CORONERS COURT OF SOUTH AUSTRALIA

INQUEST INTO THE DEATH OF ADELINA D'ANGELO

[2026] SACC 1

Inquest Findings of her Honour Deputy State Coroner Kereru

12 February 2026

CORONIAL INQUEST

Examination of the cause and circumstances of the death of a woman living with dementia who experienced severe dehydration, leading to acute kidney injury, while under the care of staff at a residential aged care facility. The Inquest explored the circumstances leading to severe dehydration, whether there was a failure to recognise the developing condition and whether steps could have been taken to avoid reaching that state.

Held:

1. Adelina D'Angelo, aged 88 years of Campbelltown, died at the Royal Adelaide Hospital on 9 October 2020 as a result of acute on chronic renal failure due to dehydration on a background of Lewy body dementia, Parkinson's disease and congestive cardiac failure.

2. Circumstances of death as set out in these findings.

Recommendations made.

Counsel Assisting: MS E ROPER

Interested Party: NORTH EASTERN COMMUNITY HOSPITAL INC
Counsel: MR R BÖNIG - Solicitor: FINLAYSONS LAWYERS

Witness: DR M GIORDANO & DR R KONOK
Counsel: MS S GILES - Solicitor: WALLMANS LAWYERS

Hearing Date/s: 28/05/2025-31/05/2025, 08/07/2025, 10/07/2025, 12/07/2025 & 31/07/2025

Inquest No: 30/2024 **File No/s: 2046/2020**

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Introduction

1 Mrs Adelina D'Angelo was born in Italy on 16 September 1932. She died on 9 October 2020, having recently turned 88-years-old.

2 Mrs D'Angelo suffered from a number of medical conditions including Lewy body dementia, congestive cardiac failure, myocardial infarction, Parkinson's disease, chronic kidney disease, fractured neck of femur (surgically repaired), hypothyroidism, urinary tract infection, hypertension and excision of squamous cell carcinoma.

3 In 2017, when Mrs D'Angelo was 84-years-old, she underwent an Aged Care Assessment and was placed into respite at the North Eastern Community Hospital Aged Care Facility (NECH) in Campbelltown, South Australia.

4 Mrs D'Angelo began respite for a four-week period from 22 June 2017 at NECH, after which she became a resident on a permanent basis.

5 Mrs D'Angelo's long term general practitioner (GP) was Dr Mario Giordano. Once she became a resident of NECH, Dr Giordano continued to visit her there for regular check-ups.

6 On 19 September 2020, Mrs D'Angelo was picked up and taken to the house of her daughter, Toni, for her planned birthday celebration with extended family and friends. She was observed to enjoy the day, including eating and drinking as usual.

7 On 26 September 2020, Mrs D'Angelo's daughter, Anna, visited her at NECH. Mrs D'Angelo was observed to be bright and her normal self, much as she was on her birthday the week before.

8 On 3 October 2020, Anna received a call from NECH advising that her mother's food and fluid intake had reduced in the last few days. She was further advised that a locum doctor had examined her, that her vitals were 'ok' and a urine sample was to be collected.

9 The locum doctor, Dr Raunak Konok, queried whether Mrs D'Angelo had suffered a stroke but did not order any specific medical intervention, with the nurse recording in the clinical notes that there was '*nothing to be done*'.

10 On 4 October 2020, Mrs D'Angelo was observed to be less responsive. Following a phone call with a family member, Toni, who insisted that an ambulance be called, Mrs D'Angelo was conveyed and then admitted to the Royal Adelaide Hospital (RAH).

11 On admission to the RAH, Mrs D'Angelo was noted to be sleeping but responding to voice. Her vital signs were abnormal, and she was found to be dehydrated with a high sodium level of 163 mmol/L, high creatinine level of 210 μmol/L and high urea level of 39.7 mg/dL. She was diagnosed with dehydration and presumed pre-renal acute on chronic kidney injury due to her poor oral intake. Despite intravenous fluid resuscitation she deteriorated and became hypotensive, bradycardic and less responsive.

12 Following a family discussion, Mrs D'Angelo was commenced on palliative care and pronounced life extinct on 9 October 2020.

Reason for report of death and cause of death

13 A Medical Report of Death was received by the Coroners Court of South Australia following Mrs D'Angelo's death. The report was made due to concerns raised by the D'Angelo family to RAH clinicians about her care at NECH. The opinion of the reporting medical officer as to her cause of death was '*severe dehydration'*.

14 Following receipt of the Medical Report of Death, a coronial investigation was commenced and an autopsy on Mrs D'Angelo's remains was directed. Associate Professor (A/P) Neil Langlois, forensic pathologist at Forensic Science SA, undertook the post-mortem examination. On 29 April 2021, A/P Langlois furnished his post-mortem report.

15 A/P Langlois' opinion was that Mrs D'Angelo's death was a result of *pneumonia complicating inanition with dehydration and urinary tract infection on a background of Parkinson's disease and Lewy body dementia*.[1]

16 During the course of the coronial investigation, an expert report was obtained from Professor Craig Whitehead, consultant geriatrician. In his report, he opined that Mrs D'Angelo appeared to have died of *dehydration precipitating acute kidney injury and renal failure*.[2] Professor Whitehead explained that he did not believe that significant urosepsis was involved in her death.

17 A/P Langlois was asked to comment on this opinion in a supplementary post-mortem report. He observed that while he and Professor Whitehead did differ in their placing of significance on factors contributing to death, they were in agreement on what they considered to be the main elements of death; dementia and dehydration. A/P Langlois opined:

> I consider the dementia to be the underlying process that has led to her death with dehydration being the precipitant of her death at the time. The contribution of other factors could be debated, but their inclusion or not in the cause of death would remain matters of individual opinion that I feel are peripheral to the key issues being considered in this case.[3]

18 For reasons that I have set out in detail below, I find Mrs D'Angelo's cause of death to be:

> Acute on chronic renal failure due to dehydration on a background of Lewy body dementia, Parkinson's disease and congestive cardiac failure.

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[1] Exhibit C2a

[2] Exhibit C15, page 4

[3] Exhibit C2b

Evidence at Inquest

19 The documentary evidence at Inquest comprised 43 exhibits.

20 In addition to the documentary evidence, oral evidence was heard from:

- Associate Professor Neil Langlois, Forensic Pathologist, Forensic Science SA
- Dr Mario Giordano, General Practitioner
- Dr Raunak Konok, General Practitioner/Locum Medical Practitioner
- Ms Vivian Ebhodaghe, Registered Nurse, North Eastern Community Hospital
- Ms Cara Miller, Chief Executive Officer (CEO), North Eastern Community Hospital
- Professor Craig Whitehead, Expert Geriatrician

21 In these findings I will not summarise all the evidence tendered or heard at the Inquest but will refer to it only in such detail as is warranted by its forensic significance and the interests of narrative clarity. It should not be inferred from the absence of reference to any aspect of the evidence that it has not been considered.

Hindsight bias

22 I warn myself concerning a vital consideration in the assessment of the evidence and any potential criticisms of witnesses in this Inquest, namely hindsight bias.

23 A description of 'hindsight bias' is given in the Australasian Coroners Manual, namely:

> The tendency after the event to assume that events are more predictable or foreseeable than they really were. What is clear in hindsight is rarely as clear before the fact. If it were, there would be far fewer mistakes made. It is an obvious point, but one that nonetheless bears repeating, particularly when Coroners are considering assigning blame or making adverse comments that might damage a person's reputation …
>
> Hindsight, of course, is a very useful tool for learning lessons from an unfortunate event. It is not useful for understanding how the involved people comprehended the situation as it developed. The distinction needs to be understood and rigorously applied.

24 As I have said, I am very mindful of this warning when considering the evidence in this Inquest.

Adelina D'Angelo

25 In the affidavits provided by her family, Mrs D'Angelo was described as a caring and generous daughter, wife, mother and grandmother. She had an active social life, dominated by family events such as weddings, birthdays, Catholic feasts and dances. She would often '*cook up a storm'* and ring her children to come and collect food. This generosity also extended to her neighbours. She was described as instilling important values in her children such as respect, humility and consideration for others.

26 By way of background, Mrs D'Angelo was born in 1932 in Italy. She met her husband, Giorgio while living in Italy. Mr D'Angelo migrated to South Australia in late 1956 with

Mrs D'Angelo following in early 1957. They married on 5 February 1958. Mrs D'Angelo worked at Penfolds Wines before they started a family. They had four children; Anna, Antonia (known as Toni), Donata and Mario.

27 The D'Angelo family lived on a 2,000 square metre property in Magill. The family lived in a small house there. Mrs D'Angelo's daughter Anna remembered a large vegetable garden and a number of chickens in their backyard.

28 When her youngest child started school, Mrs D'Angelo re-entered the work force, taking up employment in bakeries. She often worked the late and early morning shifts, allowing her to continue to look after her family and their home during the day.

29 In 1968, the D'Angelo family built a new home on their land in front of the existing house. Once moving into the newly built home, they rented their former home to a single parent with two children.

30 Around 1976, Mrs D'Angelo's mother moved into the granny flat at the family home. She remained there until her death in 1994. Mrs D'Angelo took a very active grandparent role, so her children were able to work full time. Anna described being a grandmother as bringing Mrs D'Angelo much joy.

31 When her husband's health declined, Mrs D'Angelo cared for him until his death in 2012. With the prospect of being alone in the house and the four children now grown up with their own families, a decision was made to ensure that Mrs D'Angelo was cared for. That included a family member moving in with Mrs D'Angelo, and her children regularly visiting and spending time at the house.

32 When Mrs D'Angelo was 84-years-old she underwent an Aged Care Assessment after a hospital admission where she was diagnosed with delirium on a background of functional decline. With much consideration and some agonising from her children, it was agreed that Mrs D'Angelo would spend time at an aged care facility for respite in June 2017. This aged care facility was NECH. As often occurs with respite arrangements for the elderly, Mrs D'Angelo's respite stay was transitioned into a permanent residency at the same facility.

Dr Mario Giordano

33 Dr Mario Giordano gave evidence at the Inquest. He had been Mrs D'Angelo's treating GP for more than 20 years. The clinical records of consultations with Mrs D'Angelo produced to the Court commenced on 14 September 2000.

34 Dr Giordano received his Bachelor of Medicine and Surgery from the University of Adelaide in 1978. He undertook his internship at the RAH and then at the Modbury Hospital in 1978. He then worked as a Resident Medical Officer at the Women's and Children's Hospital (named the Children's Hospital at the time) and the Queen Victoria Hospital where he furthered his studies in obstetrics, obtaining a diploma in obstetrics at the Royal Australian College of Obstetricians and Gynaecologists. In 1980, he began practice as a general practitioner.

35 Following Mrs D'Angelo entering NECH, Dr Giordano visited her at the facility and continued to consult with her there. These consultations were every 4-6 weeks in addition

to any specific request by nursing staff for a particular ailment. The frequency of these visits decreased during the COVID-19 pandemic as entry restrictions were placed on nursing homes. Dr Giordano gave evidence that he was immunocompromised due to cancer treatment, and in July 2020 he had stopped attending aged care facilities.

