JURISDICTION	**:**	CORONER'S COURT OF WESTERN AUSTRALIA
ACT	**:**	CORONERS ACT 1996
CORONER	**:**	SARAH HELEN LINTON, DEPUTY STATE CORONER
HEARD	**:**	30 SEPTEMBER 2024 TO 3 OCTOBER 2024
DELIVERED	**:**	9 MAY 2025
FILE NO/S	**:**	CORC 85 of 2022
DECEASED	**:**	NICHOLSON, COLIN STANLEY FRANCIS

Catchwords:

Nil

Legislation:

Nil

Counsel Appearing:

Ms S Markham assisted the Coroner.
Ms B Rogers appeared for Dr Paramaswaran.
Ms G J Lee appeared for Ms Eyre, Mr Woodman and Ms Brown.
Mr C G Mayne with Ms J Kasbergen (SSO) appeared for the WA Country Health Service, the Department of Health and PathWest.
Mr E Panetta with Ms C Catto (Panetta McGrath) appeared for Dr Wutchak and Dr Van Vollenstee.

Case(s) referred to in decision(s):

Nil

Coroners Act 1996
(Section 26(1))

RECORD OF INVESTIGATION INTO DEATH

I, Sarah Helen Linton, Deputy State Coroner, having investigated the death of ***Colin Stanley Francis NICHOLSON*** *with an inquest held at* ***Bunbury Courthouse, BUNBURY,*** *on 30 September 2024 to 3 October 2024, find that the identity of the deceased person was* ***Colin Stanley Francis NICHOLSON*** *and that death occurred on 18 November 2021 at Bunbury Regional Hospital from septic shock with multi-organ failure in a man with neutropenic sepsis on a background of recent acute myeloid leukaemia diagnosis, in the following circumstances:*

TABLE OF CONTENTS

SUPPRESSION ORDER

There be no reporting or publication of the name of the Laboratory Scientist [name redacted].

INTRODUCTION

1. Colin Nicholson (Colin) was a 69-year-old man who died at Bunbury Regional Hospital on 18 November 2021 from complications of an infection. His death was not initially reported to the coroner. Instead, a doctor completed a Medical Certificate of Cause of Death that recorded that Colin died from septic shock with multiorgan dysfunction on a background of neutropenia and other health conditions.

2. Following a review by the Patient Safety Surveillance Unit of the WA Department of Health, Colin's death was reported to the Office of the State Coroner on 16 March 2022 as deficiencies had been identified in relation to Colin's medical management prior to his death. The possible deficiencies were not related to his care at Bunbury Regional Hospital, but instead the care Colin had received from general practitioners (GP's) and at the hospital in Collie.

3. After the initial coronial investigation was completed on 13 June 2023, the matter was brought to my attention. The investigation revealed that Colin had died from complications (in particular sepsis) from Acute Myeloid Leukemia (AML) that was not diagnosed until very shortly before his death. The evidence suggested there had been missed opportunities to diagnose and treat the leukaemia at an earlier stage, as well as a missed opportunity to diagnose and treat the sepsis. The preliminary evidence suggested it was possible that Colin's death was preventable, or at least that if he had been diagnosed earlier and treatment commenced, he may have survived for a prolonged period before his illness led to his death.

4. Following consultation between the court and Colin's family, on 18 August 2023 I made an order pursuant to s 22(2) of the *Coroners Act 1996* (WA) that it was desirable to hold an inquest to explore the circumstances leading to Colin's death and to consider whether any lessons could be learnt from this sad case for the benefit of future patients in the South West.

5. I held an inquest in Bunbury from 30 September 2024 to 3 October 2024. The primary focus of the inquest was the management of Colin's identified neutropenia (in essence low infection fighting white blood cells) and the delay in a bone biopsy that would have identified his AML, as well as the initial failure to identify that Colin had developed sepsis and required urgent antibiotics and supportive treatment.[1]

6. Counsel Assisting identified six specific questions at the commencement of the inquest that might properly be considered in issue:

i. Were there missed opportunities by Colin's GP in identifying his abnormal blood results?

ii. What effect did the failure to adhere to PathWest internal protocols have in the sequence of events leading to Colin's death?

iii. Did the PathWest referral system fail Colin?

[1] Sections 22(1)(a) and 25(3) *Coroners Act 1996* (WA).

iv. Given his very serious condition, should Colin have been discharged from Collie Hospital on 15 November 2021?

v. Was there a missed opportunity to diagnose sepsis at Collie Hospital on 15 November 2021 and, if so, would earlier treatment have made a difference?

vi. Had AML been diagnosed earlier, would treatment have saved Colin's life or at least prolonged the amount of time he had left?

7. At the conclusion of the inquest, I made some preliminary comments in relation to the above questions and any possible adverse comments/findings I was likely to make against particular individuals involved and then allowed the relevant parties an opportunity to provide written submissions. All submissions from represented parties were provided by 15 November 2024. One witness who was not represented at the inquest, the Laboratory Scientist from PathWest Collie, was also given an opportunity to respond in writing to likely adverse comments/findings after the inquest.

8. Having considered all of the relevant evidence and giving due consideration to the submissions made on behalf of interested parties, I have found that there were a number of missed opportunities in Colin's medical care that might have prevented, or at least delayed, his death. I set out below my findings and the reasons for reaching those conclusions.

BRIEF BACKGROUND

9. Colin was married and lived with his wife Monika (Mrs Nicholson) in Collie at the time of his death. He had four children, two daughters and two sons, plus one stepdaughter, and a combined total of 19 grandchildren and one great grandchild at the time he died. He had served in the Australian Air Force before moving to Karratha to work in the power station. After he married Mrs Nicholson, they moved to Collie and Colin worked as a Power Station Operator at Muja Power Station for 27 years before he retired in 2012. After retirement, the couple purchased an off-road caravan and enjoyed many happy adventures travelling off-road in Australia. They were still planning more trips at the time of Colin's death.[2]

10. Throughout his working life and retirement, Colin also generously volunteered his time to the Collie State Emergency Service (SES). He had amassed a wealth of knowledge over the 34 years he was with the SES and he was an esteemed trainer assessor, training other volunteers and teaching other trainers and assessors throughout the State. In times of crisis, he was also deployed intrastate and interstate to help with natural disasters. In 2004, Colin was awarded the Emergency Services Medal for his work and dedication to the SES, and in 2022, he was posthumously awarded the Peter Keilor award, which is the most prestigious award in the SES. His wife Mrs Nicholson and daughter Chantal accepted the award on his behalf. It is very clear that Colin's sudden passing has been deeply felt not only by his family and friends, but within the SES and the Collie community. Some family members were

[2] Email to CA from Chantal Franklin dated 20 September 2024.

able attend the inquest, including Mrs Nicholson, with the hope of gaining a better understanding of where things went wrong. I hope the inquest, and this finding, will give them some of the answers they needed, and some comfort that the circumstances of Colin's death have resulted in significant reflection by the people, and services, involved and has led to some changes that will hopefully prevent a similar such event for another family.[3]

BLOOD RESULT – 22.9.2021

11. There is evidence that Colin had demonstrated normal renal and liver function and a normal full blood count (including his neutrophil count) in April 2021 when he had some blood taken for testing.[4] Colin saw his GP, Dr Shankar Paramaswaran (Dr Paramaswaran), at the Collie River Valley Medical Centre on Thursday, 6 May 2021 to review these blood results. Colin was told that his ferritin level was low and it was arranged that he would have an iron infusion at Collie Hospital.[5]

12. Colin returned to see Dr Paramaswaran on 10 June 2021. Colin advised he had received the iron infusion and had felt an improvement afterwards. He was given a referral for repeat blood tests to check his ferritin levels again, but he was told to wait three months before having more blood taken in order to allow some time to assess his progress.[6]

13. After waiting for the recommended three months, Colin took the June 2021 referral to the PathWest Collie laboratory on 22 September 2021 and had a full blood test performed. The automated analyser flagged that a blood film examination was indicated, so a blood film was made, stained and examined by the Laboratory Scientist on duty. It was noted that Colin had a new finding of neutropenia in his blood results.[7]

14. Neutropenia refers to lower than normal white blood cells known as neutrophils in the blood. White blood cells in general, and neutrophils in particular, fight infections in the body. Neutrophils are primarily made by bone marrow, so a finding of neutropenia may indicate a problem with a person's bone marrow. However, there are also other reasons why a person may show neutropenia on their blood results that are less concerning, such as an infection or certain medications.

15. Colin's neutrophil level was 0.69 x 10^9/Litre. The PathWest protocol HM026 states that Haematologist referral is required when the neutrophil count is <1.0 x 10^9/Litre, so the blood film should have been referred to the QEII laboratory in Perth for Haematologist review. However, the Laboratory Scientist who did the analysis did not refer the blood film. Later analysis also showed that there were abnormal cells (blasts) present in that blood film. It was not expected that the Laboratory Scientist

[3] Email to CA from Chantal Franklin dated 20 September 2024.
[4] Exhibit 1, Tab 6.1.
[5] Exhibit 1, Tab 11.1 and 11.3.
[6] T 13; Exhibit 1, Tab 11.3.
[7] Exhibit 1, Tab 5 and Tab 8.

would have been competent to identify the blasts, but there was evidence that there were abnormalities present that could have triggered a referral of the blood film, in addition to the very low neutrophil count. If the film had been referred and reviewed by a Haematologist (as per the PathWest protocol) then it is likely a Haematologist would have identified the blasts.[8]

16. Instead, given the blood film was not referred and the blasts were not identified, the blood results were simply sent back by the Laboratory Scientist to Colin's referring GP, Dr Paramaswaran, with a note that the blood film showed 'reactive lymphocyctes' and 'neutropenia'. The Laboratory Scientist also indicated that she rang the results through to the Collie River Valley Medical Centre and spoke to Dr Paramaswaran to advise him of the result, although the specifics of that conversation are unknown.[9]

17. Dr Paramaswaran advised that at the time of seeing the blood tests results from 22 September 2021, he was aware that the blood test showed neutropenia. He knew there were potential different causes, including viral illness and some medications, for neutropenia. Dr Paramaswaran was also aware the reported reactive lymphocytes can sometimes occur when someone is unwell from a viral or bacterial infection, or has taken medications, so taken together they were not particularly alarming. Similar information was included in the blood results, although Dr Paramaswaran wasn't sure that information was included on the report first sent to him. He did not recall speaking to the Laboratory Scientist about the result.[10]

18. Dr Paramaswaran's initial differential diagnosis was that the neutropenia was likely caused by a viral illness. However, when he spoke to Colin on 30 September 2021, Colin reported he had felt well at the time the blood was taken, which was a little odd. Colin said he still felt well at the appointment and did not report any other new symptoms. The comment at the bottom recommended that a repeat test be performed in seven to 10 days, so Dr Paramaswaran told Colin to do another test in about a week's time, so he could see if the neutropenia (for which there was no obvious cause) persisted.[11]

19. The evidence before me indicates this was a reasonable plan for Dr Paramaswaran to formulate, based on what information he had received at that time.

BLOOD RESULT – 5.10.2021

20. Colin underwent further blood testing on 5 October 2021. The results of the full blood picture recorded that the neutropenia persisted.[12]

21. The same Laboratory Scientist had again performed the blood analysis. Colin's neutrophil count had dropped by this time to 0.48/nl. This lower level met the criteria

[8] T 82 – 83, 364.
[9] Exhibit 1, Tab 12.1.
[10] T 16 - 18; Exhibit 1, Tab 5 and Tab 11.
[11] T 16 - 18; Exhibit 1, Tab 5 and Tab 11.
[12] Exhibit 1, Tab 11.2.

for the PathWest Critical Call List, which is an auto generated list of criteria indicating a critical result that then requires the scientist to phone the referring/treating clinician.[13]

22. The PathWest records indicate that the Laboratory Scientist made the required call to Dr Paramaswaran to advise him of the result.[14] There is no record of the substance of the phone conversation. Dr Paramaswaran advised that he did not recall receiving a telephone call on 5 October 2021 about the blood results. The Laboratory Scientist recalled that she spoke to the doctor directly, but advised that given the lapse of time, she had no specific recollection of the discussion.[15]

23. Once again, the neutrophil result was below 1.0/nl, so the blood film should have been referred to the QEII laboratory for Haematology review (as per the protocol). Regrettably, once again this was not done by the Laboratory Scientist. Later review of the blood film again showed the presence of abnormal cells with blastic features, but these were not identified by the Laboratory Scientist as it was outside her expertise. There was, again, a missed opportunity for a Haematologist to identify them and take action. The Laboratory Scientist advised the Court in writing prior to the inquest that she accepted she had not followed the referral protocol for those first two critical blood results. The Laboratory Scientist advised she interpreted the clinical details incorrectly, as not being a new presentation, and that is why she did not refer the films to a Haematologist in accordance with protocol HM026.[16]

24. Although Dr Paramaswaran also did not recall receiving a telephone call about the 5 October 2021 results, he did remember seeing Colin on 8 October 2021 to discuss the blood results and it was noted that he had neutropenia on two sets of bloods by that stage. Dr Paramaswaran gave evidence he tried to get a good history from Colin at that time, to try to understand the context of the results. Colin stated during the consult that he still felt well and indicated he had recently had an intraarticular steroid injection into his knee. The information about a steroid injection fitted with Dr Paramaswaran's differential diagnosis of medication possibly being the cause of the neutropenia as he understood at the time that steroids can have an immunosuppressant effect and cause neutropenia, although he now accepts it has the opposite effect (causing neutrophilia).[17]

25. As a result, Dr Paramaswaran told Colin to repeat the blood tests in three weeks (although he couldn't recall why he chose this time period).[18] If the tests still showed Colin had neutropenia, then he would be urgently referred to see a Haematologist for an opinion and further investigations. Dr Paramaswaran gave evidence he did discuss with Colin the possibility of giving him a non-urgent referral to see a Haematologist as an outpatient at that stage, without waiting for the next blood test, in order to get

[13] Exhibit 1, Tab 8.
[14] Exhibit 1, Tab 8.
[15] T 23; Exhibit 1, Tab 11.1 and Tab 12.1.
[16] Exhibit 1, Tab 12.1.
[17] T 21; Exhibit 1, Tab 11.1 – Second Statement.
[18] Exhibit 1, Tab 11.1 – Second Statement.

him in the system as an appointment can take time. However, because he felt well, Colin indicated he was content to wait until after the next round of blood tests.[19]

26. Colin was also given a referral to a sleep specialist (for his sleep apnoea), at his request, at the end of the consult. This was because Colin mentioned he was feeling a bit tired at times, often coinciding with not using his continuous positive airway pressure (CPAP) machine, and he hadn't seen his sleep specialist for three years, so it was felt he would benefit from a review. It is possible that some of his tiredness may have been due to his haematological malignancy, but at the time Colin associated it with when he wasn't using his CPAP machine at night. [20]

27. At the inquest, Dr Paramaswaran gave evidence the general timeframe to get a non-urgent Haematologist appointment in the South West at that time was more than a month, so even if Colin had agreed to the non-urgent referral at that time, it is unlikely to have made any difference.[21]

28. Mrs Nicholson remembered her husband told her after this appointment that the results came back that his white blood cell count was a bit low. Colin indicated his doctor had said it was probably due to him having had a cortisone injection, so it was suggested he wait three weeks and then have a repeat blood test.[22]

BLOOD RESULT – 2.11.2021

29. Colin had been given the pathology referral at his appointment on 8 October 2021. After following the doctor's advice and waiting for three weeks, on Tuesday, 2 November 2021 Colin went and had more blood taken.

