QUEENSLAND COURTS

CORONERS COURT OF QUEENSLAND

FINDINGS OF INVESTIGATION

CITATION:	**Non-inquest findings into the death of Diane Margaret Crowther**
TITLE OF COURT:	Coroners Court
JURISDICTION:	BRISBANE
DATE:	10/10/2024
FILE NO(s):	2023/4422
FINDINGS OF:	Melinda Zerner, Coroner
CATCHWORDS:	CORONERS: Wound infection; Wound care in Residential Aged Care Facility; Cellulitis.

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Introduction

1. Diane Margaret Crowther (Mrs Crowther) was born on 23 October 1946 and died on 13 September 2023, at the Sunshine Coast University Hospital (the SCUH). She was 76 years old.

2. A doctor from the SCUH had reported Mrs Crowther's death to the Coroner because her death was identified as a potential healthcare related death within the definition of a reportable death in the *Coroners Act 2003*.

3. Mrs Crowther's husband, through his son has provided a timeline of events. He has raised a number of concerns which in essence centre around:

    a. The adequacy of the wound care and treatment provided to Mrs Crowther at the Residential Aged Care Facility (RACF) she resided; and

    b. The adequacy and veracity of the RACF's communications with him about Mrs Crowther's infection.

4. The role of a Coroner is to investigate reportable deaths to establish, if possible, the cause of death and how the person died. The purpose of a coronial investigation is to establish the facts, not to cast blame or determine criminal or civil liability. An investigation is about attempting to find the root cause of the incident that precipitated the death and in appropriate circumstances to analyse systemic failures that contributed to the death and to design remedial responses.

5. In making my findings, they are based on proof of relevant facts on the balance of probabilities. I am guided by the principles outlined in *Briginshaw v Briginshaw* (1938) 60 CLR 336. That is, I am not able to make adverse findings against, or comments about individuals, unless the evidence provides a comfortable level of satisfaction that they caused or contributed to the death.

Circumstances of the death

6. Prior to her death, Mrs Crowther had been a resident at a RACF. She was supported and visited by her husband.

7. At the RACF, Mrs Crowther was categorised as a 'high care' resident. She was wheelchair-bound and required assistance with all personal hygiene (including toileting).

8. Mrs Crowther's medical history included morbid obesity, type 2 diabetes, hypertension, a stroke, partial foot amputation, breast cancer, and dementia. She also had a permanent pacemaker.

9. In addition to her ill-health, whilst at the RACF, Mrs Crowther also suffered from pressure injuries/wounds on her right upper arm, right abdominal 'flap', left leg, right buttock, left buttock, left arm, and on her left lower abdomen.

10. The wounds on Mrs Crowther's lower abdomen are most relevant to her circumstances of death. For context, her obesity and previous weight-loss surgery had resulted in redundant skin and residual fat which caused a large 'flap' (specifically, a large area of skin fold overlaying another).

Chronology of care and treatment by the RACF

11. On 13 March 2023, a registered nurse (RN) identified excoriation under Mrs Crowther's left abdominal skin fold. Hyrdrozole cream was applied, and a padded dressing was used to separate the fold from the thigh (to reduce friction). A Wound Assessment and Care Plan was created, and treatment continued until 30 April 2023 (at which point the excoriation was observed to have healed).

12. On 17 April 2023, the Clinical Care Manager and a RN spoke to Mrs Crowther's family about her condition and 'overall deterioration'. Mrs Crowther's family requested that she be transferred to hospital if her condition further declined. An active treatment approach was sought.

13. On 9 May 2023, staff recorded excoriation to Mrs Crowther's right lower abdominal skin fold. The site was cleaned, and a barrier cream was applied. A Wound Assessment and Care Plan was created, with recommendations that combine dressings be applied within the skin fold. Further, that antifungal creams be applied under her breasts.

14. The progress notes for 9 May 2023 record that a RN attempted to phone Mr Crowther and left a voice message when he did not answer.