36 Dr Giordano had very little independent memory of the events relating to Mrs D'Angelo. He relied on a combination of his clinical records and his usual practice to assist while giving evidence.

37 The relevance of Dr Giordano's involvement in the events leading up to Mrs D'Angelo's death related to his treatment of Mrs D'Angelo's pre-existing medical conditions, and the medications that he prescribed for them. Most importantly however were the results of routine biochemistry testing on 26 June 2020 which revealed a level of hypernatremia, or high sodium levels. This was the subject of considerable evidence and will be detailed below.

Dr Raunak Rahat Konok

38 Dr Raunak Konok completed her Bachelor of Medicine and Surgery in 1996 at the Bangladesh Medical College and moved to Australia to practice in 2004. Upon arrival, she passed exams and undertook a year as an intern and then a year as a registered medical officer in psychiatry and a year in paediatrics at the Women's and Children's Hospital. In 2013, Dr Konok commenced working as a locum, including work at the Salisbury Super Clinic in 2016. In 2020, Dr Konok was employed as a GP at Surrey Downs Medical Centre as well as continuing as a locum doctor.

39 Dr Konok's only involvement with Mrs D'Angelo was on 3 October 2020, when she was called, in her capacity as a locum, to attend NECH to assess Mrs D'Angelo due to concerns that she was lethargic and was excessively sleeping.[4] Her observations and assessment were the subject of oral evidence because Dr Konok did not initiate any active treatment for Mrs D'Angelo despite her suspecting that she had suffered a life threatening condition (stroke). This approach was against the expressed end of life wishes in Mrs D'Angelo's Palliative Care Plan.[5]

Professor Craig Whitehead

40 Professor Craig Whitehead is a senior consultant geriatrician who has been in consultant practice for 30 years. He is currently appointed as the Regional Clinical Director of Rehabilitation, Aged and Palliative Care in the Southern Adelaide Local Health Network. He is also a professor with Flinders University and is on the board of directors of the aged care provider Helping Hand. In his routine clinical practice, he sees residents in residential aged care and has experience with managing general medical problems in this frail, elderly population. Professor Whitehead carries out his clinical work at the Repatriation General Hospital, Flinders Medical Centre, Noarlunga Health Service and also at Victor Harbor.

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[4] Exhibit C7a

[5] Exhibit C6a, page 32.

41 Professor Whitehead prepared an expert overview of Mrs D'Angelo's care at NECH and gave extensive oral evidence at the Inquest.

42 It is important to note that Professor Whitehead gave expert evidence in this Inquest about the care provided to Mrs D'Angelo by general practitioners, registered and enrolled nurses and personal care assistants. In his evidence he frequently acknowledged that his training and experience placed his opinions at a level that he would not apply to other clinical staff. I have taken this into account when reaching certain findings in this matter.

Dehydration vs renal impairment – The cause and effect

43 A/P Langlois was called to give oral evidence at the Inquest. His opinion about the cause of death and that suggested by Professor Whitehead was the subject of cross-examination. A/P Langlois explained that in forming his conclusion that Mrs D'Angelo was dehydrated, he relied on the blood tests results, the hospital diagnosis and the changes he observed to the kidneys, which would support the possibility of dehydration as a cause of acute kidney injury. When considering the blood test results from the sample taken at 12:35 on 4 October 2020, he stated that the pattern he could see, of a very high urea and moderately but not dramatically high creatinine, was the pattern he associated with dehydration causing renal failure. While he noted that dehydration would not necessarily be the only cause of acute renal injury, it was his evidence that he could not see any other definite cause for the kidney injury he observed.[6] His observations were based on the macroscopic and microscopic findings of the kidneys during the post-mortem examination which were set out in some detail in his report.[7]

44 When asked if he would review the cause of death he had given in his original report, A/P Langlois suggested that the cause could be rephrased as 'dehydration complicating dementia' or 'dementia complicated by dehydration'.[8] He did not advocate for the inclusion of the reference to a urinary tract infection in the cause of death, noting that he initially included it as a possible reason why Mrs D'Angelo may have stopped eating and drinking, as such an infection is known to cause changes in behaviour in older persons. As to whether any infection was clinically significant, he stated that he would defer to Professor Whitehead, who opined that Mrs D'Angelo did not have a clinically significant urinary tract infection and that this issue was irrelevant to the cause of death.[9]

45 As to other possible causes or contributing factors to Mrs D'Angelo's death, A/P Langlois was cross-examined extensively. The primary alternative hypothesis put to him was that kidney failure may have caused Mrs D'Angelo to experience difficulty swallowing, eating and drinking, and that this caused her to become dehydrated, rather than a lack of fluids being provided. Once again, A/P Langlois deferred to Professor Whitehead's opinion as a clinician. However, he stated that he could see no reason why acute renal impairment may have started and then led to the problems described.[10] He did however acknowledge the nexus between renal impairment creating a change in behaviour, such as a decrease in fluid intake.

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[6] Transcript, page 35 and 42
[7] Exhibit C2a, page 8
[8] Transcript, page 75
[9] Transcript, page 520
[10] Transcript, page 59

46 Importantly, A/P Langlois cautioned that drawing inferences from post-mortem examination of the kidneys is problematic, as they are very active organs during life and it is difficult to tell even under the microscope whether the damage seen occurred during life or as a consequence of death. He explained *'You cannot always extrapolate backwards*.'[11]

47 A/P Langlois agreed that when taken at face value, prior blood test results from 11 July 2018 and 25 June 2020 indicated a degree of renal impairment. The caveat given by A/P Langlois in relation to his assessment of renal function based on these test results was that it was his understanding that the eGFR was a controversial method of assessing renal function. This was a matter on which Professor Whitehead later agreed in his oral evidence and had also given evidence about in a previous Inquest.[12] Given that controversy was addressed in detail in that Inquest, I will not discuss it in detail here.

48 The most persuasive evidence from the pathological perspective was A/P Langlois' finding of pitting of the renal cortical surface and cortical atrophy at autopsy. These changes, as he explained further in his oral evidence, were indicative of chronic renal impairment.[13]

49 It was suggested to A/P Langlois that Mrs D'Angelo's failure to improve when administered intravenous fluids in hospital supported the hypothesis that renal impairment caused the dehydration, rather than the other way around. On this topic, A/P Langlois again stated that he would defer to Professor Whitehead, however he did suggest that by the time Mrs D'Angelo presented to hospital, there had been further renal impairment due to the dehydration, and she was now in a situation that was in his words *'irreversible'*.

50 Professor Whitehead was not asked to address the suggestion that Mrs D'Angelo's failure to improve when administered fluids indicated that dehydration was the consequence of renal failure, rather than the reverse. He did however explain that he would not have expected the administration of fluids to have reversed the dehydration, as in his experience, such a process takes several days.[14] While he queried the initial choice of normal saline administered at the hospital, it was his view that this decision did not make a huge difference to the outcome.[15] I understood that A/P Langlois and Professor Whitehead were very much in agreement on this issue.

51 The hypothesis of renal failure causing dehydration was put to Professor Whitehead. He explained that high output renal failure or a renal obstruction can cause dehydration, however he opined that it was extremely unlikely as there was no evidence of renal obstruction.[16] Accordingly, it was his evidence that it was extremely unlikely that renal failure caused dehydration.

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[11] Transcript, page 52
[12] *Inquest into the death of Millicent Glenn* [2025] SACC 24
[13] Transcript, page 56-57
[14] Transcript, page 545
[15] Transcript, page 546
[16] Transcript, page 617

52 Further, Professor Whitehead expressed the view that Mrs D'Angelo almost certainly had a degree of chronic kidney disease and that this made her more prone to developing acute kidney injury.[17] As explained by A/P Langlois, '*when a kidney has been damaged and then you put another insult on top of it, you make a person dehydrated, then of course that can lead to kidney failure*.'[18]

53 I am satisfied that with the combined evidence of A/P Langlois, Professor Whitehead and also Dr Giordano, it is open on the evidence to find that Mrs D'Angelo had a degree of chronic renal impairment before her deterioration in September 2020 and I am satisfied that I should make that finding. However, the acute kidney injury detected at autopsy was caused by dehydration.

54 There is no evidence to support a finding that Mrs D'Angelo's chronic renal impairment was the cause of her severe dehydration, which was diagnosed upon her admission to hospital on 4 October 2020. It may well have exacerbated the detrimental effect of dehydration on her kidneys, but there is no evidence that renal failure suddenly caused Mrs D'Angelo to refuse food and fluid in September 2020.

55 The possibility of a cardiac cause of death was also explored during the inquest. A/P Langlois expressed the view that he did not consider the condition of the heart to be a significant factor in Mrs D'Angelo's death.[19]

56 That opinion was supported by the report of cardiologist Dr Garry Helprin.[20] Dr Helprin opined that Mrs D'Angelo did not experience a myocardial infarction, and that the troponin rise seen in the blood test results of 4 October 2020 was simply due to dehydration and renal impairment.[21] This evidence has informed me in coming to the conclusion I set out at the beginning of these findings; that the provoking cause of Mrs D'Angelo's death was acute on chronic renal failure caused by dehydration. Underlying this was Lewy body dementia, Parkinson's disease and congestive cardiac failure (the latter for which she was prescribed frusemide and spironolactone).

Dehydration – A broader issue

57 While this inquest explored several possible missed opportunities to prevent the death of Mrs D'Angelo, an issue of significant and national concern emerged during the evidence of Professor Whitehead.

58 As explained by Professor Whitehead, the natural history of dementia (part of ageing itself) is to lose the sensation of thirst. As people develop cognitive impairment not only do they fail to be thirsty, but they lack the faculties to seek and find food and fluids to maintain hydration.[22]

59 It was his evidence that the hospitalisation of severely dehydrated aged care residents is very common in his experience. He explained that he sees a procession of elderly patients

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[17] Transcript, page 547
[18] Transcript, page 34
[19] Transcript, page 26
[20] Exhibit C21
[21] Exhibit C21, page 5
[22] Exhibit C15, page 2

coming into the hospital with dehydration. In fact, he told the court that the weekend before he attended to give evidence, three people were admitted in exactly the same advanced dehydration condition as Mrs D'Angelo.