30. The pathology results for this blood sample showed "marked neutropenia with abnormal population of abnormal lymphoid cells/blasts and nucleated red cells". It was noted on the pathology results that the film features were "consistent with a primary haematological malignancy"[23] and urgent referral for bone marrow assessment was recommended. The same Laboratory Scientist had analysed the blood sample and she had noted the abnormalities found were considered to be critical limits, so this time she had referred Colin's blood film to QEII laboratory for a Haematologist review. As she had done previously, the Laboratory Scientist called Dr Paramaswaran in relation to the results, but she could not recall the exact conversation given the length of time that has passed.[24]

31. Dr Paramaswaran said he only vaguely recalled receiving the phone call from the Laboratory Scientist,[25] but he did recall also receiving a call from the Haematologist/Pathologist at QEII (who we know was Dr Rebecca Howman). He

[19] T 20 – 22; Exhibit 1, Tab 11.1 – Second Statement.
[20] T 20 – 22, 41 - 42; Exhibit 1, Tab 11.1 – Second Statement.
[21] T 23.
[22] Exhibit 1, Tab 11.2.
[23] Exhibit 1, Tab 11.2.
[24] Exhibit 1, Tab 12.1.
[25] T 24.

recalled the Haematologist "was very concerned"[26] although Dr Rebecca Howman's recollection of their conversation suggested she did not think Dr Paramaswaran appreciated her level of concern.

32. Dr Rebecca Howman (Dr Howman) gave evidence that on the morning of 3 November 2021 she had reviewed a tray of Colin's blood films (basically a glass slide of the blood sample to view down a microscope) sent by the Laboratory Scientist, as per the protocol, for Haematology review. The results from the analyser machine had flagged a couple of things, including the white cell count, the neutrophils and the blast cells. Dr Howman observed that Colin also had low haemoglobin, nucleated red blood cells (which should only be in bone marrow) and macrocytosis (large cell anaemia). Dr Howman commented that even before looking at the blood film, these results were flagging very significant abnormalities.[27]

33. When Dr Howman examined the blood film, she saw a population of abnormal cells that were clearly very large abnormal malignant cells. She found it very difficult to actually categorise the morphology of the cells, but they appeared to be blasts or abnormal lymphoid cells and it was apparent there was an aggressive malignancy that required further testing. Based on the results, Dr Howman was concerned that Colin had acute leukaemia or aggressive lymphoma. Dr Howman rang the referring GP, Dr Paramaswaran, immediately and told him there was an acute haematologic malignancy present, and the patient needed to be referred urgently for a bone marrow biopsy to confirm. By that information, Dr Howman said she intended to convey that there was a malignancy that was growing very rapidly and urgent action was required to make a diagnosis and then consider what treatments might be available.[28]

34. Dr Howman gave evidence at the inquest that from her experience, she was aware that with leukaemia and aggressive lymphoma, a patient can deteriorate within hours or days, which was her reason for making an immediate phone call to the GP so that they could take action. Dr Howman explained that from her perspective, without knowing the patient, she could not suggest any particular course of action as that is a clinical decision for the treating GP, but it was her job to urgently communicate the results so that the GP could then consider what course of action to take.[29]

35. Dr Howman recalled that when she spoke to Dr Paramaswaran on the telephone, she got the impression he was very busy and felt he was being interrupted in his work, because this was the second call he had received from PathWest about the blood results. This was because the Laboratory Scientist had already called him about the low neutrophil count. Dr Howman explained that she was the Haematologist who had reviewed the blood film and that she had seen abnormal blast cells that indicated an acute haematological malignancy. She recommended that Colin should be referred to Haematology for urgent bone marrow biopsy.[30]

[26] T 24.
[27] T 76; Exhibit 1, Tab 14.
[28] T 77 – 78; Exhibit 1, Tab 14.
[29] T 78 - 79.
[30] T 78 – 79; Exhibit 1, Tab 34.

36. Dr Howman gave evidence at the inquest that if the patient, Colin, had been clinically unstable, then she would have expected him to be sent to the closest Emergency Department (ED) and he could then be transferred to the tertiary hospital. If, on the other hand, he was more stable, then she would have expected he would be directly referred to a tertiary hospital such as Fiona Stanley Hospital, so he could be seen as quickly as possible. Other haematological experts gave similar evidence that this would have been the most appropriate course of action, given the seriousness of the situation.[31]

37. Dr Paramaswaran interpreted the notes from the pathologist on the blood results, along with the verbal information provided by Dr Howman, as indicating that Colin should be urgently recalled for medical review. If he was unwell then he should be referred to the ED, and if he was stable, then he should be urgently referred to the Haematology Service for review by a Haematologist.[32]

38. Mrs Nicholson received an urgent telephone message from the Collie River Valley Medical Centre the following day, being Wednesday, 3 November 2021. She passed on the message to her husband and Colin arranged to return to the medical clinic to see his doctor the next day.[33]

39. The Collie River Valley Medical Centre notes show Colin came back to see Dr Paramaswaran on 4 November 2021. Dr Paramaswaran gave evidence he was fully booked, but squeezed Colin in between other appointments that day so that he could review him as soon as possible. The notes indicate he "presented after recall" to discuss the blood results. Colin was noted during the consult to report he had been increasingly lethargic for the last two months but seemed otherwise well. Colin was told by Dr Paramaswaran that he needed urgent haematological review and bone marrow assessment. Dr Paramaswaran completed a referral to South West Haematology Service at Bunbury Regional Hospital, which was said to have been faxed to the Service that day.[34] A copy of the referral is in the medical notes and it shows that Colin was referred for urgent review, opinion and management in relation to his blood results, which showed neutropenia and atypical lymphocytes, and he had been advised to have an urgent haematological review for bone marrow assessment for a primary haematological malignancy. Dr Paramaswaran gave evidence that he handwrote 'urgent' on the referral so that it wouldn't get missed.[35]

40. Dr Paramaswaran indicated that his expectation at the time of completing the urgent referral was that Colin would be reviewed by a Haematologist within two to three weeks, if not sooner. Dr Paramaswaran also indicated that his practise with urgent referrals was to advise his patients that they should follow up with the referral service to make an appointment if they had not been contacted within 48 hours and also to let the GP practice know so they could also follow it up and ensure the referral had been received. Dr Paramaswaran explained that he generally provided

[31] T 80 – 81, 381.
[32] T 24 - 25; Exhibit 1, Tab 11.1.
[33] Exhibit 1, Tab 5.
[34] Exhibit 1, Tab 11.1 and 11.2
[35] T 25; Exhibit 1, Tab 11.3.

this standard advice given past experience of referrals getting lost within the public referral system, particularly during the COVID-19 pandemic.[36]

41. At the time he completed the haematological referral, Dr Paramaswaran was aware that a new haematology service had just started in the region. Previously, his patients requiring haematology services had been referred to Fiona Stanley Hospital in Perth, but he had been told by a registrar at Fiona Stanley Hospital to now directly refer patients to the South West Haematology Service at Bunbury Regional Hospital as they were likely to be seen more quickly and it would also be more convenient for his patients. Accordingly, Dr Paramaswaran understood that by sending the referral to the South West Haematology Service, he was bypassing the Public Central Referral System (CRS) and speeding up the referral process. The evidence now shows the referral did end up back with the CRS, but that was not his intention at the time. Dr Paramaswaran gave evidence he thought he also rang the South West Haematology Service and spoke to someone to tell them the referral was being sent through. He couldn't recall who he spoke to at the time, but thought it was likely a nurse or receptionist, and definitely not a Haematologist.[37]

42. I asked Dr Paramaswaran whether he considered sending Colin to the Bunbury Regional Hospital ED instead at that time. Dr Paramaswaran explained that given Colin appeared well and stable at the time, he believes Colin would have been told that he should be seen in the haematology outpatient clinic as he was not acutely unwell and there were no haematology specialists based at Bunbury Regional Hospital, so he did not consider an ED presentation was an appropriate step at the time. However, Dr Paramaswaran did state that he was aware that neutropenia with fever is concerning, and believes he advised Colin to either come back to the Collie River Valley Medical Centre or attend Collie Hospital ED if he developed a fever or otherwise felt unwell.[38]

43. Dr Howman gave evidence that if Colin was stable, then she agreed there was more scope for planning and working with a haematologist at the receiving hospital, but in her opinion a simple referral to the South West Haematology Service, which is staffed remotely by clinicians from Fiona Stanley Hospital, was not sufficiently urgent action. She expressed the view that this was a very urgent situation where there was potential for the patient to deteriorate quickly, so if he was clinically stable then she would have recommended that the GP call through to either the Consultant Haematologist or Haematology Registrar at Fiona Stanley Hospital to negotiate a way of getting the patient ideally seen within 24 hours, so that they could be assessed and have diagnostic workup before they deteriorated. However, Dr Howman's conversation with Dr Paramaswaran had been very short, and he hadn't asked any questions, so they had not discussed this issue at the time.[39]

44. Dr Simon Kavanagh (Dr Kavanagh), who is the Head of Department where Dr Howman works, suggested that in the future, if a Haematologist in his department felt they were not having a sufficiently detailed conversation with a GP due to the GP

[36] Exhibit 1, Tab 11.1.
[37] T 23, 25, 27 – 28, 33 - 35; Exhibit 1, Tab 11.1 – Second Statement and 11.3.
[38] T 29, 41 - 42; Exhibit 11.1 – Second Statement.
[39] T 80 – 81, 86.

being busy, it would be best practice for the Haematologist to ask the GP to call them back when they are free, as they have some important results to discuss.[40] In hindsight, this may have been helpful given the events that then occurred, but at the time it seems that Dr Howman and Dr Paramaswaran both felt that, although the conversation was brief, they had exchanged sufficient information for a treatment plan to be initiated.

45. Dr Paramaswaran did not see Colin again or receive a call back from him or the Haematology Service, so he did not have any further involvement in Colin's treatment.[41]

URGENT HAEMATOLOGY REFERRAL

46. Mrs Nicholson recalled that after her husband finished the appointment with Dr Paramaswaran, he rang her and told her that his white blood cell count was very low and he had been given a referral to have some tests done. He also said he may need to see a Haematologist. She told him to send off the form as soon as possible and he replied that "the girls at the surgery had sent it off whilst he was there"[42] and he had seen that "the referral had "URGENT" in big letters written across it."[43]

47. Colin did not hear anything from the South West Haematology Service. Dr Paramaswaran was aware at the time that the practice had been having a lot of issues with referrals going missing or getting lost in the system, and he had told Colin to follow up with the service if he had not heard from them within 48 hours. Following this advice, Colin rang the South West Haematology Service later that week to inquire about his appointment. His wife recalled that he was told that they had not received the referral and that Colin should go back to the surgery and ask them to re-send the referral. He did so, and told his wife the staff at the Collie River Valley Medical Centre had resent it and they also rang the South West Haematology Service to make sure they had received it. It was clarified at that time that the South West Haematology Service had changed the fax number, which was why it had not been received the first time. Accordingly, it was faxed a third time.[44]

48. Dr Helen Van Gessel (Dr Van Gessel) is the Executive Director of Clinical Excellence for the WA Country Health Service (WACHS). Dr Van Gessel reviewed this case and, after making some enquiries, established that Dr Paramaswaran's referral for an urgent haematological review for bone marrow assessment was sent to Bunbury Regional Hospital on 4 November 2021. The referral indicates it was originally sent to an email account that had been deactivated on 30 September 2021. There is no evidence of any phone conversations, but it seems there were then conversations between Bunbury Regional Hospital staff and Collie River Valley Medical Centre staff, and ultimately the referral was re-directed to the CRS, as it was seen to be 'in-scope of CRS' as it was a haematology referral,

[40] T 376 – 378.
[41] Exhibit 1, Tab 11.1.
[42] Exhibit 1, Tab 5, p. 1.
[43] Exhibit 1, Tab 5, p. 1.
[44] T 29; Exhibit 1, Tab 5 and Tab 11.1 – Second Statement, [12].

and as it apparently wasn't appreciated that it was urgent despite the fact Dr Paramaswaran had handwritten the word on it.[45]

49. The CRS was introduced in 2014 by the Department of Health to manage external referrals for patients requiring a first medical specialist outpatient appointment within the public health system. It created a system to review and prioritise referrals and allocate them to the most appropriate health site for all specialities and all outpatient services. The CRS initially covered only the Perth metropolitan area, but it was later expanded to include regional public outpatient services. Relevant to this inquest, the CRS only commenced accepting external referrals for the Bunbury Regional Hospital Haematology Service from 11 October 2021. [46]

50. Processing ordinarily involves a CRS nurse, with the assistance of clerical staff, reviewing the referral to confirm that clinical and demographic information has been provided, linking the patient to any previous public patient health care record and assigning the referral to the appropriate hospital site. It is then sent to the relevant hospital site for triaging, prioritisation and scheduling of outpatient appointments.[47]

51. There is evidence before me that the CRS policy distinguishes between patients requiring urgent or immediate (within 7 days) review and routine referrals, with urgent/immediate referrals outside the scope of the CRS due to the time (usually several days) it takes to process a referral. In cases requiring urgent/immediate referral, the CRS policy is for the GP to directly refer the patient to the hospital site following a call by the GP to the clinical team at the hospital site. If, however, an urgent/immediate referral that is high risk is mistakenly sent through to CRS, the CRS would send it through to the relevant hospital site rather than sending it back to the GP, to reduce any risk to the patient.[48]

52. In order to perform this function, the CRS Policy set Key Performance Indicators (KPI's) that all referrals will be opened and screened for priority within one business day of receipt, and immediate and priority referrals will be processed to site within one business day of receipt, with routine referrals to be processed within a longer period of three days.[49]

53. In November 2021, the CRS was experiencing a backlog of referrals and was well behind in meeting these KPI's, with a referral processing delay of seven to eight business days. Clinical Nurse Manager/Specialist Paul Hughes (Nurse Hughes) was employed by CRS but had been seconded to Public Health Operations during the COVID-19 pandemic. Due to the backlog at CRS, Nurse Hughes returned to CRS on 8 November 2021 as a Clinical Priority Access Nurse (CPAN) to assist with clearing the backlog of referrals.[50]

[45] T 389, 407 - 408; Exhibit 1, Tab 37.
[46] T 47; Exhibit 1, Tab 32.
[47] T 47; Exhibit 1, Tab 32.
[48] T 47; Exhibit 1, Tab 32.
[49] Exhibit 1, Tab 32.
[50] Exhibit 1, Tab 33 and Tab 34.

