre for definitive management of the epistaxis under general anaesthetic. He was not aware of the plan to administer intravenous sedation.

Although there was apparently a protocol for intravenous sedation held in the Emergency Department this was not immediately available and [Dr C] did not have the benefit of this guideline.

On thinking this case through further I feel that the most appropriate course of action for this patient would have been for earlier and direct involvement either by the ED consultant or the urgent attendance of either an anaesthetic registrar or consultant to the Emergency Department with likely induction of anaesthesia and intubation of the patient. This would have controlled the patient's airway and agitation and would have

allowed some interim measures to deal with epistaxis in the Emergency Department if necessary and subsequent transfer to theatre for definitive management. Given the information provided, I feel that it would be difficult to transport this patient to theatre and then induce anaesthesia. It is not uncommon for an anaesthetist to attend the emergency department and induce anaesthesia in a setting outside the operating theatre to assist with initial acute control of patients with various medical and surgical conditions and emergencies.

The attending senior psychiatric nurse had a degree of confidence about the administration of intravenous sedation and the psychiatric nurse's greater experience led to [Dr C] deferring to her plan of action. There was a power imbalance and a pressurised situation where [Dr C] felt that he had to make a decision urgently.

In [Dr C's] correspondence he has expressed great remorse and distress regarding this episode and has undertaken a number of steps to ensure that his future decision making regarding intravenous sedation of patients is safer, evidenced by his approach to intravenous sedation in radiology patients and his current position as an advanced trainee in radiology. He details the significant mental impact that this episode had on him and has undergone counselling to deal with this. He has also expressed remorse for the unfortunate outcome. He has shown excellent insight into the situation and has taken appropriate steps since and has continued to practice competently as a radiology registrar on the radiology advanced training scheme.

While my original findings remain, I do feel that there are a number of mitigating factors. Many of the pressures placed on [Dr C] in this situation were the likely result of an over stretched and under resourced Hospital system with an apparent unavailability of senior staff at a critical time. Earlier direct involvement of senior staff would have almost certainly led to a different management plan and outcome. Perhaps with more experience [Dr C] would have pressed more firmly for senior physician involvement with a better outcome.

Yours sincerely

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