60 What is clear from the evidence is that dehydration is an underappreciated problem for older Australians living in residential care. As lamented by Professor Whitehead, the failure to address hydration in a meaningful way can lead to potentially preventable deaths. While the aged care industry is highly regulated, those regulations appear to be naive to the issue of hydration. Meaning that there is no specific aged care quality standard exclusively directed to dehydration. While there are mentions of hydration within the nutrition standard, those are not sufficiently individualised. There is no mandated minimum fluid prescription for residents, even those deemed to be at high risk of dehydration. The Aged Care Quality Standards were under review during the Inquest, with the draft standards received into evidence.[23] The draft standards proposed the following actions:

> *Nutrition and hydration*
> 5.5.5 The provider implements processes to maintain an older person's nutrition and hydration by:
>
> a) conducting regular malnutrition screening
> b) minimising the impact of chronic conditions
> c) responding to the risk of malnutrition and when an older person is malnourished or has unplanned weight loss or gain.
>
> …
>
> 6.1.2 The provider implements a system to monitor and continuously improve the food service in response to:
>
> a) the satisfaction of older people with the food, drink and the dining experience
> b) older people's intake of food and drink to ensure it meets their nutritional needs (including review of identified unplanned weight loss and malnutrition identified in Standard 5)
> c) the impact of food and drink on the health outcomes of older people
> d) contemporary, evidence-based practice regarding food and drink.
>
> …
>
> 6.2.1 As part of assessment and planning, the provider assesses and regularly reassesses each older person's nutrition, hydration and dining needs and preferences. The assessment considers:
>
> a) the specific nutritional needs of older people, including a focus on protein and calcium rich foods
> b) the older person's dining needs
> c) what the older person likes to eat and drink
> d) when the older person likes to eat and drink
> e) what makes a positive dining experience for the older person
> f) clinical and other physical issues identified that impact the older person's ability to eat and drink.

[23] Exhibit C12a

Note: 'Clinical and other physical issues' may include consideration of a person's oral health, ability to chew and swallow, the impact of medications on appetite, seating and positioning requirements for eating and drinking, dexterity, physical assistance needed to eat and drink, etc.

61 Following the conclusion of the inquest, I received into evidence the final Strengthened Aged Care Quality Standards that took effect on 1 November 2025.[24] They include the same deficiency. The final text reads:

> *Nutrition and hydration*
> 5.5.5 The provider implements processes to maintain an individual's nutrition and hydration by:
>
> a) conducting regular malnutrition screening
> b) minimising the impact of chronic conditions
> c) responding to the risk of malnutrition and when an individual is malnourished or has unplanned weight loss or gain.
>
> …
>
> 6.1.2 The provider implements a system to monitor and continuously improve the food and drinks service in response to:
>
> a) the satisfaction of individuals with the food, drink and the dining experience
> b) individuals' intake of food and drink to ensure it meets their nutritional needs (including review of identified unplanned weight loss and malnutrition identified in Standard 5)
> c) the impact of food and drink on the health outcomes of individuals
> d) contemporary, evidence-based practice regarding food and drink.
>
> …
>
> 6.2.1 As part of assessment and planning, the provider assesses and regularly reassesses each individual's nutrition, hydration and dining needs and preferences. The assessment considers:
>
> a) the specific nutritional needs of individuals, including a focus on protein and calcium rich foods
> b) the individual's dining needs
> c) what the individual likes to eat and drink
> d) when the individual likes to eat and drink
> e) what makes a positive dining experience for the individual
> f) clinical and other physical issues identified that impact the individual's ability to eat and drink.

62 This Inquest has therefore illuminated a critical gap in the oversight and management of aged care facilities. It was plain from the evidence of current Chief Executive Officer of the North Eastern Community Hospital Incorporated, Cara Miller, that there would be little utility in suggesting that aged care facilities voluntarily commence the monitoring of minimum fluid prescription for residents. She indicated that in some facilities, there is no funding available for these extra care requirements. Ms Miller explained:

> Yeah, I think - so at the moment the funding that exists for the delivery of services under the eight standards that are currently legislated and monitored by the commission a requirement for documenting regular fluid intake is not as prescriptive as what I'm suggesting you're saying. In that regard if there was to be a change that then has a flow

[24] Exhibit C22b

> on effect to the staffing to be able to deliver and document that. At this stage I think it's very widely reported that there's a lot of pressure on the aged care systems. A significant number of providers are not profitable and to have extra care and nursing requirements that would need to be delivered for that greater oversight, not just in review of monitoring but recording, that would I would suggest need to be something that would need to be stipulated by the Commonwealth and the commission as a set of standards in the proposed new standards. That would need to have a requirement around what we're currently hearing and monitoring about care and nursing minutes per resident per day. So if there's a greater expectation around that that would then have to flow into a funding model that would meet the requirements for those staff members to be available to execute that greater monitoring and compliance if that was to be set as a standard.[25]

63 While some facilities may recognise the urgent need to prioritise this issue, others may not or simply do not have the resources, resulting in a lack of consistency in the care provided to older Australians.

The diagnosis of dehydration in the elderly – A misconception

64 Underpinning the broader issue above, and a contributing factor to the failure to detect Mrs D'Angelo's dehydration at an earlier time, was the widespread misunderstanding in relation to how dehydration in older persons can be detected. It is a common misconception that dehydration will manifest in clinical features in the aged. Dr Giordano, Dr Konok, RN Ebhodaghe and Ms Miller all gave evidence that their understanding of the generic signs of dehydration was that it could be detected with certain clinical features. Professor Whitehead explained that this is not the case in the elderly.

65 It was the uncontested evidence of Professor Whitehead that there are no reliable physical signs of dehydration in older adults, and the only way it can be reliably detected is by measuring the concentration of the blood.

66 He told the Court that there had been significant studies over the years indicating that the physical signs of dehydration are unreliable in older adults. This information is contained within most of the text books in the area of geriatric medicine. Professor Whitehead explained that dehydration is technically and accurately defined as being hyper-concentrated. However, in his experience, doctors typically confuse dehydration with hypovolaemia, or low blood volume. While the concepts are related, he explained that a person must be very concentrated in order to become hypovolaemic.[26]

67 Further, the external signs of being dehydrated, or hyper-concentrated, are actually very unreliable. Professor Whitehead explained that a common misconception exists that you can tell a person is dehydrated from the end of the bed.[27] This is the precise misconception that was borne out in the evidence of Dr Giordano, Dr Konok, Ms Miller and RN Ebhodaghe.

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[25] Transcript, page 692-693
[26] Transcript, page 524
[27] Transcript, page 532

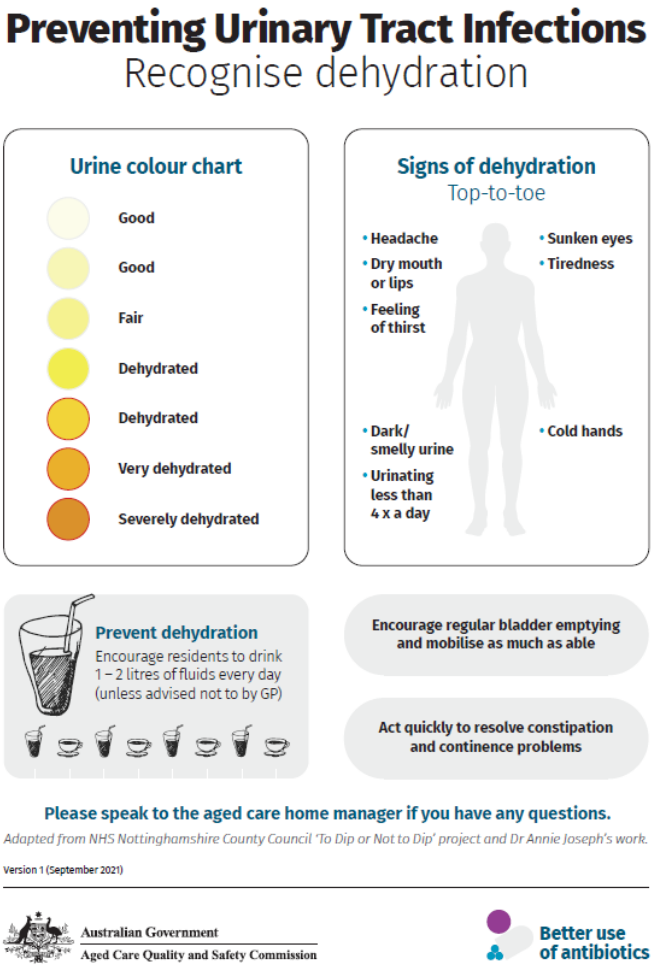
68 Dr Giordano told the Court that he believed a patient who was dehydrated would have dry lips, a low thready pulse, low urine output and a suggestion of low blood pressure.[28]

69 Dr Konok said that if she were looking for signs of dehydration, she would look at the lips and the mouth, check for capillary refill, look at skin turgor, which she described as being 'quite reliable' and said she expected blood pressure would be low.[29]

70 Ms Ebhodaghe deposed in her affidavit that in her training to become a nurse she was taught to look for generic signs of dehydration, such as cracked lips, dry skin, low urine output, signs of thirst and a dry tongue.[30]

71 Ms Miller also expressed the firm belief that her staff could tell what the signs of dehydration were, and that dehydration could be detected by conducting routine observations.

72 A Fact Sheet published by the Aged Care Quality and Safety Commission was received into evidence and set out the physical signs of dehydration:[31]



[28] Transcript, page 160
[29] Transcript, page 247
[30] Exhibit C19, paragraph 7
[31] Exhibit C22

73 It was Professor Whitehead's evidence, which I have accepted in its entirety, that this advice is misleading for those caring for elderly people. He explained:

> This idea of a minimum fluid prescription being part of standards of care [I] absolutely support that. I mean this seems to have been put in the context of preventing urinary tract infections. Again, the evidence that keeping someone hydrated precents urinary tract infections, I've never actually seen a study that supports that fact. In theory it might. But the signs of dehydration - I mean if you had all of those, to be honest, you might be moribund. It's not really very helpful.[32]

74 As seen in the clinical records, a locum doctor saw Mrs D'Angelo on 25 August 2020 due to a level of agitation and recorded the observation that her hydration at that time was 'fair'.[33] The events that followed casts doubt on this assessment. No bloods were requested to confirm this assessment and so this misunderstanding appears to have had an impact on Mrs D'Angelo's course of treatment.

75 I will return to this issue at the end of these findings when considering recommendations.

Circumstances leading up to Mrs D'Angelo's death

Incidents of concern raised by the D'Angelo family

76 In a detailed letter written by the D'Angelo family to the Coroners Court on 28 August 2021 a number of concerns were outlined in respect of the care provided to Mrs D'Angelo by the staff at NECH. This was subsequently converted into an affidavit sworn by Anna D'Angelo.[34]

77 In particular, there was an occasion in June 2020 where Mrs D'Angelo's daughter identified a skin lesion on her mother's face when visiting. This had not previously been detected by staff. It required removal and was ultimately found to be a squamous cell carcinoma.[35] There were also frequent falls documented between 22 December 2017 and 20 August 2020 (16 in total)[36] one of which led to Mrs D'Angelo fracturing her left neck of femur.[37]

78 Oral evidence was not heard about these particular incidents; however, documentary evidence was received (including the clinical records) which supported the family's concerns that these incidents did occur. While not directly relevant to her cause of death, it did give rise to a concern of sub-optimal care in the aged care facility.