54. At the relevant time, referrals were received from GP's electronically by HealthLink (an IT network that stores and shares patient data) or via fax. CRS used SharePoint as its document management system, so all referrals received via fax were uploaded to SharePoint. Once a referral was received, it was allocated to a CPAN, such as Nurse Hughes, who then opened the referral and reviewed it. If the referral was within the scope of the CRS, it was accepted for processing and the CPAN would add some information and allocate the referral to a health site and the specialty required, then the referrals would be sent within SharePoint to a clerical staff member to review the referral and ultimately send the referral to the site in SharePoint (a process known as 'clerking'). If the referral was not within the scope of CRS, it would be forwarded on directly to the hospital site by the reviewing CPAN, by either email or fax. The usual timeframe for the referral to be processed and referred to site was within three business days of being received, but the backlog meant this time frame had blown out to around 8 to 10 business days of being received, which was up to three times the usual period.[51]

55. Nurse Hughes gave evidence when he started back at CRS, the staff were working through a backlog of around 8000 unopened referrals. Nurse Hughes understood there is an inherent risk with a referral sitting for a long period of time without review, so he was working with the rest of the CRS staff to try to clear the backlog as quickly as possible, while noting there were still a large number of new referrals coming in every day.[52]

56. Nurse Hughes explained that although the KPI was for all of the referrals to be opened and assessed within 24 hours, there were a large number of referrals that had not been screened. As part of the process, CRS implemented a procedure whereby all referrals were opened and screened by a clinical nurse for urgency (assessed by reference to a number of clinical factors) in what was known as a 'front end' role. Urgent referrals identified by the 'front end' nurses were processed as a priority and referred directly to site, usually within 24 hours. Referrals deemed 'non-priority' were processed as quickly as possible by other CPAN's, with the oldest referral being processed first and then working through the backlog chronologically.[53]

57. At the same time, a letter was sent to medical practices on 2 November 2021 advising them there CRS was experiencing a referral processing delay of approximately seven business days and reminding them to refer urgent referrals directly to a hospital site.[54] Dr Paramaswaran and Dr Peter Wutchak (Dr Wutchak) both gave evidence they did not recall seeing this notice, but it would likely have gone to the Medical Centre's Practice Manager, so they may have received such a notice at the practice without them seeing it.

58. In any event, Dr Paramaswaran made it clear in his evidence that he did not intend to send Colin's referral to CRS. Instead, he thought he had bypassed CRS by sending the referral directly to South West Haematology Service, which he had become aware had recently began taking local referrals. A copy of the referral in the medical

[51] T 48 – 49; Exhibit 1, Tab 34.
[52] Exhibit 1, Tab 32 and Tab 34.
[53] T 48 – 55, 65; Exhibit 1, Tab 34.
[54] Exhibit 1, Tab 32.3.

notes shows it was addressed to the South West Haematology Service on 4 November 2021 and Dr Paramaswaran requested urgent review.[55] However, it seems from the evidence that due to problems with a change in fax number, the Collie River Valley Medical Centre staff were ultimately given a fax number for CRS and that is where the referral ended up.

59. The CRS records show that Colin's referral, dated 4 November 2021, was received by CRS via fax and uploaded to SharePoint on 8 November 2021. It was not opened for 10 days.[56]

60. On 18 November 2021, Nurse Hughes was working at CRS in the 'front end' role. Still working through the backlog, the CRS staff were starting to work on the referrals from 8 November 2021 on that day. Although he has no independent recollection of doing so, records show that on this day Nurse Hughes opened Colin's referral at 8.21 am. It's clear the uploaded referral Nurse Hughes reviewed had Dr Paramaswaran's handwritten notation, "Urgent!" on it. The records indicate that Nurse Hughes did not mark the referral as a priority. Nurse Hughes indicated that the notation of urgent on its own was not determinative of whether the referral would be treated as a priority by CRS, but he accepted at the inquest he should have marked it as a priority. However, for reasons that he could not recall, Nurse Hughes also accepted he did not mark it as a priority at the time.[57]

61. Although he did not mark the referral as a priority, it was still opened and reviewed by CPAN Natalie Birch (Nurse Birch) five hours later, at 1.10 pm, on the same day. She could not recall why she collected the referral to process so quickly, given it had not been marked as a priority, although Nurse Hughes' evidence was that they were working on the referrals from that date, so it was chronologically due to be processed. Nurse Birch put the referral through, and it was 'clerked' and allocated to Bunbury Regional Hospital Haematology Service. However, shortly after, at 1.47 pm, the referral was closed as CRS became aware that Colin was deceased. Indeed, he had died that very morning.[58]

62. At the inquest, Nurse Birch gave evidence that she recalled Colin's referral being marked as 'urgent' and she looked at the referral and read that there was a reference to a need for the patient to have a bone marrow biopsy. Nurse Birch has haematology experience, so she had an idea of what the doctor might be looking for, and she appreciated that it was an urgent referral. At that time, she had been told that they could not change the priority to urgent if the senior nurse had marked it as a non-priority. Instead, she simply took it to the clerk for processing so that it could effectively 'jump the queue' and get processed faster. Nurse Birch gave evidence that there have now been changes to the system, so staff can change the priorities, where required, and the KPI for all referrals to be opened and assessed within 24 hours is being met, although there is still a backlog for processing non-priority referrals.[59]

[55] Exhibit 1, Tab 26.
[56] Exhibit 1, Tab 34.
[57] Exhibit 1, Tab 34.
[58] T 58 – 60, 342; Exhibit 1, Tab 34 and Tab 35.
[59] T 92 – 94.

REVIEW BY DR WUTCHAK – 15.11.2021 - AM

63. On the morning of Monday, 15 November 2021, Colin told his wife he had found a lump under his right armpit. She checked it and found the lump was about the size of a walnut. Mrs Nicholson was concerned and told her husband he needed to see a doctor. She offered to go with him, but he said he would go by himself. He left their house and went to the Collie River Valley Medical Centre.

64. Colin was seen by a different GP at the Collie River Valley Medical Centre that day as Dr Paramaswaran was not available. Colin saw Dr Wutchak just before 11.00 am on the morning of 15 November 2021. Dr Wutchak is also a GP obstetrician and GP anaesthetist and he has been working in the role as a GP/on-call emergency doctor for over 25 years, so he was very experienced in all kinds of presentations, but he was not Colin's regular doctor.[60]

65. It was recorded in Dr Wutchak's notes that Colin was awaiting an appointment time to get a bone marrow biopsy, which he expected to occur in one to two weeks. Dr Wutchak understood that Colin was being investigated for suspicion of leukaemia as a result of his abnormal white cell count. At the appointment, Colin raised his concern about a new swelling in the right axilla (near the shoulder joint). Dr Wutchak recalled the lump was firm, consistent with an enlarged lymph node and suspicious of malignancy. Noting his possible leukaemia diagnosis, Dr Wutchak thought it was likely the swelling was part of that disease process, rather than a new disease process. The swelling needed evaluation, so Dr Wutchak referred Colin for an ultrasound. No observations were taken at the appointment, but Colin had appeared well at the time and he did not make any complaint of fever. Dr Wutchak accepted he may have mentioned a mild headache, given a later note made that afternoon by a Nurse Practitioner, but he did not recall that was a significant part of the consultation.[61]

66. Dr Wutchak could not recall the specifics of what he said to Colin at the end of the appointment, but his usual practice is to advise patients, particularly those who are neutropenic, that if they became unwell they should present to hospital. I note this is what Colin did that afternoon. Dr Wutchak had anticipated Colin would otherwise return to see his usual GP, Dr Paramaswaran, for follow-up, so he wasn't planning to see him again.[62]

67. I note at this stage that the expert Haematologist, Dr Ram Tampi (Dr Tampi) commented at the inquest that if Dr Wutchak was not party to the comments made by the Haematologist then, given Colin wasn't feeling unwell and he just presented with a lump, his decision seemed reasonable even though, in hindsight, it would have been appropriate for Colin to be sent to Bunbury Regional Hospital. Therefore, there was no criticism of Dr Wutchak's approach at this time, based on the information before him.[63]

[60] T 234 – 237; Exhibit 1, Tab 15.
[61] T 196, 237 - 244; Exhibit 1, Tab 11.3 and Tab 15.
[62] T 196, 237 – 244, 277; Exhibit 1, Tab 11.3 and Tab 15.
[63] T 108.

68. Colin returned home and told his wife he had seen Dr Wutchak and had another referral, which the staff at the Collie River Valley Medical Centre had again faxed for him. Later that afternoon, Colin started to feel ill. His wife took his temperature and noted it was slightly above normal. He then became lethargic, so his wife decided to take him to the hospital for medical review.[64]

FIRST PRESENTATION TO COLLIE HOSPITAL – 15.11.2021 - PM

69. Colin presented at Collie Hospital ED at around 1.00 pm that afternoon. He was initially seen by Nurse Practitioner Beth Eyre (Nurse Practitioner Eyre) for triage. Nurse Practitioner Eyre recalled he complained of a headache, a fever and a lump under his arm that he had seen a doctor about that morning. Nurse Practitioner Eyre triaged Colin as an ATS 3 for a low level headache and fever. Nurse Practitioner Eyre didn't recall having any further interaction with Colin that day.[65]

70. Registered Nurse Margaret Swan (Nurse Swan) was on duty for the day shift that day, which was from around 7.00 am until 3.30 pm.[66] She was on duty with Nurse Practitioner Peter Woodman (Nurse Practitioner Woodman) and later another Nurse Practitioner. Nurse Swan was first asked about this matter in mid-2023, and by that time she had only a limited recollection of events. However, she gave evidence she did recall seeing Colin when he had been put in a bed in bay 1. A Nurse Practitioner did his triage form before Nurse Swan spoke to Colin and made a few more notes about his history (including a low white cell count) and started his treatment in company with Nurse Practitioner Woodman, who had seen and assessed Colin. Nurse Swan agreed she made a note that Dr Jan Van Vollenstee (Dr Van Vollenstee) was to be called, but she was definite that the call was actually made by Nurse Practitioner Woodman.[67]

71. Nurse Swan gave evidence she did not think she called the doctor herself, as Nurse Practitioner Woodman had already made the call and there was no need for her to ring a second time. She understood the Nurse Practitioner had to call the doctor as Colin had seen a GP that morning, which made this his second presentation, and accordingly he had to be reviewed again by a GP, consistent with the sepsis guidelines.[68]

72. Nurse Swan is a very experienced nurse and she gave evidence she had a general idea that Colin had presented with likely emerging sepsis, based on the information that he had rigors in the morning and presented with a fever, and there was a general understanding he must have been diagnosed with cancer or leukaemia. She said that she did not discuss this possible diagnosis in detail with Nurse Practitioner Woodman as they had a good working relationship and were both experienced nurses, so it was understood between them why they were taking steps such as the IV fluids and the blood tests, which were looking for infection markers. She gave

[64] Exhibit 1, Tab 5.
[65] T 310 - 312; Exhibit 1, Tab 19.1 and 19.3.
[66] T 192.
[67] T 193; Exhibit 1, Tab 18.
[68] T 196 – 1978

evidence she was expecting he would be prescribed IV antibiotics by the doctor, once the blood results came back.[69]

73. Nurse Swan went on to manage other patients who presented to the ED, and she finished her shift at 3.30 pm without any more specific involvement in Colin's care.[70]

74. In a comprehensive electronic progress note made in BOSSnet at 3.32 pm by Nurse Practitioner Woodman, it was recorded that Colin had presented with a headache and fever. It was also noted that Colin was awaiting bone marrow biopsy for investigation of pancytopenia (low white cells, platelets and haemoglobin). Colin reported that he had seen a GP that morning for a lump in his axilla. He was reportedly afebrile (not feverish) and had a mild frontal headache at the time he had seen the GP, Dr Wutchak, but since that time he had developed a fever and rigors.[71]

75. Nurse Practitioner Woodman advised in a report to the Court that he remembered this presentation as he was surprised that Colin had been later discharged that day, and he also was aware of his diagnosis of sepsis the next day. Nurse Practitioner Woodman stated he hadn't expected to find any new findings in his physical assessment, given Dr Wutchak had seen him that morning, but his primary concern was to look for signs of infection, given Colin was being investigated for leukaemia.[72]

76. Nurse Practitioner Woodman recorded that Colin's vital signs were within normal limits. However, he remained febrile (feverish), with a temperature of between 38.8°C and 39.1°C, and he also had noticeable rigors (shivering and shaking often associated with fever) while in the ED, which raised Nurse Practitioner Woodman's level of concern that he had an infective process. Blood was taken for testing, including blood cultures, although Nurse Practitioner Woodman conceded later he wished he had also requested a venous blood gas to check lactate level.[73]

77. Nurse Practitioner Woodman recorded the following results for Colin in his medical notes:[74]

- WCC (White Cell Count) 39, awaiting WC differential but neutrophils 0.6
- Low platelet count
- Low red cell count
- CRP (C Reactive Protein – Serum) 75.

78. He believes some of the results, in particular his white cell count and his neutropenia, were telephoned results from PathWest.[75]

[69] T 196, 225 - 227.
[70] T 196.
[71] Exhibit 1, Tab 27.5.
[72] Exhibit 1, Tab 16.1.
[73] Exhibit 1, Tab 16.1.
[74] Exhibit 1, Tab 27.5.
[75] Exhibit 1, Tab 16.1, Tab 16.3 and Tab 24.1.