15. By 27 May 2023, Mrs Crowther's right lower abdominal skin fold excoriation was said to be healing well.

16. On 28 May 2023, Mrs Crowther was transferred to the SCUH due to leg swelling. A leg ultrasound ruled out deep vein thrombosis (DVT), however it suggested Mrs Crowther might have been suffering from cellulitis (a skin infection). She was commenced on antibiotics and discharged back to the RACF the following day.

17. Following Mrs Crowther's return to the RACF, staff identified no new wounds, but noted she had redness to her bilateral groins, underneath her left breast, and underneath her bilateral skin folds. Clotrimazole cream was applied to all areas.

18. By 8 June 2023, the right lower abdominal skin fold excoriation was said to have healed (barrier cream continued to be applied). Mrs Crowther continued to suffer leg pain.

19. On 10 June 2023, Mrs Crowther was reported to be crying in pain. When examined, a hard lump was identified on the left side of her abdomen. She was taken to the SCUH where she was diagnosed with a 'ventral hernia' (referred to in the RACF's progress notes as abdominal wall cellulitis). She was prescribed antibiotics and discharged on 11 June 2023. The RACF notified Mr Crowther about these developments.

20. On 28 June 2023, Mrs Crowther complained of increased pain on the left side of her abdomen. On examination, a nurse practitioner observed a 'raised and firm area' on Mrs Crowther's 'lateral belly flap'. The nurse noted this had been the subject of a recent hospital admission, and that antibiotics were continuing.

21. On 3 July 2023, Mrs Crowther required codeine due to severe pain in the 'cellulitis area'.

22. On 5 July 2023, following discussions between staff from the RACF and Mr Crowther about Mrs Crowther's decline, Mrs Crowther was placed on a palliative pathway trajectory. The progress notes relevant to that discussion indicate that staff explained (to Mr Crowther) the recent diagnosis of 'cellulitis to abdominal wall' and its irreversible and rapid 'day to day deterioration'.

23. On 6 July 2023, Mrs Crowther complained of pain on both sides of her abdominal wall. Her General Practitioner (GP) reviewed her and observed her to be 'very uncomfortable'. Although the redness in the area had 'settled', the area remained 'very firm/indurated to touch and tender on palpation'. Antibiotics continued.

24. On 12 July 2023, Mrs Crowther was given morphine due to 'cellulitis pain in abdomen fold area'. A nurse practitioner reviewed the area and noted that the redness and firmness on Mrs Crowther's left abdomen had 'progressed'. A new wound (skin tear) on her right buttock was also observed.

25. The documented plan involved the administration of morphine prior to applying dressings. Regular buprenorphine patches were also recommended. Notwithstanding these measures,

Mrs Crowther continued to complain of abdominal pain.

26. On 19 July 2023, another new buttock wound was discovered. A large air mattress was ordered.

27. Between 24 July 2023 and 2 August 2023, Mrs Crowther's pain continued, and her cellulitis remained firm. Her palliative pathway was ongoing.

28. On 10 August 2023, a new wound on Mrs Crowther's lower left abdominal wall (where cellulitis was present) was documented. So too, was an 'old Mepilex border with 100% strike through of purulent yellow exudate'. Once that dressing was found, it was removed, and the area cleaned. It seems that the dressing had been 'lost' within a skin fold for an unknown period.

29. The wound discovered on 10 August 2023 continued to be cleaned and dressed (second-daily) until 23 August 2023, at which time the wound was noted to be oedematous and inflamed with moderate exudate.

30. By 23 August 2023, the nurse practitioner noted that she was 'unable to see extended inflammation', but the wound was malodorous. A swab was taken, and antibacterial dressings recommended. Mrs Crowther was noted to be experiencing severe pain when receiving her wound care.

31. From that date, daily dressings commenced, and the type of dressing changed from that of a barrier style, to dressings directed towards treatment and infection absorption.

32. On 24 August 2023, Mr Crowther was notified about matters including the swab taken of Mrs Crowther's abdominal wound.