79 In June 2018, the D'Angelo family received a letter from the Department of Health notifying them of a review conducted by the Australian Aged Care Quality Agency (the Quality Agency) on 22 June 2018 and found that NECH was not providing an appropriate

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[32] Transcript, page 638
[33] Exhibit C11, page 75
[34] Exhibit C3, C3a
[35] Exhibit C8, pages 4-7
[36] Exhibit C12, pages 28, 86, 87, 97, 121, 125, 137, 138, 140, 145, 151, 153, 159, 163, 174, 237 and 239
[37] Exhibit C12, page 28

standard of care to residents. In response, sanctions were imposed on the aged care facility with a meeting organised for residents, relatives and representatives to attend.[38]

80 The meeting was held the next day and Toni D'Angelo attended along with a number of other residents' families. Concerns were raised at the meeting about behavioural issues, physical assaults, multiple falls and inadequate staff to assist with meals for residents who could not feed themselves.[39]

81 Details of the Audit Report were received into evidence, revealing that there were five (of 44) requirements that did not meet expected outcomes, including '*behaviour management, skin care and living environment'*.[40]

82 In October 2018, a further site visit and audit was conducted with NECH meeting all 44 accreditation standards.[41]

83 While these incidents were of concern individually, when viewed collectively it gave rise to a concerning pattern of events which understandably created distress and anxiety for the D'Angelo family. Without their involvement and advocacy on behalf of their mother, the events that were the subject of this Inquest may not have come to light.

North Eastern Community Hospital Aged Care Facility

84 From 24 May 2020, Registered Nurse (RN) Vivian Ebhodaghe worked at NECH and cared for Mrs D'Angelo and other residents. As touched on above, she gave oral evidence during the Inquest and provided an affidavit.

85 Ms Ebhodaghe explained that there were approximately 84 residents at the time she was employed at the facility.[42] Ms Ebhodaghe typically worked an afternoon shift (3 pm to 11 pm) and described that during her shift the composition of staff would be one RN and three Enrolled Nurses (EN). The EN's were the primary carers for the residents and would be responsible for between 28 to 30 residents each. The EN was responsible for administering medications, attending to minor wounds and would seek assistance from the RN on duty when necessary. There were also typically two Personal Care Workers (PCA) for each EN on a shift. A PCA was responsible for attending to the resident's daily needs such as attending to meals and hydration, toileting and assistance with mobility.

86 There were no doctors at the NECH aged care facility. The usual aged care arrangement, as explained in more detail by Dr Giordano, was that the resident would be under the care of their general practitioner (GP) from the community. If their GP was not available, the resident would be seen by a locum doctor or transferred to a hospital by ambulance, depending on the severity of the incident.[43]

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[38] Exhibit C3a,

[39] Exhibit C3a, pages 1-2 – Contemporaneous notes (taken by Toni) annexed to Ms Anna D'Angelo's affidavit

[40] Exhibit C12, Annexure CEM-C, pages 275-276

[41] Exhibit C12, Annexure CEM-D, pages 300-326

[42] Chief Executive Officer Cara Miller confirmed there to be 84 beds at NECH (Exhibit C12, paragraph 3)

[43] Exhibit C19, para 14

87 Ms Ebhodaghe was involved in Mrs D'Angelo's day to day care, but more specifically her care plan review following the June 2020 blood results. She was also on shift when Dr Konok assessed Mrs D'Angelo on 3 October 2020, just before being transferred to hospital in acute kidney failure.

When did Mrs D'Angelo become dehydrated?

88 Mrs D'Angelo suffered from a number of co-morbidities as may be expected in someone in their advanced years. The diagnosis of Lewy body dementia was particularly relevant to her risk of dehydration. This was for two reasons; firstly, her cognitive issues impacted on her ability to feel thirsty, and secondly, her motor function was affected (parkinsonism symptoms).

89 There were numerous entries in the clinical records from the aged care facility acknowledging that Mrs D'Angelo required prompting and assistance with meals and fluids due to her diagnosis of dementia. This was therefore a known and recognised risk factor. The care plan set out: '*She requires a special set up due to cognitive impairment, positioning to eat, toileting prior to meal times … She requires her drinks to be poured, a cup to be placed in her hand and verbal prompts to drink … For supervision she requires staff to standby to provide verbal prompts and physical assistance to eat … 1:1 assist with feeding*'.[44]

90 Mrs D'Angelo's daughter Anna also observed that following her admission to NECH, her ability to walk unaided declined quickly, as did her cognitive function. In response to the COVID-19 pandemic, restrictions at the facility saw residents served meals in their rooms rather than in the dining area. Anna explained:

> In the months before my mother's death she was not able to feed herself. On multiple occasions I went to visit my mother and her food tray had not been touched and was still positioned at the foot of her bed which she was unable to reach. Our mother required assistance with feeding and drinking.'
>
> She was able to place her own food into her mouth but she would have to be given the utensil with the food on it. She would not be able to or would not initiate taking the food off the plate for herself.
>
> Similarly, she had to be prompted and directed with her drinking. She was able to hold and use a cup or straw but had to be presented the drink. She would not reach for or move to her drink across the table and certainly if it were not close or out of reach, she would not drink. It would be entirely up to staff at the home to ensure that she had enough fluid intake. Something I feel they did not do.[45]

91 As touched on above, on 6 June 2020 what appeared to be a skin lesion or boil near Mrs D'Angelo's ear was brought to the attention of aged care staff by her family. A locum was called to attend NECH on the same day and upon doing so, queried whether the boil was a skin cancer.[46] Dr Giordano was notified, and he referred Mrs D'Angelo for a dermatology review on 10 June 2020. It was recorded in the clinical notes that Anna

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[44] Exhibit C6a, pages 316-317

[45] Exhibit C3, paragraphs 10-12

[46] Exhibit C12, page 221 and Exhibit C11, page 86

D'Angelo was concerned that the lesion had not been detected and acted upon earlier by the aged care staff at NECH.[47]

92 On 22 June 2020, Dr Giordano saw Mrs D'Angelo at NECH and ordered that a set of routine general chemistry bloods be taken. He then contacted Anna to discuss the upcoming dermatology review. It was recorded in his entry that he considered the 'boil' may be a basal cell carcinoma.[48]

93 The results from the blood test were sent to Dr Giordano by facsimile on 26 June 2020. These results were the subject of much oral evidence as Professor Whitehead, in his expert report, commented that the results revealed a level of dehydration as her results revealed a sodium level of 149 mmol/L, where the normal range is between 135 to 145 mmol/L. In addition to this was a slightly elevated chloride level of 111 mmol/L, with a normal range being 95 to 110 mmol/L.[49] This was concerning to Professor Whitehead as Mrs D'Angelo was also taking diuretic medications[50] for the condition of congestive cardiac failure, which heightened her risk of dehydration and meant that subtle signs were serious.

94 While Professor Whitehead emphasised that the results were only mildly abnormal, he described this as a red flag to have considered Mrs D'Angelo's hydration status and the potential cessation of her diuretic medication. Professor Whitehead opined '*[p]atients will be significantly dehydrated by the time their sodium creeps outside the normal range'*.[51]

95 There were three questions that arose from Professor Whitehead's opinion about the blood results. Firstly, did Dr Giordano consider Mrs D'Angelo's results to be reflective of a level of dehydration? Secondly, if he did, should he have acted upon it by reviewing (and potentially ceasing) her diuretic medication and/or repeating the test? Lastly, was this result causally linked to the severely deranged blood results upon Mrs D'Angelo's admission to hospital just prior to her death?

96 It is important to highlight that that Mrs D'Angelo suffered congestive cardiac failure which required diuretic treatment. There was extensive evidence before the Court, both documentary and by way of oral evidence, that this condition was actively managed in accordance with her symptoms by Dr Giordano and the specialists to whom Mrs D'Angelo was referred.[52] I am satisfied, particularly based on the expert evidence of Professor Whitehead on this topic,[53] that the prescription of diuretic medication for Mrs D'Angelo's condition of congestive cardiac failure was indicated and appropriate.

97 Another observation was that Mrs D'Angelo had been taking diuretics for a number of years and there were two prior occasions when Mrs D'Angelo's diuretics were paused during inpatient admission in hospital. Dr Giordano was notified of this by way of

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[47] Exhibit C12, page 223
[48] Exhibit C12, page 227
[49] Exhibit C15, page 4
[50] Spironolactone and furosemide
[51] Exhibit C15, page 4
[52] Transcript, page 623, 624
[53] Transcript, pages 620-624

discharge summary.[54] Following improvement on each occasion, Mrs D'Angelo was then recommenced on diuretics. Blood results for 30 September 2019[55] did not reveal any concerns for Mrs D'Angelo's hydration status. The September 2019 blood results were therefore an important baseline for the change in Mrs D'Angelo's condition in the year that followed. The cessation of diuretic therapy in hospital in response to adverse symptoms was also relevant, in that Dr Giordano was made aware that from time to time, Mrs D'Angelo's diuretic medication was reviewed and paused.

98 Following the abnormal blood results in June 2020, Professor Whitehead gave oral evidence that he was comfortable that Mrs D'Angelo's diuretic medications were not changed. The issue, as will be addressed below, was not that the medication should have been changed, rather that there should have been consideration of Mrs D'Angelo's elevated risk of dehydration in the context of her blood results and the medication she was prescribed and that it be recorded in the clinical records.[56]

Episode of hypernatraemia

99 Dr Giordano had no independent memory of reviewing the June 2020 blood results. He did however accept in his oral evidence that he must have done so as they had reached Mrs D'Angelo's clinical file, and that they revealed a mild level of hypernatraemia.[57] Dr Giordano could not recall if he took any action in relation to the results.[58]

100 No direct action was recorded in response to the mild hypernatraemia in either Dr Giordano's or NECH's clinical records. The NECH clinical records simply reflected that the results had been received and faxed to Dr Giordano, from whom they were awaiting a response.[59] Following this entry, there was no further mention of the blood results or any action required. It was essentially left to Dr Giordano to consider and address.

101 Dr Giordano did however conduct a face-to-face consultation with Mrs D'Angelo at NECH on 10 July 2020. This was 14 days after the blood results were sent to him. The entry in the NECH clinical records was as follows:

> MEDICAL REVIEW
> OBS STABLE
> CHEST CLEAR
> CVS STABLE
> RIGHT FACIAL LESION NOTES ?SCC ?BCC
> AWAIT DERMATOLOGY REVIEW
> DR MARIO GIORDANO FRACGP[60]

102 Dr Giordano gave evidence that consistent with his general practice he would have arrived at the facility, obtained information from staff members about whether there were

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[54] Exhibit C5, pages 26-27 – Discharge summary sent to Dr Giordano (frusemide was ceased); 29 September at Calvary (furosemide was ceased)
[55] Exhibit C11, page 30
[56] Transcript, page 641
[57] Exhibit C2a, page 83
[58] Transcript, page 149
[59] Exhibit C12, page 228
[60] Exhibit C12, page 231

any concerns and then visited Mrs D'Angelo.[61] His clinical notes informed him that he would have checked Mrs D'Angelo's blood pressure, heart, listened to her lungs and checked for ankle oedema.