79. Colin was given an anti-inflammatory, ketorolac, and intravenous paracetamol along with some intravenous fluids.[76] Nurse Practitioner Woodman stated that he telephoned the on-call GP, which was Dr Van Vollenstee, and asked him to review Colin because Nurse Practitioner Woodman was aware that Colin's probable diagnosis of leukaemia and presenting symptoms were beyond his capacity to diagnose and manage appropriately. In essence, they required a doctor's expertise. Nurse Practitioner Woodman felt he made his concerns clear in the telephone conversation and had expected that Dr Van Vollenstee would request specific antibiotic coverage and would possibly request further diagnostic tests. Instead, the doctor wanted to wait for the complete white cell differential before he would review the patient. Nurse Practitioner Woodman stated he felt a little uncomfortable with the delay, but he was reassured that an experienced doctor had reviewed Colin that morning and the doctor who would be reviewing Colin in the ED later was also very experienced and was usually prompt in attending the ED when requested. Therefore, Nurse Practitioner Woodman presumed Dr Van Vollenstee had a good reason to await the full white cell count differential.[77]

80. Dr Van Vollenstee provided a statement to the Court dated 22 August 2024 and he also gave evidence at the inquest. Dr Van Vollenstee has extensive experience as a specialist GP in South Africa and Australia. At the relevant time, Dr Van Vollenstee worked as a GP with Dr Paramaswaran, Dr Wutchak and a number of other GP's at the Collie River Valley Medical Centre and shared duties with them as the on-call visiting medical officer at the Collie Hospital ED. He retired for a short period from mid-2022 to the end of 2023 and left Collie, but at the time of the inquest Dr Van Vollenstee had resumed working as a GP part-time in Pinjarra.[78]

81. Dr Van Vollenstee explained that when rostered 'on call' in Collie at the relevant time, he had been required to see 'walk-in patients' in the Collie River Valley Medical Centre during normal working hours and then if patients required non-urgent review at Collie Hospital, he would go and see them in his lunch hour or after he finished work at the medical centre. Alternatively, if they required urgent review, he would go straight away. For the 24-hour period of being 'on call', he would be the only medical practitioner rostered for the Collie Hospital ED and general ward. Therefore, on 15 November 2021 when Dr Van Vollenstee was rostered 'on call', he was the only medical practitioner covering the Collie Hospital ED and general ward from 9.00 am that morning until 9.00 am the following day.[79]

82. Dr Van Vollenstee gave evidence he remembered being contacted by Nurse Swan on the afternoon of 15 November 2021 and she asked him to review Colin at Collie Hospital. He did not recall speaking to Nurse Practitioner Woodman, only Nurse Swan, although Nurse Swan gave evidence she did not speak to Dr Van Vollenstee; only Nurse Practitioner Woodman spoke to him.[80] Dr Van Vollenstee recalled that it was a busy day and he had consulted with 50 to 60 patients that day at either the Collie Practice or the hospital. He remembered that

[76] Exhibit 1, Tab 27.5.
[77] Exhibit 1, Tab 16.1.
[78] T 121 – 122; Exhibit 1, Tab 33.
[79] T 122 - 123; Exhibit 1, Tab 33.
[80] T 148 – 149, 159 – 160, 164 – 166, 196.

Nurse Swan mentioned a headache and that they were waiting for some blood results but she did not say anything to suggest Colin required urgent review, so as per the usual practice, he went to see Colin after he had finished seeing the walk-in patients at the medical centre.[81]

83. I am satisfied from the other evidence, including the evidence of Nurse Practitioner Woodman's electronic entry made contemporaneously, that it was Nurse Practitioner Woodman who called Dr Van Vollenstee to discuss Colin's case, not Nurse Swan. I can't rule out that Nurse Swan or another female nurse made a follow up call, perhaps to check when he was likely to attend, but there is clear evidence Nurse Practitioner Woodman called Dr Van Vollenstee and discussed the case with him. Given the lapse of time, it is understandable that there are some gaps or confusion in witnesses' recollections, so I don't make any adverse finding in relation to Dr Van Vollenstee for not remembering this conversation.

84. Dr Van Vollenstee did not see Nurse Practitioner Woodman or Nurse Swan when he got to the hospital at 5.15 pm, although he was aware they were the two nurses who had been rostered to work in the ED during the day. Nurse Swan had entered some written notes at 1.40 pm indicating that Colin had been hot/cold the day before with a headache, prompting him to see a GP, and that day he had a headache, rigors and an elevated temperature at home. He had been reviewed by the Nurse Practitioner and was noted to have a temperature of 39˚C so IV fluids and IV Panadol had been commenced, bloods taken and Dr Van Vollenstee had been contacted.[82]

85. Dr Van Vollenstee went straight to see Colin when he got to the hospital. Dr Van Vollenstee recalls that Colin was not in the casualty waiting area but was on the general ward by that time in the emergency bed. Dr Van Vollenstee took a history from Colin and recalled that Colin had complained of headache, abdominal cramps and nausea. Colin also told him that he had a history of low white blood cells with a planned bone marrow biopsy to be performed and he had a lump in his right axilla that was to undergo an ultrasound examination.[83]

86. Colin's pain from his headache and abdominal pain had reduced by the time he was reviewed by Dr Van Vollenstee, noting he been given analgesia and fluid support and his headache had reduced, but Colin said he still felt "fuzzy".[84]

87. Dr Van Vollenstee indicated in his statement, signed 22 August 2024, and in his evidence at the inquest, that he "understood at the time that Colin was under investigation for a haematological malignancy, and that if he did in fact have leukaemia, he would be more susceptible to a viral or bacterial infection because his immune system would be compromised."[85] He noted that apart from his complaints, Colin otherwise looked well. He physically examined Colin and looked at Colin's vital signs recorded in his observations chart, which had last been taken at 4.04 pm.

[81] T 124 – 125; Exhibit 1, Tab 33.
[82] Exhibit 1, Tab 27.6.
[83] T 125 – 128; Exhibit 1, Tab 33.
[84] Exhibit 1, Tab 27.6 and Tab 33 [39].
[85] Exhibit 1, Tab 33 [33].

They were all within normal limits except his temperature, which was still elevated at 38.3˚C.[86]

88. Dr Van Vollenstee examined Colin's blood test results that were available, which showed elevated lymphocytes and CRP (an inflammation marker) and low neutrophils. Dr Van Vollenstee did not have access to Colin's earlier blood results that had been provided to the Collie River Valley Medical Centre at that time. He indicated they may have been available to the nurses at the hospital on the hospital's BOSSnet records system, but he didn't use BOSSnet and relied upon the nurses to access it for him, if required. Therefore, although he could see there were low neutrophils, he was unaware there was a history of persistent neutropenia. Dr Van Vollenstee interpreted the blood results as suggesting Colin had a viral infection.[87]

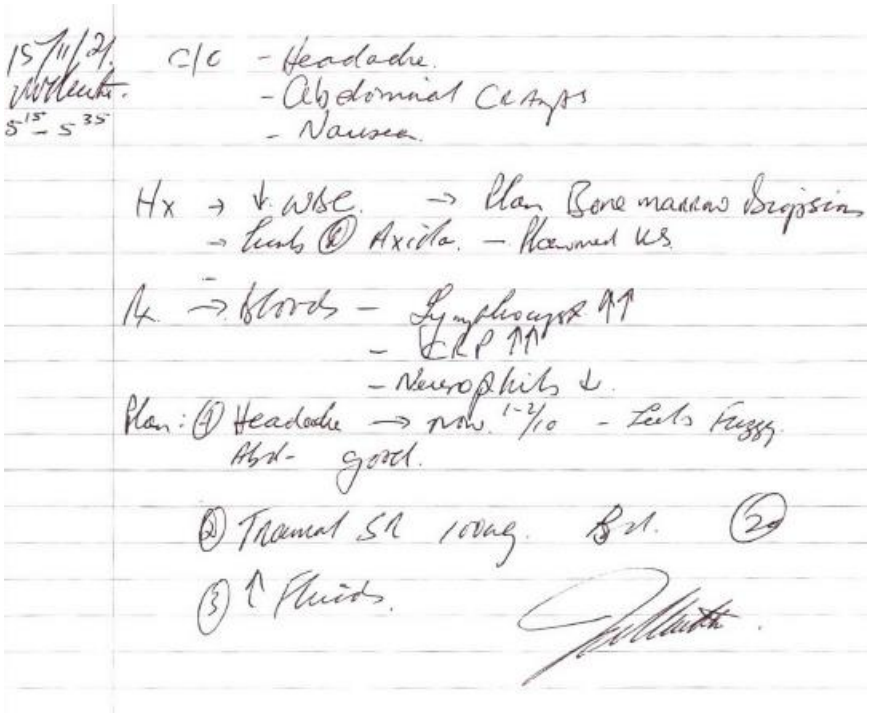
89. Dr Van Vollenstee stated that he read Nurse Swan's notes after doing his own examination, which provided information about the bone marrow biopsy, which he understood was for likely leukaemia. The notes also included a small reference to rigors, but he did not see any evidence of Colin experiencing rigors at the time of his review. Dr Van Vollenstee gave evidence he didn't use the electronic record system, so he did not read Nurse Practitioner Woodman's electronic progress note made at 3.32 pm.[88]

90. Based on the information he had read in the paper medical notes and from his own review, Dr Van Vollenstee formed a preliminary diagnosis that Colin was likely suffering from a viral infection, not a bacterial infection. Dr Van Vollenstee did not consider sepsis as an alternative preliminary diagnosis. He noted in his statement that Nurse Practitioner Woodman and Nurse Swan had not recorded any specific concerns about the possibility of sepsis or suggest commencing antibiotics in the notes, so he did not feel any of the information they recorded had pointed to concern about a bacterial infection. Based on what he saw himself, Dr Van Vollenstee thought a viral infection was the most likely cause of Colin's symptoms.[89]

91. Dr Van Vollenstee accepted at the inquest that in retrospect, there was a possibility for sepsis at that time, or at least a bacterial infection that was fulminating towards sepsis if he did not receive treatment, but on the day he felt all of the findings pointed towards a viral infection, which is why he did not commence Colin on antibiotics. Whilst he was aware there was a possibility that Colin had leukaemia, he did not know how far advanced his disease was at that stage and his logic was that if he was waiting for a bone marrow biopsy, his clinical situation was not urgent. He gave evidence he had not received any training or education from WACHS at that time on the Adult Sepsis Pathway or Neutropenia guidelines, which might have helped to prompt him.[90]

[86] Exhibit 1, Tab 33.
[87] T 128 – 133, 158; Exhibit 1, Tab 24.1 and Tab 33.
[88] T 136.
[89] T 128, 131; Exhibit 1, Tab 24.1 and Tab 33.
[90] T 132 – 134, 155; Exhibit 1, Tab 33.

92. Based on his preliminary diagnosis of viral infection, Dr Van Vollenstee formulated a treatment plan and wrote it in the paper medical notes, after Nurse Swan's entry. The entry read as follows:[91]



93. Colin was prescribed stronger pain relief in the form of tramadol slow release for his headache and a note was made for increased fluids. There was a dispute between the witnesses as to what the notation about the fluids meant. Dr Van Vollenstee gave evidence his intention was for Colin to be given increased intravenous fluids to deal with his slightly low blood pressure and for his reported fuzzy feeling.[92]

94. Dr Van Vollenstee gave evidence he did not think Colin required antibiotics as he thought it was a viral infection, not bacterial. If he had thought it was bacterial, he gave evidence he would have contacted an ED consultant to discuss which antibiotics to start him on, but that did not occur as his preliminary diagnosis was a viral infection only.[93]

95. Dr Van Vollenstee's evidence was that he did not discharge Colin at that point as he wanted to wait for the remaining blood cultures results, particularly the white cell count differential, before finalising the management plan. This was consistent with Nurse Practitioner Woodman's electronic note, made a few hours earlier.[94] Dr Van Vollenstee stated that he intended to conduct a follow-up review if he was still on duty when the pending blood culture results were returned. His reasoning was because he considered that they would indicate if there were bacterials or virals in Colin's bloods, which would confirm or disprove his suspicion that Colin was

[91] Exhibit 1, Tab 24.1 and Tab 33.
[92] T 134 – 135; Exhibit 1, Tab 33.
[93] T 134 – 135; Exhibit 1, Tab 33.
[94] Exhibit 1, Tab 27.5,

suffering a viral infection and not a bacterial infection, therefore not requiring antibiotics.[95]

96. According to Dr Van Vollenstee, the usual practice was that nursing staff would contact the on duty doctor when blood results were available, so the doctor could review them and the patient again. However, once the patient was discharged, care would be transferred back to the patient's usual general practitioners.[96] Dr Van Vollenstee referred to his entry in the medical notes and commented that he had not made a notation stating, "discharge home,"[97] which he stated was his usual practice when discharging a patient. He indicated he was not contacted again by a nurse from Collie Hospital overnight and he assumed that Colin was still at the hospital at that time. Dr Van Vollenstee stated that the first time he became aware that Colin had gone home was the following day when he was told by one of the nurses that Colin had telephoned his wife and asked her to 'fetch' him from the hospital and then they left. He could not recall the name of the nurse who told him this information, but he recalled they told him when he was at the hospital reviewing patients before his 'on call' shift finished at 9.00 am.[98]

97. Initially, this appeared to suggest that Colin may have simply left the ED of his own accord, which patients sometimes do. However, this seemed unlikely, given he would have had to take his own IV out and he went home with medication in an envelope and instructions as to when to take it. Further, other evidence from the ED electronic Audit Log clearly shows that Colin was recorded as being discharged home at 6.00 pm that night, around 25 minutes after Dr Van Vollenstee finished reviewing him at 5.35 pm. Later, at around 9.20 pm, the discharge was then formally entered by Nurse Practitioner Eyre, towards the end of her shift. Nurse Practitioner Eyre gave evidence she was not personally involved in Colin's 'discharge' at 6.00 pm that night, and she only did the electronic booking of his notes at the end of the evening. This then automatically populated the electronic Discharge Summary.[99] It was accepted on behalf of WACHS that it was, therefore, unlikely that Colin's departure from hospital was unexpected or before anticipated treatment was completed.[100]

98. The Nurse Practitioner who had reviewed Colin, Nurse Practitioner Woodman, also gave evidence that he had been absent from the ED when Dr Van Vollenstee came to review Colin, and he had been very surprised on returning to the ED to find out that Colin had been seen by Dr Van Vollenstee and discharged. Nurse Practitioner Woodman's expectation had been that Colin would be referred to Bunbury Regional Hospital for further assessment and management and "that presumptive antibiotic coverage would have been commenced."[101]

[95] T 129; Exhibit 1, Tab 33.
[96] Exhibit 1, Tab 33.
[97] Exhibit 1, Tab 27.6 and Tab 33 [68].
[98] T 140 - 142; Exhibit 1, Tab 33.
[99] T 314 – 316; Exhibit 2.
[100] T 391 – 394; Exhibit 1, Tab 37 [23].
[101] Exhibit 1, Tab 16.1, p. 2.