33. On 26 August 2023, QML Pathology contacted the RACF about the fact that the swab they had collected was not labelled. The RACF confirmed Mrs Crowther was the patient and QML were asked to proceed. There is, however, no reference in the RACF's documentation concerning the results of the swab test.

34. A GP reviewed Mrs Crowther's lower left abdominal wound on 30 August 2023 and observed that it had started to break the skin. The GP recommended analgesia for dressing changes, and the buprenorphine patches to be increased to 10mg.

35. Between 31 August and 2 September 2023, Mrs Crowther reportedly screamed and yelled when dressing changes occurred.

36. By 3 September 2023, the wound had become 'infected and malodorous'. Mrs Crowther was added to the 'GP visit list'.

37. On 4 September 2023, the wound had further deteriorated, it was recorded as having heavy yellow and green exudate and being 'extremely' smelly and painful. Although morphine was administered, Mrs Crowther's pain was too severe for the wound to be cleaned.

38. Following a discussion with Mr Crowther, as well as a 'long' conversation with the Queensland Ambulance Service (QAS), a decision was made to send Mrs Crowther to hospital the following day (an ambulance had already been pre-booked to take her to the SCUH for a pacemaker review).

Hospital admission and surgical procedures

39. Following Mrs Crowther's pacemaker review at the SCUH on 5 September 2023, she was admitted to the emergency department. She presented with:

> *…infected left lower abdominal wall (fatty apron or "stomach pannus") described as a malodourous "large cavitation" measuring some 4-5cm x 6-7cm with necrotic (dead tissue) exudate and unclear depth with surrounding cellulitis (skin and subcutaneous infection); along with a red, painful indurated (firm, thickened) 3cm x 5cm lump to right*

fatty apron area.

40. A CT scan revealed a left-sided ventral abdominal wall hernia which had been present and unchanged since June 2023, for which, Mrs Crowther was given antibiotics.

41. On 6 September 2023, Mrs Crowther was reviewed by the SCUH plastic surgery team. An 'incredibly large abdominal pannus' with a significant cavity (8cm x 5cm) was observed. It had a sloughy malodorous base and unknown depth. Necrotic skin was around the edges. Her right lower abdominal wall was also noted to be indurated (inflamed and thickened).

42. Mrs Crowther's diagnosis was an infected acute-on-chronic abdominal wound with panniculitis (infected fatty apron) of unclear aetiology, with potential element of neglect at the nursing home. Surgery was performed the following day (7 September 2023).

43. During surgery, the area of cavitation was found to be 5cm deep. The affected tissue was excised, and the area washed out. The surgical wound was left open for subsequent review. Intravenous antibiotics were administered to control the infection.

44. On 9 September 2023, during a surgical review it was noted Mrs Crowther had increased swelling of her limbs and body.

45. By 10 September 2023, Mrs Crowther's urine output had decreased, her liver and renal functioning had deteriorated, and she had increased swelling of her limbs. She was taken to theatre for further debridement of her wound. A drain was placed in the wound and the skin closed.

46. A perioperative review considered Mrs Crowther had fluid retention (anascara) due to circulating protein in the serum produced by the liver (low albumin) *in the setting* of *malnutrition and infection; acute-on-chronic renal failure and delirium.* Intravenous albumin was commenced, with antibiotics continuing.

47. On 11 September 2023, swelling had increased and extended to Mrs Crowther's hands, her renal output had dropped, and her abdominal wound was leaking copious amounts of fluid and blood. Wound swab results revealed a gut organism (enteroccus faecalis). She was treated with continuing albumin infusion, antibiotics (continued at a reduced dose to accommodate renal injury), and strict fluid balance.

48. On 12 September 2023, Mrs Crowther's condition further declined with her haemoglobin and potassium levels decreasing, ongoing fluid overload, and declining renal function.

49. On 13 September 2023, blood test results revealed precipitous decline in hepatic (liver) function reflecting likely ischaemic hepatitis (lack of blood flow to the liver) and worsening renal function. While staff were speaking to family members (by phone), Mrs Crowther suddenly stopped breathing and died. Resuscitation attempts were unsuccessful. She was declared deceased.

