QUEENSLAND COURTS

OFFICE OF THE STATE CORONER

NON-INQUEST FINDINGS

CITATION:	**Investigation into the death of Sylvia Crane**
TITLE OF COURT:	Coroners Court
JURISDICTION:	Brisbane
FILE NO(s):	2012/3589
DELIVERED ON:	11 August 2014
DELIVERED AT:	Brisbane
FINDINGS OF:	John Lock, Deputy State Coroner
CATCHWORDS:	Coroners: health care, waiting lists

Investigation conducted by Registrar Kirkegaard

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Introduction

Sylvia Crane was a 66 year old woman who collapsed suddenly and died at her daughter's home at 2 Longridge Street, Macgregor on 4 October 2012. Mrs Crane ordinarily resided at 283 Cockatoo Street, Poona with her husband, Kevin. They were staying with their daughter as Mrs Crane was scheduled for surgery at the Royal Brisbane & Women's Hospital (RBWH) on 5 October 2012 to remove a cancerous kidney.

Mrs Crane's death was reported to the coroner because the cause of her sudden unexpected death was unknown.

The coronial investigation identified systemic deficiencies in Mrs Crane's clinical management which led to a five month delay in scheduling her Category 1 surgery to remove the cancerous kidney.

Mrs Crane's medical history

Review of Mrs Crane's medical records (GP Records, Hervey Bay Hospital, Maryborough Hospital, and the RBWH) shows she had been diagnosed with a right renal cell carcinoma (kidney cancer) on 18 May 2012. She had no other significant medical history.

This diagnosis was made following a presentation to the Maryborough Hospital Emergency Department on 24 April 2012 for investigations of multiple blister-like lesions on her hands. She had presented to her general practitioner on 23 April complaining of soreness and a blistery rash on both hands, which had been present for six days, together with intermittent dizziness. Apart from a slightly elevated temperature, her observations were within normal limits. The general practitioner took a swab from one of the blisters and sent it off for herpes simplex virus and varicella zoster virus testing. She was prescribed antibiotics (Keflex) for a possible secondary infection of the blisters pending these results.

Mr Crane contacted the medical practice the next afternoon advising that his wife's rash had spread and become increasingly painful. He was advised she should return for medical review, contact the after hours doctor service or present to the local hospital emergency department for treatment. Mr Crane arranged for her to attend for follow up on 26 April. However, she presented to the Maryborough Hospital Emergency Department that evening, so she did not return to the general practitioner until some months later.

Mrs Crane was initially diagnosed with cellulitis. Swabs and blood were taken for testing. She was given intravenous antibiotics and referred for review the next day at the Hervey Bay Hospital. She was admitted to the orthopaedic unit for further investigations.

Biopsies of the lesions taken during this admission confirmed a diagnosis of Sweet Syndrome (a skin disease characterised by fevers, elevated white cells and tender skin lumps). As this condition has a known association with malignancy, a CT scan of the chest, abdomen and pelvis was ordered. This identified a right renal tumour 6.5cm in diameter in the left lower pole of the right kidney. There was no evidence of local spread.

A bone scan was arranged and an urgent referral was made to the RBWH Urology Department for further management.

Management of referral to Royal Brisbane & Women's Hospital Department of Urology

The referral was received by RBWH on 24 May 2012.

On 1 June 2012, Mrs Crane was allocated as a Category 1 outpatient and thus was required to be seen within 30 days of the referral.

Mrs Crane was seen by her general practitioner on 19 June 2012 for a rash on her right index finger. It was during this consultation that she mentioned her recent admission to Hervey Bay Hospital and diagnosis with a tumour of her right kidney. The general practitioner discussed the bone scan results, which indicated no evidence of any skeletal metastatic lesions. Mrs Crane advised she was expecting to be seen by an urologist at the RBWH sometime in July 2012.

Mrs Crane returned to her general practitioner on 26 June so he could complete forms to enable her to arrange free travel to RBWH. He took the opportunity to conduct a brief physical examination during that consultation, which demonstrated that her overall condition was reasonable at that time. Mrs Crane was asked to come back and see her doctor after her specialist appointment.

Mrs Crane was seen in the urology outpatient clinic and pre-admission clinic on 9 July 2012. She was assessed as requiring laparoscopic right nephrectomy (removal of kidney). Given that Mrs Crane lived outside Brisbane, all of the pre-admission checks were completed at this appointment.

The urological surgeon reviewed Mrs Crane's films at the outpatient appointment. As the original CT scan showed some irregularity of the contrast filling within the inferior vena cava, the surgeon asked her general practitioner to arrange for an ultrasound of the renal tract to be performed in Hervey Bay to further delineate the vena cava. At that time, it was thought the irregularity represented a flow artefact rather than a caval thrombus.

Mrs Crane presented to her general practitioner on 17 July 2012 at which time the abdominal ultrasound was arranged. Mrs Crane was noted to be upset during this consultation as she felt her surgery was taking a long time to be organised. She declined her doctor's offer to provide her with a private referral as she did not have private health insurance and could not afford to have private hospital treatment.