99. Dr Van Vollenstee acknowledged that the Discharge Summary created in relation to Colin's presentation that day recorded that the Discharge Plan was for Colin to go Home and he was discharged at 6.00 pm the same day. However, his evidence was that he did not authorise the discharge and did not at any stage approve Colin being sent home. Dr Van Vollenstee gave evidence if he had been asked, he would have said it was not appropriate for Colin to be discharged as "we don't have all the answers yet."[102] Dr Van Vollenstee also indicated that, as he had reviewed Colin, he was the only person who could discharge him, which was consistent with the evidence of other witnesses.[103]

100. I note that the ED Audit Log information does not actually record Dr Van Vollenstee as Colin's doctor that day, and instead it only shows Nurse Practitioner Peter Woodman and Nurse Swan as being involved in his care. This may be because Dr Van Vollenstee did not use BOSSnet, so he did not make any electronic entry in the notes. However, the written medical notes clearly show Dr Van Vollenstee was to be contacted and Dr Van Vollenstee did review him and it was generally agreed by the witnesses he was, therefore, Dr Van Vollenstee's patient and only he could decide to discharge Colin.[104]

101. Dr Van Vollenstee pointed to his direction that Colin should be given increased intravenous fluids as supporting his contention that he did not discharge Colin at that time. He gave evidence that as well as writing it down, he orally gave that direction to the nurse present in the ward. He could not remember the identity of the nurse, but it seems it was not Nurse Swan or Nurse Practitioner Woodman. Dr Van Vollenstee gave evidence he had intended for Colin to be given another litre or two of IV fluids and then check his blood pressure, and by that time, the blood differential count would hopefully be back. If Colin had tried to leave the hospital before then, he said he would have expected the nurses to call him and tell him the patient was leaving, so that he could speak to Colin himself.[105]

102. There were no witnesses called at the inquest who were able to give direct evidence as to exactly how Colin came to leave the hospital. There were no entries in the notes to indicate the staff from the hospital who were involved in sending Colin home, other than the electronic entry showing the time he left, and Nurse Practitioner Eyre's entry made a few hours after he had gone. It was generally agreed that the appropriate practice is for a nurse to make an entry in the notes when a patient is being discharged, and similarly if a patient discharges themselves against medical advice, but in this case there is nothing in the notes to assist.[106]

103. Dr Van Vollenstee was asked whether he did anything to follow up with Colin after he was told by a nurse that Colin had left the hospital, and he responded that he didn't as he was aware he was already being managed by another GP and had been referred to Haematology.[107]

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[102] T 138.
[103] T 139.
[104] T 135 – 136; Exhibit 1, Tab 33.
[105] T 136 – 139.
[106] T 140.
[107] T 142.

104. At the end of his written statement, Dr Van Vollenstee included some reflections. He indicated that with the benefit of hindsight, he now appreciated that on the afternoon when he reviewed Colin "there were some symptoms or signs (that is, temperature, rigors and CRP level) that could have been consistent with a diagnosis of bacterial infection needing antibiotics."[108] Dr Van Vollenstee also indicated that after reviewing the Neutropenia guidelines, he now appreciates that a patient with neutropenia and a temperature needs urgent antibiotics and accordingly, in the future he would change his treatment plan for such patients.[109] At the inquest, Dr Van Vollenstee confirmed his current understanding, after reading the report of Clinical Associate Professor David Mountain (Professor Mountain) and doing his own research, that any patient who has leukaemia or shows neutropenia with a temperature requires antibiotics, whether or not the impression is that it may only be a viral infection.[110] Dr Van Vollenstee also appeared to indicate that referral to a larger hospital ED would be appropriate, in such a case.[111] He has also done his own studies in relation to the diagnosis of, treatment and management of sepsis, as a result of this case.[112]

DISCHARGE FROM COLLIE HOSPITAL

105. I have included above Dr Van Vollenstee's notes of his plan for Colin, made after he reviewed him at 5.35 pm on 15 November 2021. Also noted above, Dr Van Vollenstee pointed to his direction that Colin be given more intravenous fluids as supporting his contention that he did not intend for Colin to be discharged. He also did not write in the notes "for discharge,"[113] which he gave evidence was his standard practice if he intended to discharge a patient.

106. In respect to the contention about the intravenous fluids, I note the hospital notes include a chart for Intravenous Fluid Treatment, which had been started by Nurse Practitioner Woodman at 2.15 pm, directing that Colin be given one litre of saline fluid at a specified rate, and Nurse Swan confirmed the IV had been put in place. There is no other entry in the chart, and specifically, no entry by Dr Van Vollenstee ordering more intravenous fluids.[114]

107. It was put to Dr Van Vollenstee that if he had intended to order the nursing staff to give Colin intravenous fluids in hospital, he would have written it in the Intravenous Fluid Treatment chart. Therefore, it was suggested to Dr Van Vollenstee that his instruction was, in fact, for Colin to increase his fluid intake at home. Dr Van Vollenstee disagreed with this proposition and maintained that his intention for his instruction about increasing fluids was for the nurses to increase the IV fluids he was already receiving in the hospital.[115]

[108] Exhibit 1, Tab 33 [79].
[109] Exhibit 1, Tab 33 [80].
[110] T 145 - 146.
[111] T 148.
[112] T 162.
[113] T 151, 199.
[114] Exhibit 1, Tab 27. 2, Intravenous Fluid Treatment Chart.
[115] T 153.

108. There is also a medication chart for that afternoon/evening, which shows Nurse Practitioner Woodman prescribed ketorolac, which was given at 2.14 pm, and Dr Van Vollenstee prescribed Tramal SR (tramadol slow release), 2 tablets, which was given at 5.40 pm.[116] In addition, Dr Van Vollenstee had written, as part of his treatment plan, Tramal SR 100 mg BD (twice daily) and then a number with a circle around it, which was either 2 or 20.[117]

109. Dr Van Vollenstee gave evidence that he had intended by the notation in his plan for Colin to be given two tablets, one in the morning and one in the evening, if needed, whilst remaining in the hospital.[118] It was put to Dr Van Vollenstee that the entry in the plan was actually intended to be a prescription for a take home dose of 20 tablets of the medication, as any medication to be given in the hospital would have been written in a medication chart. Dr Van Vollenstee disagreed with this proposition. He said he did not order take home medication, although he accepted this may have been misinterpreted by the nursing staff.[119]

110. It was also put to Dr Van Vollenstee that the reason there were no further notes after Dr Van Vollenstee's in the medical notes was because there was a plan to discharge Colin after Dr Van Vollenstee had reviewed him. Dr Van Vollenstee was, again, firm in his evidence that there was no plan to discharge him after his review. Dr Van Vollenstee agreed that once he had seen Colin and formulated a plan for his treatment, only he could discharge Colin, but he maintained he did not give instructions for Colin to be discharged that night.[120] He did, however, also make it clear he had not admitted Colin as a patient, and said he was simply being monitored as a casualty patient until the rest of the blood results came in. However, as Nurse Swan pointed out in her evidence, if that was the case, then why didn't he follow up the blood results overnight?[121] It seems clear from the evidence Dr Van Vollenstee did not hold a heightened concern for Colin, or he would have followed up.

111. Nurse Wendy Greenmount (Nurse Greenmount) is an Advanced Skilled Enrolled Nurse, and she was working at Collie Hospital on 15 November 2021 and had some interactions with Colin that day. Nurse Greenmount had not been asked to provide a statement, but she came along at short notice to give evidence at the inquest as it was apparent she had been involved in giving medication to Colin. Nurse Greenmount gave evidence she understood that two tablets in the medication chart reflected a plan to give Colin take-home medication, with her understanding she probably gave him one in the ED and one in an envelope to take at home later. Nurse Greenmount could not recall the circumstances in which Colin then left the hospital.[122]

[116] Exhibit 1, Tab 27.3, Medication Chart.
[117] Exhibit 1, Tab 27.6.
[118] T 143.
[119] T 152, 166.
[120] T 153 – 154, 166 - 167.
[121] T 207.
[122] T 426 – 427.

112. Nurse Swan was not present when Colin left the hospital, but she had experience working with Dr Van Vollenstee and her reading of his treatment plan was that Colin would be given a prescription for 20 Tramal tablets to take home. She also read his note about fluids as indicating oral fluids, noting that there was no documentation of further IV fluids on the IV chart and she would have expected him to add "Continue more IV fluids for the patient"[123] in the notes, if that is what he intended. She would also have expected Dr Van Vollenstee to prescribe IV antibiotics on the same chart, given Colin's presentation. Nurse Swan noted that at that time patients did not usually stay long in the ED, so she would have expected him to be admitted, transferred or discharged. Nurse Swan gave evidence that reading Dr Van Vollenstee's treatment plan left it open in her mind whether or not he intended Colin to be allowed home, and she assumed there would have been a verbal discussion between the doctor and a nurse to add to that information.[124]

113. Nurse Practitioner Woodman also stated that his interpretation of Dr Van Vollenstee's medication ordered would indicate take home medications, which he presumed was with the intent that Colin be discharged home. I note when he had returned from the general ward, after both Colin and Dr Van Vollenstee had left the hospital, he was also told Colin had been discharged.[125]

114. Nurse Sharyn Brown (Nurse Brown), who is also a very experienced nurse who worked for many years with Dr Van Vollenstee, also gave evidence at the inquest she would interpret the instruction for the two Tramal slow release tablets with the circle around them as "two tablets to take home."[126] Nurse Brown explained this was due to the type of medication, namely slow release, which was not something they would normally use in the ED, as well as how it was written. Nurse Brown interpreted the notation as indicating that Colin would have been given one tablet at the time in the ED, to start providing pain relief, then given the other tablet in an envelope for him to take some hours later at home. I note that is consistent with the evidence of Colin's wife that he came home with one tablet, with instructions to take it later that night. The other notation for Tramal in the treatment plan she also read as indicating a prescription for 20 tablets. Similarly to other witnesses, Nurse Brown also indicated she would have expected any instruction about IV fluids to be written in the Intravenous Fluids Chart. Nurse Brown also gave evidence that in her experience, Dr Van Vollenstee's notes were often brief and he did not necessarily always write the words "discharge home" if he intended the patient to be discharged, so in her opinion the omission of those words would not have been significant. In her experience, Dr Van Vollenstee would often give verbal instructions about a plan to discharge a patient. Nurse Brown agreed that she would then expect a nurse to document their actions in following through with such a plan, but she noted the ED is often very busy and sometimes it could be missed.[127]

115. Without labouring the point too much, I also note that Nurse Practitioner Eyre, who was involved in entering the electronic discharge for Colin on the night of 15

[123] T 207.
[124] T 202 – 207, 225 - 226.
[125] Exhibit 1, Tab 16.3.
[126] T 291.
[127] T 291 - 305.

November 2021, also gave evidence consistently with the other nurses that she interpreted Dr Van Vollenstee's plan as a discharge plan, for similar reasons. Nurse Practitioner Eyre indicated she believes she would have had a verbal conversation about the matter at that stage, but would also have looked at the notes and reviewed the case.[128]

116. Dr Wutchak also reviewed the treatment plan while giving his evidence, and he acknowledged that different doctors write things differently and commented that Dr Van Vollenstee was perhaps "not the best note-writer"[129] and there was a lack of clarity in the instructions. Based upon what he read, Dr Wutchak also interpreted Dr Van Vollenstee's notation as a prescription for 20 Tramal tablets, noting that 20 is the typical quantity for a prescription of that medication and the circle around it is generally a quantity notification for dispensing.[130] Dr Wutchak also interpreted the notation of a two with a circle around it in the medication chart as indicating that Dr Van Vollenstee had intended for Colin to be sent home with two tablets, rather than to be given a dose of two tablets.[131] Dr Wutchak explained that the pharmacy would have closed, so he assumed that the patient was being dispensed a small amount of analgesia to cover him overnight, before he could get his prescription filled the next day. Dr Wutchak gave evidence it is a very common practice at the hospital to discharge patients with a small amount of medication, often handed to them in a small yellow/orange packet, which is consistent with the description given by Colin's wife of Colin's medication he brought home that night.[132]

117. In relation to the instruction for increased fluids, Dr Wutchak gave evidence he interpreted that instruction as being for more intravenous fluids given Colin was already receiving intravenous fluids. However, he agreed with the nurses that such an instruction should have been charted by Dr Van Vollenstee, as it is similar to prescription medication. Without any entry being included in the Intravenous Fluids Chart, Dr Wutchak agreed with the nurses that it could be interpreted as an instruction for Colin to increase his fluids orally.[133]

118. There is no question, considering all of the evidence together, that at the very least Dr Van Vollenstee's notes left ambiguity as to whether he intended to discharge Colin home with an instruction to drink more fluids and take slow release pain medication, or keep him in and give him IV fluids while he waited for the remaining blood results, as he stated in his evidence. Therefore, it is possible that a nurse discharged Colin based upon a misunderstanding as to what Dr Van Vollenstee intended.

119. However, when I consider also:

- the absence of any notation in the Intravenous Fluids Chart;

[128] T 318 – 330.
[129] T 267.
[130] T 246.
[131] T 278 - 282.
[132] T 246 - 251.
[133] T 249 – 250.

- the evidence from witnesses that the medication notations were consistent with 'take home' medication;
- the fact he didn't follow up Colin's bloods overnight, nor when he returned to hospital the next day and Colin was no longer there;
- Dr Van Vollenstee's evidence that he considered the most likely diagnosis was viral infection and, accordingly, he did not include antibiotics as the treatment plan; and
- the general evidence a nurse would only discharge a patient on the instruction of the treating doctor, which would likely be communicated orally as well as possibly in writing,

I am satisfied it is more likely that Dr Van Vollenstee did decide to discharge Colin home that night.

120. I acknowledge the significant lapse of time before Dr Van Vollenstee was asked to provide an account of his care of Colin, which would have adversely affected his memory, and his notes were not detailed, so would not have greatly assisted him. Therefore, I wish to make it clear that I am not suggesting Dr Van Vollenstee was being deliberately untruthful, only that it is very possible that his recollection of events is flawed, given the time that has elapsed and the events that occurred afterwards, including his own health issues and temporary retirement.

121. In submissions provided on behalf of Dr Van Vollenstee after the inquest, it was reiterated that Dr Van Vollenstee is a dedicated general practitioner with extensive experience who was working in a challenging rural practice. However, he accepts that with the benefit of hindsight, and having heard the evidence of the expert witnesses, his failure to initiate immediate sepsis treatment, and the confusion surrounding the discharge/treatment plan were significant contributors to the outcome in this case.

122. Dr Van Vollenstee commented in his evidence that the doctors were often very tired after a day on call, as they would have to see a lot of patients between the medical practice and the hospital so "it's possible that you sometimes can miss things"[134] when making quick decisions. Dr Van Vollenstee has given significant reflection to this case and taken steps to educate himself on sepsis protocols. Dr Van Vollenstee also extended his profound condolences to Colin's family and expressed a desire for positive changes to come from this inquest. In those circumstances and noting that Dr Van Vollenstee is no longer working as an emergency department doctor but now works only in general practice, I do not propose to make any specific further comment or finding in relation to his conduct in this case.

123. I also make the comment that it is generally accepted there is a lack of documentation from a nursing point of view on the night of 15 November 2021 to explain the circumstances in which Colin came to be discharged home. This has made it much more difficult to understand what actually happened on the night of 15 November 2021. I do not direct this comment to any particular nurse who was on duty that night, as the identity of the nurse or nurses involved in Colin's discharge

[134] T 146.

home is not clear from the evidence. Rather, I simply make the comment to emphasise the importance of good documentation when taking important steps, such as to discharge a patient home who has presented to an ED. Poor communication is often a key finding in an inquest involving a medical issue, such as in this case, and good documentation of verbal discussions is a very important tool to assist in any review of events.