103 In the absence of an independent recollection, Dr Giordiano asserted that he would have observed Mrs D'Angelo's general appearance to see if there were any signs of dehydration; such as a sunken face and/or dry lips.[62] He explained that dehydration would also manifest in a low volume thready pulse, low urine output and potentially low blood pressure.[63]

104 Hypothesising as to why a repeat general chemistry blood test was not ordered, Dr Giordano gave the following evidence:

> A. In retrospect, one could argue that one may have repeated the blood test, but there was nothing there on clinical examination which made me concerned that her hydration had not been corrected.
>
> Q. So when you refer to clinical examination are you referring to clinical examination that happened after this date.
>
> A. Yes.
>
> Q. So I just want to focus on the results and looking at those results, considering just the results that you can see there, do you think that those results call for any follow-up testing.
>
> A. Clinical follow-up yes, biochemical follow-up no, unless she did not respond to clinical management.[64]

105 In light of Professor Whitehead's evidence, it is difficult to see how an improvement could be detected without blood testing.

106 Three days after this consultation, Mrs D'Angelo's care plan was reviewed, and a three-day food and fluid chart was commenced. A submission was made that this care plan review was consistent with Dr Giordano's general practice of discussing a patient's fluid intake with nursing staff after an abnormal blood result,[65] and that a finding could be made accordingly.

107 The difficulty with that submission was that Dr Giordano had no memory of reviewing the blood results on 26 June 2020, the consultation on 10 July 2020[66] or speaking to the nursing staff about any concerns. As detailed above, he retrospectively relied upon Mrs D'Angelo's observations being normal (as recorded in his consultation on 10 July 2020) for not repeating the bloods. Therefore, the obvious question arose: why would a three-day food and fluid chart be necessary?

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[61] Transcript, page 158
[62] Transcript, page 160
[63] Transcript, page 160
[64] Transcript, pages 152-153
[65] Written submissions on behalf of Dr Giordano, paragraph 45 (f)
[66] Transcript, page 369-370

108 Professor Whitehead opined that following the mildly hypernatraemic status, the gold standard of practice would be to order a repeat test. He gave the following evidence:

> I suppose - there are degrees of practice failure, for want of a better term. You know, there's gold standard and there's - at [one] end, to truly egregious at the other. I think it's generally good practice if you've got an abnormal blood test to repeat it, to make sure that it normalises, and I think that probably should have been done in this case. The reality is, of course, that it was a minor abnormality, and may well have resolved by itself, and therefore for - in terms of - because this is putting into context that we know subsequently she becomes much more dehydrated - it's really in saying did Dr Giordano miss an opportunity to prevent the eventual outcome, and I don't believe he did, because I don't think it would be reasonable to expect him to have gone 'Aha, I need to really intervene now because I know in a few months' time Mrs …D'Angelo will end up severely dehydrated and in hospital'. I think that's an unreasonable thing to expect Dr Giordano to predict that based on what, you know - turning up and seeing this blood test, because of the minor level of the abnormalities. Having said that, in the spectrum of practice, I think if you've got an abnormal blood test, you should probably repeat it, and it's quite possible if it was repeated it would have been normal.[67]

109 The issue therefore was whether Dr Giordano had turned his mind to Mrs D'Angelo's hydration status. In the absence of his memory[68], the clinical records (other than the commencement of food and fluid chart) did not support that contention.

110 While of some concern in isolation, I understood Professor Whitehead's evidence to be that no causal relationship existed between Mrs D'Angelo's mildly hypernatraemic state in June 2020 and her severely dehydrated state a few months later. Events that occurred in the intervening months were supportive of Mrs D'Angelo remaining well.

111 Accordingly, I am not critical of Dr Giordano for not ordering a follow up test. However, there was simply no evidence to support the contention that Dr Giordano specifically turned his mind to Mrs D'Angelo's elevated risk of dehydration following the blood results on 26 June 2020. If he had turned his mind to that risk, reference to her mildly hypernatraemic state should have been recorded in the NECH clinical records for the benefit of nursing staff (and locum doctors), particularly given Mrs D'Angelo's elevated risk due to her dementia as well as the diuretic medications she was taking.

112 What it did demonstrate was the missed opportunity to have provided clear instructions to nursing staff for the monitoring of Mrs D'Angelo's fluid intake, quite separately from the three-day food and fluid chart which might have assisted her to stay out of concerning territory later. This was therefore a missed opportunity to place those responsible for the day-to-day care of Mrs D'Angelo on notice that they needed to carefully monitor her fluid intake and ensure it was adequate.

The three-day food and fluid chart[69]

113 While serendipitous in its timing, occurring three days after Dr Giordano saw Mrs D'Angelo, there was evidence to suggest that the commencement of the three-day food and fluid chart was simply part of the six-monthly care plan review process. An

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[67] Transcript, page 627

[68] Transcript, page 370

[69] Exhibit C6A, pages 115-117

entry made in the NECH clinical records by an EN dated 13 July 2020 noted that a six-monthly care plan review was to commence on 13 July until 15 July 2020.[70] These were the very dates of the three-day food and fluid chart. There was no mention at all that the plan was instituted due to concerns about Mrs D'Angelo's hydration levels.

114 It was also the evidence of Ms Ebhodaghe that if fluid balance charts were recommended by a doctor, the request would then be escalated to the clinical nurse specialist, who would then discuss that request with a care manager. A dietician would then be organised to attend the review and assess the resident's care needs to determine if they had changed.[71] There was no evidence that this process was activated.

115 Some comfort was placed on the commencement of the food and fluid chart by both staff at NECH and Dr Giordano during the oral evidence. In particular, that it was said to be both an indication that Mrs D'Angelo's food and fluid was being monitored regularly and it showed her eating and drinking adequately. While it was demonstrative of the aged care facility having semi-regular processes to monitor food and fluid in place, Professor Whitehead raised concerns about the unreliability of measuring fluid in such a chart, as well as the inadequacy of Mrs D'Angelo's fluid intake on two of the three charted days.

116 Professor Whitehead undertook his own calculation and observed that on 14 and 15 July 2020, the amounts recorded were inadequate, with only 600-700 mL ingested.[72] Despite what Professor Whitehead saw as insufficient fluid intake recorded, there was no acknowledgement noted on the document that this was an inadequate amount or any adjustment made to the care plan to increase Mrs D'Angelo's fluid in response. This was despite an area at the bottom of the chart allowing for daily totals and daily balance.

117 A later entry in the clinical records revealed that in fact no concerns were held in relation to the amount of fluid Mrs D'Angelo was drinking. On 22 August 2020, when the care plan review was discussed with Anna, Mrs D'Angelo's nutrition and hydration were recorded as '*Eats and drinks well. nil significant weight loss. same management and* [sic] *current.*'[73]

118 The lack of awareness may have been as a result of the change in procedures at NECH prior to 2020. It was apparent from the clinical records that up until early 2020, nursing staff were required to enter a tally into the Care Review Tool of the average fluid intake over a 24-hour period from the food and fluid chart completed prior to the review. It was also evident that this particular form included a prompt to implement strategies to improve fluid intake if the average intake over a 24-hour period was less than 1,500 mL. The portion of Care Review Tool relating to fluid in-take is extracted below:

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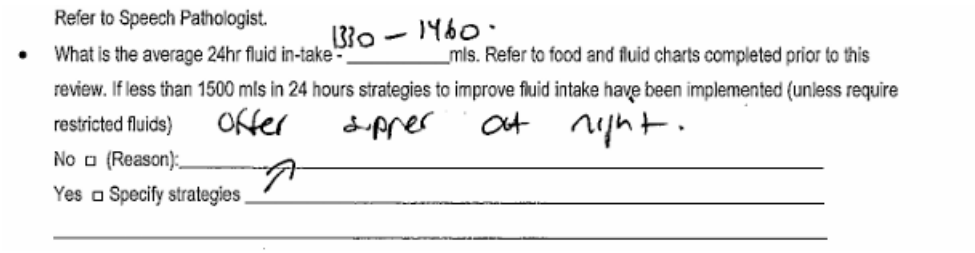
[70] Exhibit C12, page 232
[71] Transcript, page 463
[72] Transcript, page 645-646
[73] Exhibit C12, page 240



Refer to Speech Pathologist.

- What is the average 24hr fluid in-take - 1330 – 1460. mls. Refer to food and fluid charts completed prior to this review. If less than 1500 mls in 24 hours strategies to improve fluid intake have been implemented (unless require restricted fluids) offer supper out night.

No □ (Reason):

Yes □ Specify strategies

119 It is important to note that the extract above from a care review plan in July 2019 revealed Mrs D'Angelo was averaging 1330 – 1460 mLs of fluid in a 24-hour period. This was roughly double that recorded in the 3-day Food and Fluid Chart for 14 and 15 July 2020. Notwithstanding, it still fell below the 1500 ml benchmark amount, and the specific strategy was to '*offer supper at night'*.

120 In contrast, the care review checklist[74] completed by Ms Ebhodaghe in late July 2020, following the three-day food and fluid chart, did not quantify the average 24-hour amount of fluid Mrs D'Angelo had been consuming. It did not include a prompt to implement strategies for inadequate fluid intake. The checklist was also in a different format to the previous document.[75]

121 In her affidavit, Ms Cara Miller the CEO of NECH, explained that the method of recording the six-monthly reviews changed with the introduction of an electronic record system, MANAD. This system was rolled out over time in modules and saw a change in the care review format coincidentally in July 2020. Ms Miller was asked about the change in this document where it related to the lack of quantifying fluid, specifically, what she knew about the philosophy behind the change. Ms Miller was not able to provide any information on why it had changed, having commenced her role in December 2022, but agreed that the previous format was preferable in measuring how much fluid was ingested with prompting to address an inadequate amount.[76]

122 As I have observed, the previous care review tool had specified what appeared to be the benchmark of an adequate amount of fluid (1,500 mL) and a mechanism to address hydration if the amount fell below that. It could therefore not be reasonably suggested that the aged care facility had no awareness of a safe target amount of fluid an elderly resident required (particularly one who was reliant on staff to eat and drink). This was notwithstanding the aged care industry's lack of a mandated minimum fluid prescription. It will remain a mystery as to why the format changed in the way it did, other than as part of a more general electronic system conversion.

123 The lack of documented concern held for the risk of mild hypernatraemia, or the potential for the increased risk with diuretic medications (by Dr Giordano) and a documented fluid chart which did not require a total 24-hour fluid calculation (by the aged care facility), was support for the contention that there was a lack of appropriate focus on Mrs D'Angelo's hydration status.

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[74] Now called 'checklist' and not 'tool'

[75] Exhibit C6a, pages107-110

[76] Transcript, page 714

124 I am satisfied on balance that the three-day food and fluid chart was instituted as part of routine six monthly care plan review and not due to any concerns raised by Dr Giordano following the blood results on 26 June 2020. I further find that the food and fluids recorded over this three-day period, if correctly interpreted and considered, was another indicator that Mrs D'Angelo was not ingesting adequate fluid. However there was no appreciation that this was the case.