50. Mrs Crowther's husband had left on a pre-planned holiday on 9 September 2023 believing that everything was under control concerning Mrs Crowther's health and wellbeing. Very sadly he was not able to be at the hospital when she passed.

Expert Opinion

51. An opinion concerning the care provided to Mrs Crowther has been obtained from Dr Gary Hall, a Senior Forensic Medical Officer.

52. Dr Hall considers that by virtue of Mrs Crowther's obesity-related abdominal skin folds, there was an increased risk of friction (from skin folds rubbing) and in turn, infection with fungi and bacteria. This, he says, *mandated attention to good wound care and very regular skin care checks.* Based on Mrs Crowther's progress notes though, it seems it was only when a skin

injury was discovered that regular checks were initiated.

53. In relation to the RACF's treatment of the wound identified on 10 August 2023 (being the left lower abdominal wound), Dr Hall noted that the care plan was not created until 17 August 2023. He was critical of this and reports that:

> *…it ought to have been reviewed and managed appropriately from the time of discovery with thorough cleaning with saline, antibiotics (if required), and attention to mitigating wound breakdown with dressings and prevention of frictional injury.*

54. According to Dr Hall, the appropriate time to refer Mrs Crowther to a hospital was when the wound was reviewed on 23 August 2023 – particularly when the nurse recorded that she was unable to assess the full extent of the wound.

55. Ultimately, Dr Hall concluded:

    i. Management of Mrs Crowther's recurrent infection was reactive rather than *through appropriate surveillance and monitoring*. There was no consistency in how it was monitored – leading to the retention of an old dressing causing infection.

    ii. Appropriate management required daily review with separation of the folds, cleaning with soap (or another agent), airing (where possible), the use of barrier creams and/or dressings.

    iii. Best practice requires monitoring for early signs of infection, with a GP or nurse undertaking reviews and directing appropriate wound care management (and antibiotics if needed).

    iv. The pannus infection identified on 10 August 2023 would have been manageable with good skin care, regular cleaning and dressings, and antibiotics.

    v. *That the wound was allowed to progress significantly over the course of over three weeks with little escalation in wound cares, developing into a large cavitating ulcer, and with Mrs Crowther screaming in pain for days due to inadequate analgesia reflects poor palliative care and poor nursing care.*

    vi. There was considerable deterioration of the wound by 23 August 2023. Had Mrs Crowther been referred to hospital at that time, her ulcer and infection could have been appropriately treated. This was an outcome changing moment.

    vii. The RACF's palliative care of Mrs Crowther fell short of good practice: Mrs Crowther *was screaming in pain for days with dressing changes. GP and nurse practitioner were rarely consulted, and the analgesia prescribed was inadequate.*

56. Considering Mr Crowther's concerns, Dr Hall reviewed the RACF's records of discussions purportedly held with Mrs Crowther's family.

57. Dr Hall is particularly critical of the RACF's actions when implementing Mrs Crowther's future planning and palliative pathway. In this regard, there seems to have been uncertainty or confusion regarding communications with Mr Crowther about Mrs Crowther's disposition and future planning.

58. For instance, in March 2023, Mr Crowther instructed the RACF to proceed with full cares including hospital transfer if required. The RACF reports this to have changed in July 2023 though, with Mr Crowther 'apparently' agreeing to the 'Palliative Pathway Trajectory B'. This 'passive acceptance' of palliative care *was at odds with his request for full cares some 3-4 months previously, and subsequent wishes.*

59. There are, however, no records documenting 'appropriate' discussions with Mr Crowther about the palliative pathway – nor is there any evidence that it was adequately explained to him. Dr

Hall also observes that he was not provided with any accompanying information/documentation about the procedures involved. Accordingly, he is of the view Mr Crowther is unlikely to have understood its meaning or its consequences.

60. In Dr Hall's opinion, the issues arising on 23 August 2023 (in relation to Mrs Crowther's wound) presented an opportunity for the RACF to discuss Mrs Crowther's condition with him, ask how he would like to proceed, and confirm adherence to the palliative pathway.