The general practitioner received the abdominal ultrasound report the next day and noted there was a large mass on the lower lobe of the right kidney and a cystic mass in the right lobe of her liver. There was no evidence of any metastases.

The ultrasound report was received at the RBWH Department of Urology the same day and reviewed by the surgeon who did not consider there was any evidence of caval thrombus.

The general practitioner received correspondence from the RBWH Department of Urology on 24 July 2012 advising that Mrs Crane had been booked in for a laparoscopic right nephrectomy, which would be 'performed in the not too distant future'. Mrs Crane did not return to see her general practitioner again.

On 21 August 2012, Mrs Crane was booked for the surgery to proceed on 5 October 2012.

Mrs Crane is reported to have experienced increasing right flank and right lower abdominal pain over the two months leading up to her surgery date.

Her family says she telephoned the number provided by the RBWH Urology Department to report this change in her condition and was advised to see her general practitioner. Although a review of her general practice notes shows no record of any pain in her right loin or abdomen at any of her three consultations in June and July, her family says the GP did recommend she take Nurofen for the pain. She did not return to the practice after the last consultation on 17 July.

Admission to the Hervey Bay Hospital in September 2012

Mrs Crane presented to the Hervey Bay Hospital on 17 September 2012 with right flank pain and mild haematuria, with haemoglobin of 110. She was admitted for four days during which her symptoms were managed conservatively. An irrigation catheter was inserted to wash out the bladder and she was commenced on antibiotics and analgesia. Urinanalysis showed no evidence of urinary tract infection. Routine blood tests did not show an increased risk of clotting.

A CT scan performed during this admission showed an increase in the size of the right renal cell carcinoma (from 6.5cm maximal diameter in May, to 7.6cm x 7.1cm). The haematuria was thought to be secondary to tumour invasions through one of the lower pole calyces (urine collecting ducts). There was no evidence of renal vein or inferior vena cava tumour thrombus noted at that time.

The Hervey Bay Hospital notes show the RBWH urology registrar was contacted on 17 September about Mrs Crane's presentation and advised that she be treated with intravenous antibiotics for 48 hours and have imaging performed to investigate the loin pain.

The Hervey Bay Hospital doctor contacted the RBWH registrar the next day with the CT findings. The RBWH Urology registrar's advice was to stick with the original plan of surgery on 5 October unless there was worsening haematuria or pain.

A review of the records notes there is no corresponding documentation of the RBWH urology registrar's conversations with the Hervey Bay Hospital treating team in the RBWH records. Further, the RBWH urological surgeon says he was not made aware of Mrs Crane's symptoms and did not recall being made aware of her admission to the Hervey Bay Hospital. However, it is noted the RBWH records contain a copy of the Hervey Bay Hospital discharge summary. It is unclear when this may have been received and by whom. It is possible it may have been simply placed on the records and not made available to the RBWH urology team. RBWH however, agrees there were problems with communication.

Mrs Crane was noted to be very emotional and anxious during this admission. The hospital records note she was worried about her cancer and the delay in operating. She remained in hospital until 21 September when she was discharged home with advice to continue the antibiotics and analgesia until her surgery in two weeks' time.

Review of the medical records shows Mrs Crane did not seek further medical attention after this time.

Mrs Crane's Sudden Collapse

Mrs Crane and her husband were staying with their daughter in Brisbane in early October 2012 in preparation for Mrs Crane's operation on 5 October 2012.

Mrs Crane was up through the night on 3 October with constipation and pain in the kidney region. She was scheduled to see the surgeon the next day. She went to have a shower at around 7:50am that morning. Mr Crane became concerned for her welfare when approximately 15 minutes later he could not hear the shower running, so he went into the bathroom to check on her. He was unable to open the door, so called out to his wife but she did not respond. He then forced the door open and found her collapsed on the bathroom floor. He immediately called out for help and then commenced CPR pending the paramedics' arrival. Paramedics attended soon afterwards but despite continued resuscitation efforts, Mrs Crane was unable to be revived.

Officers from the QPS Criminal Investigation Branch attended the scene and were satisfied there were no suspicious circumstances.

Autopsy findings

An external examination and partial internal autopsy (chest, abdomen and legs only) were performed on 9 October 2012. The autopsy revealed a large saddle pulmonary embolus originating from a 60mm deep vein thrombus in the right calf muscle, which the pathologist considered caused the death.

There was a large 90 x 50mm tumour mass within the lower pole of the right kidney and marked dilatation of the right renal pelvis. There was a soft tissue mass within the right renal vein extending to involve the inferior vena cava which the pathologist considered likely represented tumour invasion into the renal vein and inferior vena cava. Microscopic examination confirmed the tumour to be a high grade renal cell carcinoma with extensive tumour necrosis.