125 15 July 2020 was also the last occasion when Mrs D'Angelo's daily fluid intake was measured. The scene was therefore set for the unfortunate events that followed.

Removal of lesion

126 Mrs D'Angelo attended the Lyell McEwin Hospital on 2 September 2020 to have the 'boil' removed from her face. She returned to NECH in the evening, and it was recorded that she ate '*part of her meal and much fluid orally*'.[77] The following day the discharge summary that was returned with Mrs D'Angelo was faxed to Dr Giordano. This informed him that Mrs D'Angelo had undergone an excision of a right pre-auricular lesion plus flap with a follow up appointment for pathology results on 11 September 2020.[78]

127 A surgical pathology report, verified on 4 September 2020, revealed that the lesion was indeed cancerous, reported as an invasive squamous cell carcinoma with keratoacanthoma type features.[79]

Mrs D'Angelo's birthday

128 On 19 September 2020 Mrs D'Angelo was taken out of the NECH facility for her birthday celebrations, held at her daughter's home. The D'Angelo family and friends gathered at the house for celebrations which were described by her daughter Anna as a happy day for them all. Mrs D'Angelo was in good spirits, enjoying herself and was able to eat and drink.[80]

129 Anna also visited her mother at NECH on 26 September 2020 and observed her to be her usual bright self, much as she was on her birthday the week before.

130 Following that, there were few entries in the clinical records to suggest that there were any concerns held for Mrs D'Angelo's health before 3 October 2020.

131 It was suggested by counsel for NECH, Mr Ralph Bönig, in his cross-examination of Professor Whitehead, that because there was no documented evidence in the notes of clinical dehydration during this time frame, it was not open to criticise any oversight of dehydration by aged care facility staff.

132 Professor Whitehead agreed that there were likely no clinical signs of dehydration manifesting in Mrs D'Angelo for aged care staff to detect. However, his criticism was not directed at individuals. Professor Whitehead's concern with Mrs D'Angelo's care was that there was no regular monitoring of Mrs D'Angelo's fluid intake at an aged care

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[77] Exhibit C12, page 249

[78] Exhibit C11, pages 66-72

[79] Exhibit C9, page 53 and Exhibit C8, pages 4,5 and 7

[80] Exhibit C3, paragraph 40

facility level, and no regulation of an adequate fluid amount at an industry level. He gave the following evidence:

> Q. But isn't the point you're making that in any event, leaving aside all of those facts, your main criticism in this matter, in Mrs D'Angelo's death, is that her fluid intake was not being monitored adequately.
>
> A. Correct, yes.
>
> Q. That's the bottom line, essentially, as I understand from your evidence today.
>
> A. And that it - yes, that the only way she could have got from A to B is by not drinking and it was not being assessed, not measured, and not noted.
>
> Q. So, leaving aside the clinical signs or the inability to detect the clinical signs. Even leaving aside the blood tests. If she was not drinking between 1 to 2 litres per day, or at a minimum 1 litre per day, and that being monitored and documented, then there should have been concern.
>
> A. There should have been concern raised, yes.
>
> Q. But the other factor in this is that there …was no policy at the time and that seems to be an across the board phenomena to dictate what the level fluids should be for a patient with the risk factors like Mrs D'Angelo.
>
> A. Correct. But there's no mandated minimum fluid prescription for a resident who's at high risk of dehydration. And that is not part of the standards, as I say, the focus is very much on weight loss, which actually - I mean obviously you can lose weight when you dehydrate, because we're mostly water, but that's - the weight loss is perceived as a loss of nutrition, not a loss of fluid, although the two are related. And I think that is the problem, that as you've said, the open question is what's the best way and the most fair way for an aged care provider to do that monitoring in a way that's sustainable and meaningful in aged care as it is in the 21st century. And that, to my mind, is a fundamental point here, that there is no debate about it. We talk about weight loss but we don't talk about a minimum fluid prescription. And really, that's not a big ask, I don't think.
>
> Q. And now, even in 2024, your evidence is that there is still not an adequate guideline or policy in place to dictate the amount of hydration a dementia patient has.
>
> A. I don't believe so, no.[81]

133 There were however signs of a potential decline in Mrs D'Angelo from 27 September 2020, as reflected in the clinical records. Enrolled nurse, Ms Puttnins recorded Mrs D'Angelo's daily progress to be as follows:

> P: Sleepy/lethargic
>
> I: Adelina had been very sleepy since beginning of shift, hardly had her breakfast and refused her morning tablets. She was awake and alert after her wash but became more sleepy again and remained so at lunchtime. Had minimal food and oral intake,

[81] Transcript, page 677

could not tolerate her medication as well. Medication discarded. Obs stable. [Team leader] notified.

E: Currently sleeping in bed, appears comfortable, no signs of pain.[82]

134 While Mrs D'Angelo was recorded as being alert the following morning with her observations all within normal limits, the next day there was only reference to her bowels not being open and no observations of her alertness or otherwise. There were no entries made on 30 September 2020 at all. On 1 and 2 October 2020, there were two entries recording skin tears.[83]

135 Later, on 2 October 2020, Ms Puttnins made the following clinical note:

P: Difficulty in eating

I: Adelina was observed to be struggling with eating her meals and was refusing to eat. Currently she is on regular cut up meals, which she's not tolerating. [Team leader] notified.

E: She managed to eat her dessert and had good amount of fluid.'[84]

136 The following morning at 11:27 am, a similar entry was made by the same enrolled nurse, recording that Mrs D'Angelo had been sleepy again but rousable, would occasionally moan, was refusing her breakfast and not tolerating fluid. She was not given her medications as she was not swallowing. They were again discarded. As she had done the day before, Ms Puttnins notified the team leader.

137 A little later in the day (2:13 pm) an RN checked on Mrs D'Angelo's poor oral intake. It was recorded in this entry that her vital signs were within normal limits, but a locum was contacted to review Mrs D'Angelo for sleepiness/tiredness.[85] Despite the entry reflecting the plan for a telehealth consultation due to the unavailability of the locum service for an in-person visit, Dr Konok attended at NECH in person a few hours later.

Dr Konok's consultation

138 I turn now to the attendance of Dr Konok at NECH on 3 October in 2020. Dr Konok explained that she was called to the aged care facility in the capacity as a locum doctor after receiving information from the National Home Doctor Service application relating to Mrs D'Angelo. A document was received into evidence which reflected the information available to Dr Konok prior to attending.[86]

139 The clinical symptoms listed on the document were '*lethargy, excessive sleeping, not eating*'. It also indicated that the consult occurred sometime between 5:29 pm and 6:19 pm.

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[82] Exhibit C12, page 257
[83] Exhibit C12, page 259
[84] Exhibit C12, page 259
[85] Exhibit C12, page 260
[86] Exhibit C7A

140 Dr Konok explained her usual practice when visiting aged care facilities. This included speaking with a nurse when she arrived to assess why she had been called and to determine whether there was anything significant in the patient's observations. During her consult, Dr Konok would make handwritten notes which she would then later use to write up her clinical report on the iPad. The completed report would then be sent to the GP and the nursing home.

141 Dr Konok had not seen Mrs D'Angelo before this occasion. She explained in evidence that she did however have some memory of the consult. Dr Konok remembered seeing Mrs D'Angelo in her bed and that she was not responding to her name. She also remembered that a female nurse accompanied her to Mrs D'Angelo's bedside.[87] Dr Konok later added that she thought Mrs D'Angelo was not opening her eyes but recalled that she did respond to pain stimulus.[88]

142 Dr Konok thought that the person who accompanied her was either the nurse looking after the patient (EN) or an RN. She recalled the nurse stating to her something to the effect of '*This had happened before, but this time is worse and going on for longer*.' Dr Konok explained that this statement was imprinted in her memory, but she could not recall whether it was a reference to Mrs D'Angelo not eating and drinking or being unresponsive.

143 Dr Konok said it was part of her general practice to ask the nurse whether the patient was for active management. She described the term 'active management' to mean *'Whether the patient is for hospitalisation, further investigation and all management that's offered to the patient for the diagnosis*.'[89]

144 A large focus of Dr Konok's evidence was the entry in her notes, *'not for resuscitation/active management'*. The relevance of this was two fold; firstly, it dictated what Dr Konok did and did not do following her examination of Mrs D'Angelo, and secondly, it was not in accordance with Mrs D'Angelo's recorded wishes.

145 Relying on her general practice in aged care facilities, Dr Konok explained that she would generally ask nursing staff what the patient's wishes were and if the nurse didn't know they would be asked to retrieve the relevant documentation.[90] In the absence of her memory of how this information was elicited, Dr Konok formed the view that she must have been provided with this information by the nurse who accompanied her.[91]

146 On the National Home Doctor Service Report prepared by Dr Konok after her consult with Mrs D'Angelo, she recorded her observations of blood pressure, pulse, respirations and oxygen saturation levels which were all within normal limits. Following that Dr Konok recorded her examination and diagnosis, as extracted below:

Examination:	Patient is in bed Shallow breathing noted GCS 13

[87] Transcript, page 217
[88] Transcript, page 257
[89] Transcript, page 219
[90] Transcript, page 220
[91] Transcript, page 219-220

Hear dual, regular
Chest NAD
Abdomen soft
Increased tone toned in right arm

Diagnosis: ? CVA[92]

147 Dr Konok explained that CVA was an acronym for cerebrovascular accident, old terminology for a stroke. She considered this to be a possibility.[93] To come to this differential diagnosis, Dr Konok observed increased tone in Mrs D'Angelo's right arm. Her evidence was that Parkinson's disease will not cause a change on one side of the body, the difference would be seen on both sides. She explained:

> I know that she had Parkinson's disease but on the right side there was more resistance compared to the left…[94] I was more relying on the increased tone on the right side compared to the left side….so she had Parkinson's. That will give her increased tone, but I remember on the right side it was – the tone was increased compared to the left.[95]

148 Dr Konok did not consider dehydration despite the information bringing her to the aged care facility was that Mrs D'Angelo was lethargic, excessively sleepy and not eating. She explained, '*[t]o be honest, I was not concerned about dehydration when I saw her*.'[96] It is acknowledged that there was nothing in the clinical notes from Dr Giordano, had Dr Konok looked at them, to alert her to Mrs D'Angelo's heightened dehydration risk.

149 As it was Dr Konok's understanding that Mrs D'Angelo was not for active management, she did not continue with the diagnostic process. She explained that to her, this meant that Mrs D'Angelo was '*going the palliative way'*.[97] Dr Konok did order a blood glucose test and a urine dipstick to be done. She understood that these tests could be done on site and were sometimes requested by families notwithstanding palliation. Dr Konok could not recall what she reported back to the nursing staff after her consultation with Mrs D'Angelo, but suspecting as she did that Mrs D'Angelo had suffered something as serious as a stroke, her evidence was she must have reported this to the nurse.[98] Relying on her usual practice, Dr Konok also explained that she would have requested nursing staff to contact family and advise them of the outcome of her visit. The record of her consultation did include the direction to '*inform family*'.