61. He says the key to commencing the palliative pathway is advance care planning. This should have included ongoing communication between staff and Mrs Crowther and her family, the appointment of a substitute decision-make (i.e. Mr Crowther), discussion and agreement about matters such as hospital transfer and active versus palliative treatment, and regular review.

62. Ultimately, Dr Hall opined that Mr Crowther's wishes did not appear to be aligned with the RACF's 'management pathway.'

63. Dr Hall determined that SCUH's management of Mrs Crowther's abdominal wound and infection was appropriate - it was *reasonable with no identifiable outcome changing event or opportunity to reverse her clinical deterioration*.

Response from the RACF

64. I sought a response from the RACF regarding the concerns raised by Dr Hall. I was provided a statement from the Executive General Manager Clinical and Care Practice (the GM).

65. I have been advised,

    a. The results from the wound swab of 26 August 2023 were received. A report was printed on 20 September 2023. There is though no documented evidence the wound swab was followed up, but it is noted the results are usually sent to the requesting GP with the RACF also receiving a copy. It has not been confirmed if the GP received the result. I note Mrs Crowther was reviewed by a GP on 30 August 2023. Her previous course of antibiotics finished on 16 August 2023.

    b. The RACF acknowledges there were some gaps in care. The GM states,

> *On review of the records, it appears that Mrs Crowther's condition arose from a combination of issues including inadequate clinical assessment skills to identify when appropriate to escalate wound deterioration, lack of clinical oversight and general knowledge around wound management processes, poor continuity of care and lack of staff accountability, as well as Mrs Crowther's strongly expressed unwillingness for hospital transfer.*

66. The GM also accepts:

- Wound care and management plan documentation occurred every day from 23 August 2023, but was 'missed' on 26 and 28 August 2023. Further, the documentation on 30 August 2023 did not *clearly provide directions on how the wound was to be cleaned and dressed, including the dressing type*. This was an appropriate time for the nurse to confirm or change the wound care regimen.

- Mrs Crowther's skin assessment and care plans did not adequately identify Mrs Crowther's risks, including obesity, diabetes, recurrent skin fold infections, immobility and did not provide a proper injury prevention plan.

- On reflection, Mrs Crowther should have been transferred to hospital when the severity of her wound became apparent on or around 30 August 2023 [however acknowledges the wound rapidly deteriorated between 25 and 30 August 2023 and that a wound specialist review was warranted at this time].

67. The GM refers to Mrs Crowther's hospital phobia and her scheduled pacemaker review appointment as potentially having influenced the decision of the RACF staff not to transfer Mrs Crowther to hospital sooner.

68. The GM accepts that there were gaps in the provision of regular updates and comprehensive consultations with Mrs Crowther's family. She notes the Clinical Care Manager had apologised to Mr Crowther, she states,

> *The CCMS apologised to Mr Crowther that the clinical team had not discussed with him a potentially earlier hospital transfer, noting that there appeared to have been a collection under the skin, which was only revealed when the overlying skin broke down. The CCM confirmed that the wound had been cleaned and dressed daily in accordance with the wound care and that Mrs Crowther had been regularly reviewed by her GP and the NP. The CCMS advised that he would be kept informed of any changes and reinforced the need for the wound to be surgically cleaned and intravenous antibiotics administered prior to Mrs Crowther's return to the facility*.

69. The GM accepts that there was a lack of communication and clarification regarding goals of care, *including clarification of Mrs Crowther's family's understanding of comfort measures provided under the palliative care pathway as opposed to active measures to promote comfort contributed to deficiencies in care planning and missed opportunities for escalation.*

70. Since Mrs Crowther's death, the RACF has undertaken a 'comprehensive' review to better understand the factors that contributed to Mrs Crowther's wound deterioration and management.