SECOND PRESENTATION TO COLLIE HOSPITAL – 16.11.21

124. Colin called his wife from the hospital to tell her he could go home. Mrs Nicholson was at an SES volunteer meeting that night, so a friend of theirs collected Colin from the hospital and took him home. Colin rang his wife after arriving home and encouraged her to stay at the meeting. The friend also attended the meeting after dropping Colin home, and the friend expressed his opinion to Mrs Nicholson that Colin should not have been allowed to go home from hospital as he seemed unwell.[135]

125. When Mrs Nicholson got home from the meeting at around 9.00 pm, she found her husband sitting on the lounge, shivering, which is consistent with Colin developing rigors again. Mrs Nicholson took his temperature again and saw it was elevated at just over 38°C, so she told her husband he needed to go back to hospital. Colin refused to go back, telling her the hospital staff had given him a tablet to take at midnight, which he had in a small envelope. Accepting he didn't want to go back at that stage, and had a treatment plan for the night, Mrs Nicholson got two paracetamol tablets from their own first aid kit and gave them to him in the hope it would bring his temperature down. She also encouraged him to drink water regularly. Colin took the tablet provided by hospital staff at midnight, but was still shivering and not feeling well.[136]

126. Colin suggested to his wife that she go to bed at about 1.00 am, telling her he would be fine. She complied and went to sleep. Mrs Nicholson woke up at about 7.00 am on 16 November 2021 and immediately went to check on Colin. She found he was in "very bad shape,"[137] shivering and slumped on the couch. He tried to get up a few times, but each time he felt dizzy and fell back onto the couch. Mrs Nicholson was concerned and told him she needed to take him back to the hospital. Colin initially resisted, so she told him if he didn't agree then she would call an ambulance instead. He became extremely vocal and agitated in response and refused to go to hospital or, it seems, to an ambulance being requested. Mrs Nicholson became extremely worried, so she called her son-in-law Luke, who is an industrial paramedic, for help. Luke agreed that Colin should go to the hospital and said he would come to help persuade him.

127. After dropping his children to school, Luke drove to the Nicholson's home to see if he could assist in convincing Colin to go to hospital. Luke quickly assessed him and concluded Colin needed to go to hospital immediately. Colin still refused to allow

[135] Exhibit 1, Tab 5.
[136] Exhibit 1, Tab 5.
[137] Exhibit 1, Tab 5, p. 2.

them to call an ambulance, but he agreed to be driven to hospital by Luke. It took a number of people's assistance to manoeuvre Colin off the couch and into the car, given his deteriorating state. Luke then drove Colin directly to Collie Hospital.

128. Colin re-presented to Collie Hospital at 10.35 am. The nursing notes record he was weak and required assistance to get out of the car. Colin was seen quickly at triage and it was apparent to the nurse on duty, Nurse Brown, that he was very unwell and his family were very concerned. They advised it was a re-presentation from the night before. Based on his presentation, history and observations, probable sepsis was identified and he was started on the sepsis pathway. The on-call doctor was notified at 10.40 am. The on-call doctor was a GP registrar, Dr Win Thant (Dr Thant), who was at the Collie River Valley Medical Centre at the time of taking the call. Dr Thant initiated treatment for Colin, including giving a phone order for IV antibiotics at the request of Nurse Brown. Blood samples were taken and then the first dose of antibiotics, Flucloxacillin, was given at 11.15 am.[138]

129. Nurse Brown telephoned Dr Thant again at 11.30 am to request urgent review of the patient. Colin was given the next antibiotic, Gentamicin, at 11.35 am. At 11.50 am, the nurses were still waiting for the on-call doctor to arrive, when Dr Wutchak came into the ED. Dr Wutchak had just completed an anaesthetic session in the hospital theatre that morning and he swung past the ED to check that there was nothing that he could assist with before he left the hospital. Given the ED was very busy, Dr Thant had still not arrived and Dr Wutchak had seen Colin the previous day, he became involved in Colin's care in the ED at that time.[139]

130. Dr Wutchak observed that Colin looked significantly more unwell than when he had seen him the previous day, although he was still quite chirpy, which Dr Wutchak attributed to Colin's stoic and friendly nature. During Dr Wutchak's attendance, Colin still had a fever of 39.8 degrees and he had an increased heart rate and respiratory rate, a low systolic blood pressure and exhibited shallow breathing. He had been commenced on the sepsis pathway, which included IV antibiotics Fluxlocacillin and Gentamicin, as well as IV fluids, by Dr Thant. Dr Wutchak's diagnosis was of generalised sepsis without a clear cause. Dr Wutchak noted that the appropriate steps had been taken in terms of antibiotics and fluids being initiated, so his role was largely to formalise the assessment and arrange for transfer. Transfer was arranged to Bunbury Regional Hospital before Dr Wutchak left Colin in the care of Dr Thant and the nursing staff. Colin was then transferred by ambulance from Collie Hospital to Bunbury Regional Hospital at 1.20 pm that afternoon.[140]

DIAGNOSIS OF ACUTE MYELOID LEUKAEMIA

131. At Bunbury Regional Hospital, Colin was diagnosed with septic shock with neutropenia. Investigations revealed that Colin had a right sided pneumonia and a right sided pulmonary embolism. Colin was managed in the Intensive Care Unit (ICU) at Bunbury Regional Hospital and advice was sought from the Haematology

[138] T 288 – 289, 300 - 301; Exhibit 1, Tab 17.
[139] T 252, 289; Exhibit 1, Tab 15 and Tab 17.
[140] T 252 – 253; Exhibit 1, Tab 15 and Tab 17.

team at Fiona Stanley Hospital in relation to his ongoing management. His antibiotics were changed to Tazocin and Vancomycin, and Azithromycin was added. Clexane was given to treat the pulmonary embolism. Medication was also required to support Colin's low blood pressure. Colin developed an acute kidney injury and coagulopathy (abnormal blood clotting) while on the ward.[141]

132. Colin continued to deteriorate while in hospital. Mrs Nicholson recalled that he was struggling to talk, but he did manage to say that if he stopped breathing or if his heart stopped, he wanted to fight it and, in effect, that all resuscitation efforts should be made to save him. After spending a long time sitting with Colin in Bunbury Regional Hospital, she was given advice to go home around midnight and get some rest. Mrs Nicholson went to her daughter's home to try and rest.[142]

133. Mrs Nicholson received a call recommending that she return to the hospital in the early hours of the morning. When she arrived, she was told he was going to be intubated. Colin was intubated and ventilated, then commenced on haemodialysis for renal failure. Blood films went to QEII for review by a Haematologist and Fiona Stanley Hospital Haematologists consulted with the QEII laboratory. The analysis showed blast cells. ICU doctor notes record that Colin was diagnosed with Acute Myeloid Leukemia (AML) that evening. It had been planned that Colin would be transferred to Fiona Stanley Hospital the following day for treatment, but these plans eventually changed.[143]

134. Colin was reviewed by the ICU Consultant and then a family meeting was arranged on the afternoon of Wednesday, 17 November 2021. Colin's family were advised of his diagnoses and told that his prognosis was very poor. He continued to decline from that time. Nursing notes record that Colin showed no signs of life at 8.30 am, although his death was not formally certified by a doctor until 11.10 am on Thursday, 18 November 2021.[144]

135. That same day, after her husband's death, Mrs Nicholson received a call advising of an appointment for Colin. She informed the caller it was too late, as he was already dead, then hung up the phone.[145] Her distress in that moment is easy to understand.

CAUSE AND MANNER OF DEATH

136. Colin's death was not immediately reported to the coroner, so no post mortem examination was performed. An ICU Registrar at Bunbury Regional Hospital completed a Medical Certificate of Cause of Death on 18 November 2021 and identified the disease or condition directly leading to death as septic shock with multiorgan dysfunction. The antecedent causes were listed as pulmonary embolism, neutropenic recent diagnosed AML, pneumonia and hypertension, which were indicated to have occurred between 72 hours and death.[146]

[141] Exhibit 1, Tab 23.
[142] Exhibit 1, Tab 5.
[143] Exhibit 1, Tab 23.
[144] Exhibit 1, Tab 3 and Tab 23.
[145] Exhibit 1, Tab 5.
[146] Exhibit 1, Tab 4.

137. On the initial certificate, the doctor had indicated that no one had expressed any concerns regarding Colin's medical treatment, which was correct at the time. However, a hospital review of death prompted a report to the Coroner and a clinical incident investigation. The root cause analysis found there was no direct causation between the actions of PathWest and Colin's death, but the investigation found that sepsis guidelines were not followed at Collie Hospital on 15 November 2021 and immediate IV antibiotics should have been commenced.[147]

138. I find the cause of death was septic shock with multi-organ failure in a man with neutropenic sepsis on a background of recent acute myeloid leukaemia diagnosis. The manner of death was by way of natural causes.

139. Having said that it was natural causes, it is important to note that there is evidence before me to indicate that Colin's death at that time may have been prevented with medical treatment. With the benefit of hindsight, all of Colin's blood results in the last few months prior to his death showed he was developing AML, and this placed him at high risk of infection leading to sepsis. If Colin had been diagnosed with AML at an earlier stage, there remained the option of commencing treatment. There are different types of AML, and each one carries a different prognosis, but the standard treatment for all of them is chemotherapy to try and get the person into remission. There was evidence before me that Colin's AML was potentially salvageable at the point his blood results were reviewed by Dr Howman on 3 November 2021.[148]

140. Significantly, two independent experts (whose expert opinions I set out below), also expressed the opinion that if Colin's infection and possible developing sepsis had been identified on the afternoon/night of 15 November 2021, when Colin presented to Collie Hospital ED, successful treatment was still possible for the sepsis and in the fullness of time, he could have commenced chemotherapy treatment for his AML. It was only by 16 November 2021, when Colin returned to the Collie Hospital ED in a very poor physical state, that it was too late for there to be any chance to save him.[149]

DR TAMPI'S REVIEW

141. Dr Tampi is a Laboratory and Clinical Haematologist. Dr Tampi was asked by the Court to consider the medical care provided to Colin and provide an expert Haematology review of the case. Dr Tampi reviewed Colin's medical records and other relevant material, including the pathology records, then prepared two reports.[150]

142. Dr Tampi noted in his initial report, dated 30 January 2023, that there were gaps in the available records, particularly in relation to any conversations that may have transpired between Dr Paramaswaran and Colin regarding the initial notification of

[147] T 401 - 402; Exhibit 1, Tab 8 and Tab 9.
[148] T 112 - 113.
[149] T 112 – 113.
[150] Exhibit 1, Tab 6.

Colin's neutropenic status and the importance of follow up tests.[151] In his supplementary report, dated 20 November 2023, Dr Tampi acknowledged he had been provided with a number of further statements and materials, including some information from Dr Paramaswaran in relation to his discussions with Colin and his actions in response to the various pathology results, although some questions still remained.[152]

143. Dr Tampi noted that Colin's pathology records demonstrated normal renal and liver function and a normal full blood count (including his neutrophil count) in April 2021. The first time neutropenia was noted was on 22 September 2021, along with reactive lymphocytes, which were an atypical finding, but read together they were potentially attributable to a viral infection. The relevant protocol regarding blood film referral to a Haematologist for review, due to the low neutrophil count, was not followed at that time.[153]

144. On 5 October 2021, persistent neutropenia was noted and the neutrophil count had decreased, along with a slight decrease in the haemoglobin and platelet count. The result was phoned to the GP, Dr Paramaswaran, by the Laboratory Scientist but the blood film was again not referred to QEII for Haematologist's comment (contrary to the protocol) and there was no mention about the immature cells with blast like features.[154] Dr Tampi described this as "a missed opportunity to for an earlier diagnosis of leukaemia".[155] Dr Tampi gave evidence at the inquest that the duration of the neutropenia and decrease in the count were less supportive of a viral infection, as if it had been "just post-viral infection, one would have thought there would be recovery by now and not further deterioration. So from that point of view, it does raise a kind of red flag even at that stage."[156]

145. Dr Tampi commented that Dr Paramaswaran had made a note about the possible influence of Colin's recent steroid injection on the results, but it was accepted at the inquest that such an injection would have the opposite effect.[157] While Dr Paramaswaran's reasoning behind the injection possibly being the cause of the neutrophilia may have been flawed, Dr Tampi also commented that if the blasts had been reported in the second film, he believes Dr Paramaswaran would have condensed the time frame for the next set of blood results to the absolute minimum, rather than the three weeks he suggested at the time.[158] Dr Paramaswaran agreed at the inquest that an earlier call about blasts signifying a possible haematological malignancy would have prompted him to refer Colin for haematological review earlier, as he had been contemplating referral earlier even without that information, so a recommendation from a Haematologist would have confirmed that decision.[159]

[151] Exhibit 1, Tab 6.1
[152] Exhibit 1, Tab 6.3.
[153] T 100; Exhibit 1, Tab 6.1.
[154] Exhibit 1, Tab 6.1.
[155] Exhibit 1, Tab 6.1, p. 2.
[156] T 101.
[157] Exhibit 1, Tab 6.1, p. 2
[158] Exhibit 1, Tab 6.1, p. 2.
[159] T 32.

146. Dr Tampi explained at the inquest that if the blood film had been referred for Haematology review on 5 October 2021, he would have expected a series of tests to be performed, including flow cytometry, which would have identified blasts in the flow as being myeloid, leading to a diagnosis of AML. Therefore, the failure to follow the referral protocol once again was a missed opportunity to diagnose the leukaemia at an earlier stage.[160]

147. Dr Tampi suggested that the failure to follow the protocol on those two occasions was possibly due to the Laboratory Scientist's inexperience, or alternatively they lacked the requisite skills to identify what needed to be done.[161] In his report, Dr Tampi expressed the opinion that "[i]nexperienced scientists in regional country laboratories require more supervision by the primary laboratory and, additionally, frequent internal and external review (quality assurance) and enrolment in quality assurance programs".[162] This was recommended in the SAC1 investigation. Dr Tampi also observed that there is now equipment available (CellaVision) that can transmit digital images directly from regional areas to the reference laboratory for comment by a Haematologist, which might resolve some of these issues. I will return to this later.[163]

148. The next blood results from 2 November 2021 showed a progressive deterioration in the blood count. Dr Tampi observed that the "acute leukaemic nature of the blood film due to the presence of the blasts" was apparently communicated to Dr Paramaswaran by the PathWest Haematologist, Dr Howman, on 2 November 2021, but at that time the GP was recorded as saying that Colin did not appear unwell. The need for an urgent bone marrow biopsy was noted in the blood film comment that followed and this led to a referral to the South West Haematology Service in Bunbury Regional Hospital on 4 November 2021. However it was not clear whether the "abnormal and critical nature of the findings"[164] was properly communicated and understood, as Dr Tampi would have expected that Colin would have been referred for emergency review at the nearest main hospital, whether or not he appeared unwell. Dr Tampi commented that if this had occurred in metropolitan Perth, he would have imagined that the patient would have been seen at a tertiary hospital on an urgent basis.[165] Instead, Colin was left to wait for a Haematology appointment that did not eventuate before his death, two weeks later.