150 Dr Konok was asked what she would have done differently had she been aware that Mrs D'Angelo was for active management upon considering that she had suffered a condition as life threatening as a stroke. She very candidly explained that she would have contacted an ambulance for transfer to hospital and contacted Mrs D'Angelo's family.[99] She therefore acknowledged that her incorrect understanding of Mrs D'Angelo's advanced care wishes impacted on emergency intervention.

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[92] Exhibit C7
[93] Transcript, page 235
[94] Transcript, page 234
[95] Transcript, page 262
[96] Transcript, page 247
[97] Transcript, page 245
[98] Transcript, page 242
[99] Transcript, pages 237-238

151 Dr Konok's evidence that she was provided with information that Mrs D'Angelo was not for active management was unchallenged. She clearly did not read the document and I accept she was likely advised this or misheard. What was less clear was who provided that information to her. In an attempt to ascertain how it was that Dr Konok formed this erroneous belief, the court heard evidence from Ms Ebhodaghe.

152 Ms Ebhodaghe made the entry in the clinical records of Dr Konok's visit.[100] Unfortunately, she was unable to recall whether she was the nurse that was present with Dr Konok during the consult.[101] The note recorded:[102]

> P: Locum doctors visit
>
> I: Locum doctor visited and stated there is not much to be done, but UA to be collected, vital signs are within normal range, repositioned on regular bases, refused dinner but had few sips of water, BGL taken and was 5.9mmol. NOK notified of the locum doctors
>
> E: Requires close monitoring

153 Ms Ebhodaghe said she did not recall having a conversation with the locum doctor or if she led the locum doctor to see Mrs D'Angelo. She was, however, adamant that she would not have told Dr Konok what Mrs D'Angelo's palliative care plan was, even if she had been asked, and she would not have used the phrase 'active management'. If she had been asked what Mrs D'Angelo's end of life wishes were, she said she would've obtained the relevant documentation for the doctor from the resident's folder.

154 In support of this evidence, it was also Ms Ebhodaghe who had completed Mrs D'Angelo's care plan review in July 2020. That review included a review of the palliative care plan that was signed by Dr Giordano. Ms Ebhodaghe was shown the plan and asked how she'd interpret it. She told the court that in her view, this document meant that Mrs D'Angelo was for hospital transfer.[103]

155 It was also Ms Ebhodaghe's evidence that she knew Mrs D'Angelo was not on palliative care at any time while she was at the facility.[104] Accordingly, it was highly improbable that Ms Ebhodaghe told Dr Konok that Mrs D'Angelo was not for active measures. These were not words that Ms Ebhodaghe says she used; they were not familiar words to her, and she would have known them to be incorrect.

156 The other possibility was that it was a different member of staff who provided this information to Dr Konok. Ms Ebhodaghe told the court that on 3 October 2020 there would have been three ENs on duty. If she was present and available, she said she would have accompanied the doctor to the patient.[105] She was certain that this would not have been the role of a PCA, but she could not recall whether an EN would undertake that task. This leaves open the possibility that one of the three enrolled nurses present accompanied

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[100] Exhibit C12, page 261
[101] Transcript, page 465
[102] Exhibit C19
[103] Transcript, page 480
[104] Transcript, page 487
[105] Transcript, page 456

Dr Konok and provided her with misinformation about Mrs D'Angelo's end of life wishes.

157 To further address that possibility, Ms Ebhodaghe was asked several times in her oral evidence whether there was any significance to the fact that she had made the note of the locum doctor's visit. She was asked whether her recording the information in the note meant that she was the person who had a conversation with the locum doctor, or whether someone else had the conversation and she made the note. Her response was:

> If I'm the one who document it - I think I did. I don't know, but yeah, I still can't recall all of this, yeah. I still can't recall all of this, sincerely.

158 She was then asked:

> So you don't know, even looking at that note, whether you had a conversation with the locum doctor or not.

159 She responded:

> For me to have written all of this, should be - yeah, I'm just - I don't know, but I don't want to just assume. I can't remember.[106]

160 Returning to the subject for a third time in her evidence, Ms Ebhodaghe was asked this question:

> Q. And just looking at that note now, you're unable to assist the court with whether you spoke to the locum or whether somebody else has given you that information.
>
> A. I'm sure I did, yeah. I'm sure I did. I can't actually recall all the incident, everything that happened, yeah, but for me to have documented this, yeah - I know this is what I could have documented, yes.[107]

161 She then said again that she was not 100% sure.

162 Ms Ebhodaghe had no recollection of speaking with the family, but it was her evidence that if she was told there was not much to be done, she would have told the family that. She also stated that if she was told that by a locum, she would've asked what the diagnosis was, in anticipation of having to call the family and explain what had transpired with the locum.

163 This evidence was consistent with Mrs D'Angelo's daughter Anna's evidence that she was contacted by NECH on 3 October 2020 and informed that a locum had visited her mother as she had not been eating or drinking *much* for a few days. No mention was made that she was refusing or unable to take anything by way of mouth.[108] She was informed Mrs D'Angelo's vital signs were 'ok' and that a urine sample was to be collected. Anna passed this information onto her brother, Mario, as she was not in

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[106] Transcript, page 466-467

[107] Transcript, page 467

[108] Exhibit C3, paragraph 43

Adelaide at the time of the phone call. He attended the nursing home in the afternoon and was given the same information by the staff.

164 Importantly, Ms Ebhodaghe said that if she was told the diagnosis was stroke, she would have conveyed that to the family. Further, she explained that a resident suffering from a stroke is not a common occurrence, so she would have escalated care if that had been communicated to her.[109] She then would have consulted the folder for Mrs D'Angelo's palliative care plan to determine her wishes. She also said that even if it was not her that the doctor spoke with, that she would expect that whoever did speak with the doctor would have escalated it.

165 Ms Ebhodaghe emphasised the importance of contacting the family with such information as regardless of what was on an Advance Care Directive, the decision about what to do next would be up to the family.[110]

166 As explained by Ms Ebhodaghe, '*someone having a stroke means prompt intervention'*. It is highly improbable in my view that if Dr Konok had told an EN that she suspected stroke, this nurse would not have informed the family of that fact or escalated the matter to the RN on duty who was Ms Ebhodaghe. I accept that if this was advised directly to Ms Ebhodaghe, she would have acted differently, in the way she described.

167 Based on the evidence as a whole, it is open to find that it was Ms Ebhodaghe who accompanied Dr Konok to Mrs D'Angelo's bedside. I further find that Dr Konok only conveyed to Ms Ebhodaghe that there was '*not much more to be done'*, asked her to obtain a urine sample and blood glucose reading, and did not articulate her suspicions that Mrs D'Angelo had suffered a stroke.

168 I am satisfied that Ms Ebhodaghe did not inform Dr Konok that Mrs D'Angelo was for palliative care or not for active management. It will remain unclear why Dr Konok formed the view that Mrs D'Angelo was not for active management. It may be that she was told this information by some unidentified member of staff, or perhaps she simply misheard or assumed it. I can make no conclusive finding about that.

169 Turning now to Professor Whitehead's review of Dr Konok's involvement. He was critical of her assessment of Mrs D'Angelo for a number of reasons. In his expert report he commented that the assessment by Dr Konok was 'fairly perfunctory'. He further noted that no blood tests were ordered and that subcutaneous fluids could have been administered at that time to treat dehydration.[111]

170 Professor Whitehead was also critical of the probable diagnosis of stroke. It was his evidence that Dr Konok was incorrect in placing emphasis on the one-sided rigidity that she detected. He explained that the sign of an acute stroke is actually flaccid paralysis and not rigidity. In his view, this was *'pretty basic information'* that he hoped most GPs would know.[112]

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[109] Transcript, page 471
[110] Transcript, page 479
[111] Exhibit C5, page 4
[112] Transcript, page 655

171 Professor Whitehead explained that in his view, in deciding not to actively treat, a medical practitioner should always sight the relevant document for themselves, but that the key thing is to pick up the phone. He opined *'I think it's inappropriate just to leave someone who you think has a stroke without checking with the family about actually what they want to have done.*'[113] Professor Whitehead explained that if Dr Konok did not feel comfortable to have that conversation (as she indicated in her evidence, due to her role as a locum), she was obliged to arrange for her transfer to hospital so that conversation could occur.

172 In this case, a telephone call to the D'Angelo family would have undoubtedly corrected any misinformation or misunderstanding that Dr Konok had received in relation to Mrs D'Angelo's end of life wishes. However, it was the evidence of Professor Whitehead that intervention by Dr Konok at this late stage probably would not have changed the outcome for Mrs D'Angelo.

173 Accordingly, after pausing to make *Briginshaw* considerations, I find that Dr Konok's assessment of Mrs D'Angelo was inadequate in several respects. She did not consider dehydration, despite being provided with information that Mrs D'Angelo was lethargic and not eating. Further, her differential diagnosis of stroke was not medically sound, and she failed to consider other possibilities. Those issues were compounded by her misunderstanding in relation to Mrs D'Angelo's end of life wishes, and her failure to contact the D'Angelo family that evening.

174 Dr Konok accepted that the criticism of Professor Whitehead was warranted.[114] She agreed that she should have viewed Mrs D'Angelo's documented wishes herself. Further, Dr Konok reflected upon her treatment of Mrs D'Angelo and offered an apology in court to the family. Dr Konok said she was terribly sorry and acknowledged '*I know it's your mother and I can feel it. If I am given the chance, I would go back.*' [115]

175 I observed Dr Konok to give her evidence truthfully and genuinely. Her apology to the D'Angelo family was heartfelt. It was apparent that she was deeply affected by her mistake, leading to changes in her practice; to always check documentation rather than relying on information provided by others.

Transfer to hospital

176 The consequence of Dr Konok not initiating active treatment for Mrs D'Angelo was that she remained at NECH for a further 18 hours. Mrs D'Angelo was monitored with only one entry made in the clinical notes at 10:12 pm on 3 October 2020, and four entries made on 4 October 2020 at 7:30 am,[116] 10:28 am, 10:30 am and 11:17 am. All entries raised a level of concern as to Mrs D'Angelo's condition. A urinary tract infection (UTI) was diagnosed on 4 October 2020.

177 Anna D'Angelo received a phone call on the morning of 4 October from staff at NECH advising of the UTI as well as informing her (for the first time) that Mrs D'Angelo had

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[113] Transcript, page 590

[114] Transcript, page 252

[115] Transcript, page 253

[116] This entry was made retrospectively on 5 October 2020 and recorded carers asking an EN to review Mrs D'Angelo due to her being slow to respond (Exhibit C12, page 262)

not taken any prescription medication for a few days. The staff member expressed concern for Mrs D'Angelo, telling Anna that she had not seen her mother physically look this way before.[117] Anna was informed that a locum doctor would be called.

178 Anna contacted her sister, Toni, who in turn immediately rang the facility and insisted that an ambulance be called. The South Australian Ambulance Service Patient Clinical Record reflected that the tasking was received at 11:02 am with paramedics arriving at the facility at 11:08 am. Mrs D'Angelo was taken to the RAH.