71. In turn, the RACF has implemented initiatives to reduce the risk of similar occurrences in the future. This has included:

    - the recruitment of a National Manager for Wound Prevention and Management to develop an improvement strategy for wound care;
    - wound education, prevention, and management sessions delivered by Wound Solutions and the National Manager for Wound Prevention and Management;
    - educative sessions provided by the Clinical Care Manager on topics such as wound swabs, wound referrals, skin care, and infection control;
    - clinical coaching for nursing staff about topics including 'wound management and documentation' and conversations about palliative care;
    - implementation of a weekly wound focus day to identify non-healing wounds and newly chronic wounds;
    - new pathology results processes – including online access to results; and
    - involvement in a Melbourne University project concerning professional development and the advancement of wound prevention and management practices.

72. In addition, in February 2024, the RACF updated its Palliative Care Trajectory Model to the Palliative and End of Life Care process, which includes an extra tool to ensure all appropriate end-of-life actions are completed and assists nurses to identify signs of end-of-life in a timely manner. The advance care planning process and goals of care have also become a regular practice, regardless of the resident's trajectory stage.

Forensic Pathologist Examination

73. An external examination with whole body CT scan and urine and blood samples, was

undertaken by the forensic pathologist.

74. The forensic pathologist's examinations revealed obesity, an old right-sided stroke, an insitu pacemaker, cardiac valve calcification, fluid both within and around the lungs, possible pneumonia, renal atrophy, osteoporosis, arterial calcification, and generalised soft tissue oedema.

75. Insofar as the wound goes, the forensic pathologist found, internally, there were *signs of recent abdominal wall surgery with no sign of abdominal wall or cavity bleeding;* and externally, the wound was 'uncomplicated'.

76. The forensic pathologist determined Mrs Crowther's cause of death was multiple organ failure due to abdominal wall cellulitis (surgically treated).

Conclusion

77. After considering the material obtained during the coronial investigation, I consider I have sufficient information to make the necessary findings in relation to Mrs Crowther's death.

78. Unfortunately, there were deficits in the care Mrs Crowther was provided at the RACF. I am of the view the overlooked 'old Mepilex border' dressing, identified on 10 August 2023 likely led to a downward trajectory which was not addressed in a timely manner. A care plan was not created until 17 August 2023.

79. Dr Hall opines the infection identified on 10 August 2023 would have been managed with good skin care, regular cleaning and dressings, and antibiotics.

80. By 23 August 2023, the wound was noted to be oedematous, inflamed, malodourous (smelly) with moderate exudate. Further, Mrs Crowther was experiencing severe pain when receiving wound care. This deterioration in the wound is unlikely to have occurred overnight and there is no evidence of a review by a wound specialist or GP since the old dressing had been identified on 10 August 2023. Noting Mrs Crowther was reviewed by a GP on 30 August 2023.

81. While Mrs Crowther was reviewed by a nurse practitioner on 23 August 2023, had wound swabs taken, and had her dressing regime changed, the wound swab does not appear to have been actioned by the RACF or the GP. I accept this was a critical period and consideration should have been given to transferring Mrs Crowther to hospital for review at or around this time.

82. Noting Mrs Crowther's extensive medical co-morbidities, I accept on balance, with earlier surgical debridement and treatment, Mrs Crowther would likely have had a better outcome, and that the need for palliation would not have been required in the short term.

83. I am satisfied the RACF has appropriately reviewed and reflected on the events surrounding Mrs Crowther's death. The changes which have been put in place by the RACF will hopefully go some way to preventing another resident experiencing what Mrs Crowther and her family went through.

84. I am not satisfied that it is in the public interest to hold an Inquest (formal court hearing). I have though sought approval from Mrs Crowther's husband to publish these findings so other clinicians and other RACFs are able to consider and reflect on the events which occurred in this case. Further, that this case may result in the implementation of practices to improve wound management in the aged care setting.

85. I accept the forensic pathologist's opinion as to the cause of Mrs Crowther's death.

86. I extend my condolences to Mrs Crowther's family and friends for their loss.

I close the investigation.

Melinda Zerner
Coroner

12 August 2024