149. On 15 November 2021, 13 days after Colin's blood results showed significant abnormality, 11 days after he saw Dr Paramaswaran and at least 7 days after the urgent Haematology referral was sent by the Collie River Valley Medical Centre staff, Colin still had not been reviewed by a Haematologist and he was becoming increasingly unwell. He went back to Collie River Valley Medical Centre and saw a different GP, Dr Wutchak, with a raised lump in his armpit. Dr Tampi suggested that it is likely this lump was leukemic infiltration of the lymph gland. However, rather than being urgently sent to Bunbury Regional Hospital ED, he was simply referred

[160] T 102, 117.
[161] T 104.
[162] Exhibit 1, Tab 6.1, p. 2.
[163] T 105; Exhibit 1, Tab 6.1.
[164] Exhibit 1, Tab 6.1, p. 2.
[165] Exhibit 1, Tab 6.1.

for an ultrasound, which was likely to take two weeks. Dr Tampi commented at the inquest that if Dr Wutchak was not party to the comments made by the Haematologist then, given Colin wasn't feeling unwell and he just presented with a lump, his decision seemed reasonable even though, in hindsight, it would have been appropriate for Colin to be sent to Bunbury Regional Hospital.[166]

150. When Colin presented at the Collie Hospital ED around 1.00 pm that afternoon, there had been a sudden deterioration in his clinical state and he had a temperature and was experiencing rigors, which Dr Tampi explained are a classic feature of pyrexia (fever). After being seen by the Nurse Practitioner and started on IV fluids and Panadol, an anti-inflammatory and another medication, he was not seen by a doctor until around 5.00 pm, when Dr Van Vollenstee (who was on-call for the Collie Hospital ED that night) came after finishing at the Collie River Valley Medical Centre. By that stage, the blood work showed raised lymphocytes, CRP and low neutrophils, which "[i]n this context, it would have meant infection."[167] Dr Tampi suggested that what was identified by the analyser as lymphocytes at that time were probably blasts, given what we know now, but the results as they were given may have been misleading. Dr Tampi commented that you "would have to put two and two together and realise that this was not just lymphocytosis; that this was actually leukaemia".[168] Nevertheless, in Dr Tampi's opinion, the blood results were still sufficiently abnormal to raise an alarm.[169]

151. Given the results that were present, Dr Tampi commented that there was definitely a high risk of sepsis and Dr Tampi gave evidence he would have expected a doctor to consider sepsis as a possibility and admit him. The appropriate treatment would have been urgent intravenous antibiotics for his infection and then transfer to Bunbury Regional Hospital for emergency treatment, before being transferred to Fiona Stanley Hospital for bone marrow biopsy.[170] Instead, he was discharged and sent home from hospital that night.

152. The description Colin's wife gave of his presentation that night when she got home was indicative of the onset of infection. By the time he presented back to Collie Hospital ED, that infection had moved to a state of overwhelming sepsis. Dr Tampi considered Colin's treatment by Dr Wutchak and the other Collie Hospital staff at that time was appropriate. Sepsis was identified and Colin was given the first line of treatment for sepsis, namely intravenous antibiotics and other support, but he was already deteriorating by that time. Colin was transferred to Bunbury Regional Hospital for emergency medical treatment, but sadly by then it was too late. At the time of his presentation to Bunbury Regional Hospital on 16 November 2021, Colin had 95% leukaemic blasts. He was admitted to the ICU, but he had developed multi-organ failure and did not recover.[171]

[166] T 108.
[167] T 109.
[168] T 109.
[169] T 114.
[170] T 109 – 110, 116; Exhibit 1, Tab 6.3.
[171] T 111.

153. At the inquest, Dr Tampi confirmed that there were opportunities to diagnose Colin with AML and commence treatment from 22 September 2021, and the longer he went without diagnosis and treatment, the worse his prognosis. Dr Tampi observed that "AML is a dangerous disease"[172] and one of the significant risks for Colin was that without diagnosis and treatment, he was at significant risk of infection due to his low neutrophil count.[173] Sadly, that is what ultimately occurred.

PROFESSOR MOUNTAIN'S REVIEW

154. Professor Mountain is a Specialist Consultant in Emergency Medicine. Professor Mountain was asked to review Colin's medical care at Collie Hospital ED and provide an independent report to the Court about the quality of the treatment and care, based upon his specialist knowledge. Professor Mountain also made some brief comments on the GP care and management of the blood results, while noting that general practice is not within his area of specialty.[174]

155. Professor Mountain's comments on the GP response to the blood results was largely consistent with Dr Tampi's opinion. Professor Mountain agreed that the care provided by the general practitioners at the Collie Medical Practice was generally attentive and within the boundaries of expected practice, and he agreed that all the evidence indicated that if the earlier blood films had been referred, as per the PathWest protocol, a GP would have initiated a Haematology referral at a much earlier stage, which would have led to earlier diagnosis and treatment of Colin's leukaemia. He also agreed that it seemed he had been given appropriate advice to go to hospital or the ED if he felt unwell.[175]

156. Professor Mountain also expressed the opinion Dr Wutchak's treatment plan on the morning of 15 November 2021, when Colin presented with a lump under his arm, was also reasonable as at that time Colin did not have a fever and was not unwell, he just had a lump.[176]

157. Professor Mountain's expert opinion was more specifically focussed on the care provided by the nursing staff and GP's (in their role as 'on call' emergency department doctors) at the Collie Hospital ED, when Colin presented with a high fever, a history of rigors and feeling very unwell.[177]

158. After reviewing the medical notes, Professor Mountain expressed the opinion the care provided by the initial reviewing Nurse Practitioner, Nurse Practitioner Woodman, was "completely appropriate"[178] as it included "early review, appropriate observations and investigations, and recognition of the significant risk of sepsis".[179]

[172] T 116.
[173] T 116.
[174] T 171; Exhibit 1, Tab 7.
[175] T 172 - 173; Exhibit 1, Tab 7.
[176] T 189.
[177] T 189.
[178] T 173.
[179] Exhibit 1, Tab 7.1, p.2.

Professor Mountain observed that all of the tests ordered by Nurse Practitioner Woodman were appropriate and sensible tests.[180]

159. In contrast, Professor Mountain expressed the opinion the care delivered by Dr Van Vollenstee's as the emergency doctor, was "problematic"[181] and "substandard".[182] Colin presented febrile, had had rigors in the morning, a low (severe) neutrophil count and potential (but very likely) acute leukaemia diagnosis and he was being investigated for a haematological malignancy. In Professor Mountain's expert opinion, "the blood results should have raised serious concern of sepsis and marrow failure".[183]

160. Professor Mountain observed that Colin's CRP was raised very early in his acute illness and it is a marker of bacterial infection. Although Professor Mountain conceded that raised CRP is not a definitive test, he commented that a raised CRP at the level recorded "doesn't exclude severe bacterial disease, and increases the likelihood of it being present. Indeed, looking for evidence of sepsis/bacterial infection is the only real reason to have ordered CRP in this situation,"[184] and the result was not reassuring.[185]

161. Further, his white cell count on a history of persistent neutropenia and leukaemia investigation should have raised major concerns that this was "a rapid worsening of an underlying haematological malignancy, especially when associated with pancytopenia".[186] Although Dr Van Vollenstee gave evidence he was not aware that Colin's neutropenia was persistent, as he did not have access to the earlier blood results, Professor Mountain considered it was odd that no effort was made to look for any previous blood results, but he also commented that even just the results that were before him showed the neutrophil count was very low and the results overall were very concerning.[187] Read altogether, everything suggested he was a patient with bone marrow failure and potentially a bacterial illness, which Professor Mountain commented "you have to treat that as the emergency it was".[188]

162. Professor Mountain did not have an opportunity to see Dr Van Vollenstee's statement at the time of preparing his report, but he guessed accurately that Dr Van Vollenstee interpreted the results, particularly the very high lymphocyte count (which he had noted with two arrows in his notes), as suggesting a viral illness. Professor Mountain commented that "would be a dangerous misinterpretation in this scenario and suggests poor understanding of the ordered pathology tests and the likely problems in acute haematological malignancies, and the risk of neutropenic patients".[189] I note at this stage that, after reading Professor Mountain's report,

[180] T 176.
[181] Exhibit 1, Tab 7.1, p.2.
[182] T 174
[183] Exhibit 1, Tab 7.1, p. 2.
[184] Exhibit 1, Tab 7.1, p. 3.
[185] T 175.
[186] Exhibit 1, Tab 7.1, p. 3.
[187] T 174; Exhibit 1, Tab 24.
[188] T 175.
[189] Exhibit 1, Tab 7.1, p. 3.

Dr Van Vollenstee accepted he had not properly understood the neutropenia guidelines and had missed the signs of a bacterial infection.

163. Professor Mountain expressed the opinion that "overall, the care given to this patient by the treating doctor was substandard. Given the history of rigors, persistent high fevers, the likelihood that this could be early neutropenic sepsis was high and could in no realistic way be excluded clinically or by the tests available or ordered".[190] Professor Mountain observed that even if the doctor had considered a viral illness was more likely, bacterial sepsis could not have been excluded, and neutropenic patients die at high rates if sepsis is missed and not treated early with antibiotics. In Professor Mountain's opinion, Colin clearly met the trigger for febrile neutropenic care and early antibiotics. Professor Mountain considered the delay in his treatment for another 16 hours before antibiotics were initiated by Dr Wutchak was "clearly consequential to the patient's poor outcome".[191]

164. Professor Mountain made it clear in his evidence that he was not suggesting there should have been a definitive diagnosis of sepsis at the time Colin was seen in the Collie Hospital ED on 15 November 2021, as it was too early at that stage for such a diagnosis. Professor Mountain's position was that "the real issue is should febrile neutropenia be recognised and treated?".[192] In this case, it was clearly present when Colin arrived in the ED and based on the available information, Professor Mountain considered it should have been the key diagnostic concern, given his very low neutrophil count made him both more at risk of catching a bacterial infection and at very high risk from the consequences of a bacterial infection. Sepsis in those circumstances could not be excluded, so it needed to be considered as a differential diagnosis. Professor Mountain explained that when you have a got a low neutrophil count, "you have to presume there is sepsis whenever there's a fever"[193] and take steps to treat it, without waiting for blood cultures or something else to confirm it.

165. Professor Mountain explained that, if this had been recognised, Colin should have been admitted, given immediate IV antibiotics, and his case discussed with Bunbury Regional Hospital specialists for advice and probable transfer for emergent care. Although neutropenic sepsis raises the level of urgency of treatment, even if only sepsis had been suspected, Professor Mountain indicated that "you really want to get antibiotics on board as soon as possible," with the national guidelines indicating within one hour.[194] In Professor Mountain's opinion, the very lowest potential level of acceptable care would have been oral antibiotics and early review in the morning.[195] Professor Mountain expressed that opinion in terms of what he would expect a GP working in rural hospital ED to do, not just an ED specialist. Professor Mountain stated "if you're going to be working in the emergency environment, it's one of the emergencies that you have to recognise and manage appropriately".[196]

[190] Exhibit 1, Tab 7.1, p. 3.
[191] Exhibit 1, Tab 7.1, p. 3.
[192] Exhibit 1, Tab 7.1, p. 3.
[193] T 172, 180.
[194] T 176 – 177.
[195] Exhibit 1, Tab 7.1, p. 4.
[196] T 181.

166. In Professor Mountain's opinion, even if Dr Van Vollenstee suspected a viral illness was the cause of the symptoms, "there was no way with those blood results and that presentation that you could rule out bacterial infection," so antibiotics should have been commenced.[197] I note that on any version of events, Dr Van Vollenstee was clear that he did not consider prescribing any form of antibiotics to Colin on the night in question, either oral or intravenous and when he returned to the hospital in the morning and found Colin was no longer there, he did not take any steps to look at the final results and arrange for Colin to return for review or speak to the other GP's in the practice about the case. Accordingly, he did not take the necessary steps that would have met even the lowest level of what Professor Mountain considered was acceptable medical care in this case.[198]

167. Professor Mountain also commented that Dr Van Vollenstee's treatment plan, as written in the notes, appeared to address the headache as the main issue for the patient, but the plan did not even document the fever nor indicate a plan as to how he was going to manage the fact he had a man with a low neutrophil count who was febrile. Professor Mountain was also asked his opinion on what Dr Van Vollenstee's note appeared to indicate was his plan for the fluids, and he interpreted the note as "suggesting the patient takes oral intake to try and improve his hydration status, which can affect headache severity".[199] Professor Mountain agreed with the evidence of other witnesses that if Dr Van Vollenstee had intended for Colin's IV fluids to be increased when he made that notation, then he should have written an order in the intravenous fluid chart.[200] Colin "had a really quite borderline blood pressure" while at the hospital, which required treatment in its own right, and was a red flag for other issues. Professor Mountain gave evidence that if he had a patient with that blood pressure who had apparently left the hospital of his own accord, he would be ringing him back and asking him to return to the hospital. Professor Mountain explained that how Colin's blood pressure responded to fluids would have been important, as it is a marker for sepsis.[201]

168. Professor Mountain also expressed the opinion if Dr Van Vollenstee was waiting for the white cell count differential to take any further steps, he would have expected that to be entered in the notes. Further, if he had been waiting for these results, he would have expected that Dr Van Vollenstee would have been following the results up overnight. Once Dr Van Vollenstee had been informed that Colin had gone home, he would have expected him to ring Colin up to find out why he had discharged himself and make it clear something serious was happening and encourage him to return to the hospital to receive treatment.[202]

169. Professor Mountain also expressed concern that the circumstances in which Colin came to be discharged home were not documented. He commented that he would have expected the notes to document any discharge plan, or alternatively that the

[197] T 177.
[198] T 182.
[199] T 185.
[200] T 186.
[201] T 189 – 190.
[202] T 186 - 188.

patient discharged themselves, but Professor Mountain commented that the notes did not say anything about the discharge, which is unusual.[203]

170. Professor Mountain also reviewed the care delivered in the Collie Hospital ED on 16 November 2021, when Colin re-presented in a parlous state. Professor Mountain considered the care at this time was "mainly appropriate and diligent"[204] and Professor Mountain specifically commended Dr Wutchak's actions in "recognising the severity of the situation, acting quickly and expediting antibiotics and rapidly organising the patient's transfer".[205] Professor Mountain's only concern was that the antibiotics commenced were not necessarily recommended for neutropenic sepsis, but more appropriate for sepsis in an immunocompromised patient, but this was addressed by a change in antibiotics later that day after Colin was transferred to Bunbury Regional Hospital.[206]

171. Professor Mountain had no criticism to make of the medical treatment and care Colin received at Bunbury Regional Hospital, which he described as "thorough, timely and diligent".[207] Sadly, it was simply too late by that time for the treatment to save Colin's life.