179 As outlined at the beginning of the finding, upon her arrival at the RAH, Mrs D'Angelo was noted to be sleeping but responded to voice. Her vital signs were within normal limits however she was found to be severely dehydrated with an acute on chronic kidney injury. No clear underlying cause was found. Efforts were made to resuscitate Mrs D'Angelo with intravenous fluids. She did not respond and continued to decline. Ultimately, her family agreed to a palliative approach.

180 Mrs D'Angelo died on 9 October 2020.

Preventability

181 In light of my findings above, it is important to consider the question of preventability. The *Coroners Act 2003* directs my attention to considering recommendations which might prevent a recurrence of the same circumstances. My duty in that regard would be amplified if preventing those circumstances would have prevented death. In many cases, the question is a difficult one, requiring the weighing up of various possibilities and potential effects of actions not taken. A finding that a death could have been prevented is a finding of substantial weight to the community and, in this case, to the aged care sector. It must be approached with care. If I was uncertain about the potential effect of particular actions, I would refrain from making a finding about preventability. However, in this case, carefully considering all of the evidence I heard together, I am satisfied that a finding that Mrs D'Angelo's death was preventable is open and should be made. There are several aspects.

Systemically guarding against dehydration

182 At a systemic level, if there had been a mechanism to monitor fluid intake, Mrs D'Angelo's death from the effects of dehydration would have been prevented. I have formed this view based on the expert opinion of Professor Whitehead and what I have found Mrs D'Angelo's cause of death to be. Professor Whitehead described this lack of systemic monitoring as the 'greatest missed opportunity'.[118] I consider that there are likely two issues I heard evidence about which collide to give rise to this systemic issue; the first is the apparent general misunderstanding in the aged care community that dehydration in the elderly can be detected without blood testing, and, secondly, a lack of realisation of the potential seriousness of subtle signs in blood tests and the potential seriousness of developing dehydration.

183 I find that greater awareness is needed of dehydration in the elderly and the necessity for early detection by blood testing. If there had been greater awareness at the time of these

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[117] Exhibit C3, paragraph 48
[118] Transcript, page 569

events, I consider it likely that concerns could have been raised by any number of nurses and carers.

Action by Dr Giordano

184 Professor Whitehead said that the blood test revealed that Mrs D'Angelo was 'vulnerable'.[119] He described metaphorically that, at some unknown point following the test, she dropped 'off the cliff'.

185 If Dr Giordano had turned his mind to Mrs D'Angelo's elevated risk of dehydration in the context of the mild hypernatraemia revealed in June 2020, and made a record of this in the clinical notes for the aged care staff to monitor, her death would likely have been prevented. It is trite to observe that a condition like dehydration, which can develop undetected as it seems to have done in Mrs D'Angelo's case, would not develop with early preventative measures. I find that to be particularly so where there was a very simple mechanism to address potential dehydration; conscious consideration and documentation of fluid intake.

186 I note that in his evidence, Professor Whitehead allowed for the *possibility* that Mrs D'Angelo's dementia had advanced to such a degree that her dehydration might not have been reversable.[120] Factored against that possibility is the evidence of Mrs D'Angelo's family about her behaviour at her birthday celebration. She was happy, alert and, importantly, taking in food and fluid. I note that this celebration was about three months after the blood test was taken, which in the context of these circumstances is a particularly meaningful timeframe, particularly where Professor Whitehead opined, with some equivocation, that Mrs D'Angelo's clinical dehydration likely started in September.[121] I am satisfied that a recorded acknowledgement of the results three months before her birthday could have prevented the dehydration developing to the dangerous level that it did and that this would have prevented her death.

187 I also note that Professor Whitehead was eager to record that he did not consider that Dr Giordano should be expected to have predicted the outcome some months later based on the blood test result.[122] I accept that to be so, however that is not quite the question that properly arises. The true question is whether the blood test result should have prompted some different action than was taken and whether that different action might have prevented what ultimately occurred. In that sense, Dr Giordano's ability to predict the future is not relevant and I remain satisfied that the evidence established the conclusion I have reached. That is, while the metaphorical cliff was not there to be seen, the vulnerability to dehydration had presented itself in the test and the surrounding circumstances.

Calculating the result of the three-day food and fluid chart

188 If the format of the Care Review Tool had not been altered to remove the 24-hour calculation which served to draw attention to trends, it would likely have been realised that on two of the three days of the food and fluid chart, Mrs D'Angelo had taken in an

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[119] Transcript, page 573
[120] Transcript, page 585
[121] Transcript, page 649
[122] Transcript, page 627

inadequate amount of fluid. This would have prompted a remedial mechanism of some kind and, at the very least, closer attention to her ongoing intake. It may be that concern being raised would have led to the earlier blood test being checked and a further blood test being ordered. If that had occurred, the issue of vulnerability to dehydration would again likely have been readily apparent with the same mechanisms available to address it. This was also likely to have prevented Mrs D'Angelo's death.

Action by Dr Konok

189 If Dr Konok had requested to see Mrs D'Angelo's Advance Care Directive herself on 3 October 2020, as she accepted she should have, she would have initiated emergency treatment. It is likely that this would have led to blood testing and the administration of fluids which are common and basic interventions. These would have been positive interventions and should have occurred at an earlier time. Notwithstanding that, given the expert evidence, I reach the conclusion that Mrs D'Angelo's condition by this time was advanced to a degree that I cannot say that this intervention would, more likely than not, have prevented her death.

Treatment at the Royal Adelaide Hospital

190 I heard some evidence about the particular treatments chosen while Mrs D'Angelo was at the RAH. Consistent with Professor Whitehead's evidence,[123] I do not consider that anything that occurred at the RAH was inappropriate or contributed to the issue of dehydration. As I have indicated, by the time Mrs D'Angelo presented at the hospital, the opportunities to prevent her death were gone.

Conclusions

191 The findings I have made are set out in accordance with the issues above. I have come to these conclusions on the basis that I am comfortably satisfied each of them were established on the evidence.

1. Mrs D'Angelo died from acute on chronic renal failure caused by severe dehydration, on a background of Lewy body dementia, Parkinson's disease, and congestive cardiac failure.
2. There was no regular, meaningful monitoring of her daily fluid intake, particularly in the weeks before her deterioration.
3. As a result, Mrs D'Angelo's dehydration developed to a critical point which was unable to be reversed.
4. The only reliable way to detect dehydration in older adults is through blood tests, not physical signs, yet this was not adequately understood by multiple clinicians and staff involved in her care.
5. The June 2020 blood tests showed mild hypernatraemia, a biochemical marker of dehydration. Although not critically abnormal, this result should have prompted:
    i. Explicit recognition of increased dehydration risk,

[123] Transcript, pages 661-662

ii. Clear instructions to nursing staff, and

iii. Ongoing monitoring of fluid intake.

These actions would likely have prevented Mrs D'Angelo's death.

6. A three-day food and fluid chart completed shortly afterwards as part of her care plan review showed inadequate intake, but this was neither recognised nor acted upon. This was a further opportunity to identify and address a risk of dehydration which would likely have prevented Mrs D'Angelo's death. After July 2020, there was no further quantification of daily fluid intake.

7. Changes in documentation systems removed prompts for staff to calculate total daily fluid intake or respond to inadequate volumes.

8. Dr Konok's assessment on 3 October 2020 was inadequate. Dehydration was not considered, despite clear reports of lethargy and poor oral intake. A suspected diagnosis of stroke was medically unsound and not communicated to nursing staff or the family.

9. Dr Konok mistakenly believed Mrs D'Angelo was not for active treatment, contrary to her documented wishes, and failed to verify this directly or contact the family. As a result, Mrs D'Angelo was not transferred to hospital that evening, delaying emergency treatment.

10. Intervention on 3 October 2020 would not have altered the final outcome.

Recommendations

192 Pursuant to section 25(2) of the *Coroners Act 2003* I am empowered to make recommendations that in the opinion of the Court might prevent, or reduce the likelihood of, a recurrence of an event similar to the event that was the subject of the Inquest.

193 I make the following recommendations directed to the Minister for Health and Wellbeing and the Minister for Seniors and Ageing Well:

One That a copy of this finding is forwarded to the Commonwealth Minister for Health, Disability and Ageing with a request to consider the concerning prevalence of dehydration in older persons living within aged care facilities, particularly those with risk factors such as dementia, chronic renal disease and the use of diuretic medications.

Two That the Medical Research Future Fund consider providing a grant opportunity to enable the development of an evidence-based dehydration intervention pathway for older Australians living within aged care facilities.

Three That a copy of this finding is forwarded to the Commonwealth Aged Care Quality and Safety Commissioner and the Commonwealth Inspector-General of Aged Care with a request to consider implementation of the recommendations directed toward them.

194 I make the following recommendation to the Aged Care Quality and Safety Commissioner, the Inspector-General of Aged Care and the Minister for Health, Disability and Ageing:

Four That consideration be given to amending the final Strengthened Aged Care Quality Standards to include the following requirements (potentially within standard 5.5.5):

> *The provider implements processes to maintain an older person's hydration by:*
> *a. Measuring the daily fluid intake of residents who are clinically dehydrated*
> *b. Measuring the daily fluid intake of residents assessed as being at risk of dehydration, including all residents living with dementia and residents being administered diuretic medication/s*
> *c. Recognising inadequate fluid intake*
> *d. Responding to inadequate fluid intake*

195 I make the following recommendations to the Aged Care Quality and Safety Commissioner:

Five That the poster "Preventing Urinary Tract Infections - Recognise Dehydration", published in the resource library section of the Aged Care Quality and Safety Commission website, be amended to reflect that caution must be exercised in the identification of dehydration in older persons based on observable signs as it may only be reliably identified by a blood test.

Six That the Commissioner provide educational resources to aged care providers regarding the prevalence of dehydration in older persons, and the unreliability of traditional assessment methods in detecting dehydration.

196 I make the following recommendation to the Nursing and Midwifery Board of Australia:

Seven That nurses working within the aged care environment receive specialised training in relation to maintaining hydration in older persons, including:

a. The recommended daily minimum fluid intake

b. The unreliability of traditional assessment methods in detecting dehydration

c. Medical conditions or treatments which increase the risk of dehydration, and

d. Strategies to encourage adequate fluid intake.

197 I make the following recommendations to the Royal Australasian College of General Practitioners:

Eight That further education be provided as a matter of urgency to redress the widespread use of unreliable assessment methods to detect dehydration in older persons by General Practitioners.

Nine That General Practitioners working within the aged care environment provide advice to Aged Care Facilities regarding the hydration needs of their patient/s, including the recommended daily minimum fluid intake for that patient, and what steps are to be taken in the event of inadequate fluid intake.

Acknowledgments

198 I acknowledge the valuable assistance of all counsel in the Inquest.

199 I would like to convey my sincere condolences to the family and loved ones of Mrs D'Angelo who experienced her death as unexpected and upsetting.

Keywords: *Aged Care; Dehydration; Dementia*