172. In summary, Professor Mountain expressed the opinion that there were two key major failings in Colin's care:[208]

- The failure of the Laboratory Scientist to follow PathWest's standard operating procedure and have the films examined by a trained Haematologist meant that the acute leukemia diagnosis was delayed. Professor Mountain considered Dr Paramaswaran and Dr Wutchak's delay to definitive diagnosis was understandable given the falsely reassuring reports regarding the blood films and the fact Colin looked otherwise well even on the morning of 15 November 2021. Professor Mountain acknowledged Colin could still have had episodes of neutropenia and sepsis during treatment for leukemia, but he and his treating doctors would have been aware of his full diagnosis and he would hopefully have then had expedited and appropriate care, reducing his likelihood of mortality. In effect, he would have had a much better chance of survival if he had been treated earlier.[209]

- Colin's initial care on the afternoon of 15 November 2021 by Nurse Practitioner Woodman was reasonable and appropriate. The tests he ordered showed he had suspected sepsis and was ordering investigations so the doctor would be in a position to take the next appropriate steps.

- The failure of Dr Van Vollenstee to recognise a likely neutropenic sepsis and a high risk clinical picture for sepsis, and the lack of antibiotics as part of his

[203] T 188.
[204] Exhibit 1, Tab 7.1, p. 4.
[205] Exhibit 1, Tab 7.1, p. 4.
[206] Exhibit 1, Tab 7.1, p. 4.
[207] Exhibit 1, Tab 7.1, p. 4.
[208] Exhibit 1, Tab 7.1, pp. 4 - 5.
[209] T 178.

> treatment plan at this stage, allowed Colin's sepsis to progress almost unchecked due to his ailing immune system, causing severe organ dysfunction as the infection rapidly progressed. Professor Mountain considered Colin would have been significantly more likely to have survived if he had been treated with broad spectrum antibiotics (oral or intravenous) and provided with supportive care on the presentation on 15 November 2021 and transferred to Bunbury Regional Hospital for urgent care.[210]

173. I note that Professor Mountain clarified in his evidence that he is an ED specialist, not a GP, but his comments about Dr Van Vollenstee's failure to identify likely sepsis and initiate antibiotics was within the context of Dr Van Vollenstee performing an emergency doctor role at the Collie Hospital, not simply as a GP. Dr Wutchak, who worked in the same roles as Dr Van Vollenstee (albeit with some additional specialist functions as a GP obstetrician and GP anaesthetist), gave evidence the information that was before Dr Van Vollenstee on the afternoon of 15 November 2021 was, quite simply "neutropenia … plus fever, equals infection that needs treatment,"[211] which meant he needed antibiotics that day, preferably intravenous.[212]

174. Professor Mountain noted that the WACHS neutropenic pathway was specifically labelled for Oncology/Haematology patients, and suggested this might need to be clarified to include all patients being investigated for severe neutropenia, marrow failure or haematological malignancy.[213] Professor Mountain made the observation that "from a health system perspective, we need to clarify that any patient with persistent neutropenia below 1.0 or severe (<0.5) neutropenia at any stage, who becomes febrile, must be treated as an emergency with early antibiotic therapy, and discussion with local or tertiary level experts for further advice. The current guidelines appear to focus on patients on chemotherapy, which Professor Mountain suggests blinds people to the danger of other causes for neutropenia.[214] He observed that it is important for doctors to be aware that a low white cell count, for any reason, can make you prone to the same issues as a cancer patient with low neutrophils will experience, and "it can be overwhelming and very rapidly so".[215]

175. Professor Mountain's observations are consistent with the comments made by Dr Wutchak in his evidence, in which he noted that in his experience, Colin's presentation with neutropenic sepsis was unusual, given he had not been formally diagnosed with leukaemia and was not undergoing chemotherapy. Dr Wutchak suggested the early onset of Colin's profound neutropenia may have slightly clouded the decision-making and the judgement of the people involved. Dr Wutchak also observed that Bunbury Regional Hospital has extended its oncology services in the last few years, so they are seeing more people who have had chemotherapy and are

[210] T 179.
[211] T 257.
[212] T 257, 273.
[213] Exhibit 1, Tab 7.1, p. 3.
[214] Exhibit 1, Tab 7.1, p. 5.
[215] T 172.

neutropenic, so what was a very rare presentation in Collie is now becoming more common.[216]

176. I do not propose to make a specific recommendation in relation to the guidelines, as I am certain that the WACHS will pay close attention to Professor Mountain's comments and consider whether their policy requires amendment, noting the guidelines is due for standard review in March 2026.[217]

CHANGES SINCE COLIN'S DEATH

CRS

177. Dr Shelley Campos (Dr Campos) gave evidence at the inquest about changes to the CRS procedures. Dr Campos has been employed by the Department of Health as the Clinical Lead, System Flow and Reform, since 9 October 2023 and she has been responsible for overseeing CRS (as part of her broader role) since 13 May 2024, so a few months prior to the inquest. Dr Campos explained at the inquest that prior to her becoming involved with CRS, it had been recognised that the CRS didn't have the correct clinical oversight and clinical governance, so she was given the portfolio to try and improve that issue. In her report to the Court, Dr Campos indicated that it took CRS until 14 February 2022 to clear the backlog of unopened referrals, but since that date CRS has been meeting its KPI and opening all referrals for triage within one business day. Dr Campos observed the highest risk is on the things that you haven't seen yet, so meeting this KPI and ensuring that an initial assessment is done in a short timeframe, is a very important improvement.[218]

178. Dr Campos provided a detailed report, and spoke to her report in evidence, about improvements made, and still being made, to the CRS since 2021. Some of the changes involve staffing and there are also daily huddles, monthly Quality and Safety meetings and a Performance Management and Reporting Framework now in place. Since these changes, although the CRS still experiences backlogs in processing referrals, there is less clinical risk as the 'front end' opening and triaging is given priority. Dr Campos also gave evidence there is a plan moving forward to change the system to include SmartForms for GP's, which will streamline the process by making sure referrals contain all the required information, and it will also enable the doctors to receive immediate feedback through the system when their referrals have been received, rather than after it has been processed or rejected.[219]

PathWest Haematology

179. Dr Kavanagh is a Clinical Haematologist and the current Head of Department of Haematology at PathWest, QEII Medical Centre. Although he was not in that role at the time of Colin's death, as Head of Department, Dr Kavanagh undertook a review of PathWest's involvement in the events leading up to Colin's death and whether the

[216] T 242, 244.
[217] Exhibit 1, Tab 10.6.
[218] T 331 – 336, 345; Exhibit 1, Tab 32.
[219] T 338 – 339; Exhibit 1, Tab 32.

PathWest procedures and policies were followed, and what steps were taken following Colin's death in this regard.[220]

180. Dr Kavanagh explained that the QEII laboratory holds governance over regional sites within WA, including Collie, and provides supervision as well as receiving referred work from these regional laboratories. Scientists in the regional laboratories are multidisciplinary scientists, so they work in all areas such as biochemistry, microbiology, and in multiple sub-disciplines within Haematology. The scientists are provided with training when they join the organisation, before they are deployed to regional areas, to ensure they meet baseline accreditation.[221] In the case of the Collie Laboratory Scientist who was involved in Colin's case, it was accepted that the scientist twice failed to follow the PathWest policies and procedures for mandatory referral to a Haematologist, once prompted by the Haematology analyser. Dr Kavanagh observed that the referral criteria in the policy does allow for some exercise of judgment by the scientist, in cases where a result is not necessarily unexpected or indicative of a new diagnosis (for example where a person is known to be undergoing chemotherapy), but in the case of the two set of results on 22 September 2021 and 5 October 2021, they should have been referred. In addition, both sets of results showed blasts, which Laboratory Scientists are trained to identify, but given the potential difficulties in identifying blasts, it was more understandable that they were not identified by the scientist in question.[222]

181. When it is identified that blasts or other critical findings were not recognised by a medical scientist reviewing a blood film, further training is offered to improve future recognition of this key finding. In this case, the Laboratory Scientist had already attended the QEII laboratory for training and assessment in January 2019 and 2020, with a focus on Transfusion Medicine. Following the 2019 assessment, it had been recommended that she not work unsupervised in the area of Transfusion Medicine as a result of a number of mistakes made during her training/assessment. However, following the 2020 assessment, she was considered to have met all requirements. This included review of a blood film for a case of acute leukaemia and a second case with isolated neutropenia.[223]

182. However, after Colin's death and following a prolonged absence from work (November 2021 to August 2023) when the Laboratory Scientist again attended the QEII laboratory for refreshing training and reassessment in July/August 2023, she did not perform adequately in the subsequent assessment. As such, PathWest considered that the Laboratory Scientist was not competent to return to work as an independent medical scientist. She ceased employment with PathWest on 13 October 2023.[224] Counsel Assisting made contact with the Laboratory Scientist shortly before the inquest commenced and she advised she is no longer working as a Laboratory Scientist in any capacity.

[220] T 358 – 359; Exhibit 1, Tab 36.
[221] T 360
[222] T 370; Exhibit 1, Tab 36.
[223] Exhibit 1, Tab 36.
[224] T 371 - 372; Exhibit 1, Tab 36.

183. Separate to the considerations in relation to the specific medical scientist involved, Dr Kavanagh also provided evidence that since Colin's death PathWest have implemented a number of changes, including a mandatory learning exercise for scientists in regional services regarding the recognition of blasts/acute leukaemia and the medical scientist in charge of each laboratory was contacted to ensure all staff had read and were familiar with the relevant policies. Further, positions have been created for a medical scientist in charge of regional support and a full-time FTE position for a senior medical scientist responsible for training.[225]

184. In addition, and consistent with the suggestion of CellaVision raised by Dr Tampi, the PathWest Haematology laboratory at QEII is actively pursuing procurement and deployment of digital microscopy. If successful, this technology will likely act as a 'safety net' for scientist inexperience and also speed up review and diagnosis in regional sites, as the referral process to QEII is much quicker. Dr Kavanagh indicated the primary challenge is cost and PathWest is in ongoing negotiations with the vendors. Dr Kavanagh advised he has submitted a grant proposal seeking funding to purchase CellaVision instruments for higher-risk regional laboratories, such as Kununurra and Esperance, which are more remote, often more difficult to staff whilst having to manage a high disease burden and big populations of clients. Dr Kavanagh explained that new technology will not replace the human element of scientists reviewing results, but it is hoped it will act as an aid and assist in supporting regional scientists to do their jobs in our very big state. Dr Kavanagh noted that South Australia, which is a much smaller state than ours, has implemented CellaVision and experienced substantial benefits in turnaround time.[226]

WACHS

185. Dr Van Gessel, as the Executive Director of Clinical Excellence for WACHS, gave evidence at the inquest about how WACHS SouthWest outpatient teams have amended procedures that apply when they receive a GP referral that might properly have gone through CRS. Rather than advising the GP to refer it to CRS, the referral is still accepted and processed by the hospital, with the GP also reminded of the appropriate pathway for future matters. While this adds additional administrative burden to the hospital, it acts as a safety net for cases like Colin's.[227]

186. Dr Van Gessel also provided significant evidence about the WACHS Sepsis Pathway and febrile neutropenia guidelines which are there to guide clinicians in cases like Colin's. These guidelines were in place at the time of Colin's presentations, but continue to be refined and training provided around them. Following Colin's death, Febrile Neutropenia/Neutropenic Sepsis training was specifically provided to staff at Collie Hospital on 31 January 2022, which was intended to capture the GP's who are contracted as the on-call ED doctors as well. Recent surveys have shown that staff recognition and reported utilisation of the Sepsis Pathway is high throughout WACHS, including in Collie.[228]

[225] Exhibit 1, Tab 36.
[226] T 373 – 374, 382; Exhibit 1, Tab 36.
[227] T 390; Exhibit 1, Tab 37.
[228] T 399 - 400; Exhibit 1, Tab 37.

RECOMMENDATION

I recommend that the Western Australian Government give consideration to allocating appropriate resources to PathWest to fund the procurement and deployment of digital microscopy solutions (such as CellaVision) throughout the state in order to improve the timeliness and accuracy of Haematologist review for patients living in regional areas.

CONCLUSION

187. Colin Nicholson was a very loved husband, father, grandfather and member of the Collie community. He contracted a serious and aggressive blood disease in 2021, which may well have led to his death eventually, despite medical treatment. He may also have been successfully treated and gone into remission, with the opportunity to live many more years. Sadly, we will never know, as a number of missed moments in his medical care meant that his death as a result of complications of this disease came very quickly. His family were deprived of the opportunity to come to terms with his illness and, if necessary, say goodbye to him properly.

188. Working as a rural doctor in Western Australia can be a difficult and demanding job, particularly when, like these doctors, they assist as on-call emergency doctors at the local regional hospital. Even when the doctors are well-supported by experienced and dedicated nursing staff, as in this case, it is apparent that there are systemic and contextual challenges faced by doctors working in rural practice that take their toll. It is no secret that across the country, health services are experiencing significant challenges hiring and retaining doctors to work in country areas, particularly as more junior doctors are prioritising a greater work/life balance than has generally been available to doctors in the past. The rural communities are the ones who suffer the most, as a result.[229]

189. However, that does not mean that people living in the regions should be expected to tolerate a substandard level of medical care. In this case, there were a number of moments when a different decision, or better communication between health practitioners, may have changed the course of events. I have identified those moments above. I note that all of the doctors, nurses and scientists involved, as well as their colleagues, have reflected on these events and learnt from them. Many of them have expressed their regrets about what occurred and a wish that they had done things differently. This particularly applies to the three GP's who were working in Collie at the relevant time and saw Colin over the period of a few months before his death.

190. The GP's were certainly not assisted by the failings in the laboratory work and referral service. If the protocols had been followed by the Laboratory Scientist, I am satisfied Colin's AML would have been diagnosed much earlier, and treatment

[229] T 11.

initiated, and even if he had then suffered an infection, the risks would have been well known to both Colin and his doctors. However, similarly to the rural doctors, the Laboratory Scientist was working under significant workload pressures and in a somewhat isolated environment. These kinds of challenges were acknowledged by the haematology experts who gave evidence. I am also aware of some extenuating personal circumstances for the Laboratory Scientist, which would have added to the pressures of her workload.

191. I am satisfied that the WACHS, PathWest Haematology Department and CRS have collectively reflected on these events and taken appropriate steps to rectify the identified areas of concern. I note the particular Laboratory Scientist involved is no longer employed by PathWest and steps have been taken to improve the referral process, so that similar referrals are not missed and do not sit unopened. The advent of digital scanning of microscopy images, which will hopefully be funded and implemented in Western Australia in the future, will also vastly improve Haematology Services for rural patients in the future.

192. Colin's family provided a photo of him that captures him hard at work with the SES. It demonstrates the good, hardworking man he was in life, always committed to helping others in the rural community in which he lived and worked. Hopefully, in considering the sad circumstances in which Colin died, his memory has also served to encourage change and improve safety for other patients in that same community.

SH Linton
Deputy State Coroner
9 May 2025