The large thrombus which obstructed blood flow to the lungs was made up almost entirely of tumour cells (and some blood clot), which appears to have originated from the primary tumour within the right kidney, which in turn had grown into the large vessels leading back to the heart.

Independent Clinical Review

Mrs Crane's family were concerned about not only the delay in scheduling her surgery, but also about the adequacy of her clinical management during that period. In view of these concerns and the autopsy findings, an arrangement was made for an independent doctor from the Department of Health Clinical Forensic Medicine Unit to review and provide an opinion about the appropriateness of Mrs Crane's clinical management.

The reviewing doctor expressed concerns about the delay in approving and scheduling Mrs Crane's laparoscopic nephrectomy surgery, noting the medical records revealed no obvious reason for it having occurred.

The reviewing doctor noted that Mrs Crane appears not to have reported her flank pain to her general practitioner at any time before or after her admission to Hervey Bay Hospital, during which appropriate steps were taken in discussing her new symptomatology (haematuria and pain) and the CT results with the RBWH Urology Registrar.

The reviewing doctor confirmed that in the absence of renal vein or inferior vena cava tumour thrombus, the findings of the CT scan performed during the Hervey Bay Hospital admission would unlikely expedite surgery given it was scheduled within the following three weeks.

Consequently, the matter was referred back to the RBWH for formal clinical incident review.

Outcomes of Royal Brisbane & Women's Hospital Review

The RBWH conducted a clinical review pending the outcome of a full Root Cause Analysis. In summary, the clinical review found:

Why was there a delay in scheduling Mrs Crane's surgery?

The hospital review noted that although Mrs Crane was identified as a Category 1 patient at the point of referral, her surgery was not booked until 134 days from receipt of the referral.

The Category 1 timeframe begins on the day the patient is considered 'ready for care' which is after their initial appointment with the surgeon and once all relevant tests necessary for preparing the patient for theatre have been completed.

The review was satisfied that all of the appropriate diagnostic tests and investigations were conducted in a timely way. Mrs Crane would have been considered 'ready for care' once the ultrasound results were available and reviewed by the surgeon on 18 July 2012, but it was another 43 days before she was prioritised and booked for surgery.

The hospital review found that during Mrs Crane's waiting time, urology theatre lists were fully booked and any extra acute lists were being offered to acutely unwell patients. The Department of Urology had significant wait list pressures with 38 long wait Category 1 patients. Bookings at that time were made more difficult by the need to treat other long wait patients in Category 2 and 3 as part of the National Elective Surgery Target (NEST) initiatives.

Consequently, the review concluded the reason Mrs Crane was not treated within the recommended 30 days of referral was largely due to waiting list issues and inefficient internal processes.

The hospital review noted a continued demand for urology services with an increase in complex and high acuity cases that has not been matched with increased theatre availability. This in turn can result in patients waiting longer than their categorisation time frames with clinicians having to manage urgency within allocated theatre times.

The hospital review cited a range of initiatives implemented in the Department of Urology since May 2012 to address extensive waiting lists, streamline referral issues and prioritise those patients requiring urgent intervention. These include:

- a review and revision of patient categorisation and wait list management (undertaken by the Director of Urology and the Clinical Nurse Consultant Urology Care Coordinator)
- instituting a database listing all waitlist patients and waiting times/dates
- initiating a 'full waitlist"' case manager tool (commenced April 2013)
- active review and management of long wait Category 2 and 3 patients (commenced on 15 July 2013). This includes a long wait list streaming strategy whereby the Urology New Case Coordinator facilitates daily week day discussion of new cases and surgeon availability on the surgical list
- regular case management meetings between the Clinical Nurse Consultant Urology Care Coordinator (senior nursing clinician) and medical staff to discuss waiting list issues

- creating acute surgical lists to ensure patients requiring urgent surgery (within 1-2 weeks) do not disrupt or lead to cancellation of Category 1 and urgent Category 2 patients

- a new process whereby long wait patients lists from the Elective Surgery Office are discussed with consultants and registrars at outpatient clinics and prioritised according to clinical need

- initiating an 11-point plan to manage operating theatre bookings by registrars (commenced in January 2013)

- ongoing reporting to the hospital and Metro North Hospital and Health Service of wait list times against NEST criteria

In combination, these processes mean that:

- Category 1 patients now get booked for surgery on the day they are considered 'ready for care'

- weekly case discussions between medical and nursing staff ensure that all referrals and current cases are discussed and prioritised according to clinical need

- out of district referrals are now reviewed by the Urology New Case Coordinator and where appropriate will be referred to a service closer to home.

The hospital review noted that as at 25 November 2013, these initiatives had led to a reduction over long wait patients in each Category, including no long wait Category 1 patients.

Noting the work done by the Department of Urology to eliminate long wait patients and streamline their referral and prioritisation processes, the hospital review made no recommendations for further improvement.

Could Mrs Crane's surgery have been performed elsewhere?

The hospital review confirmed that although the Hervey Bay Hospital would not normally perform laparoscopic nephrectomy; Bundaberg, Nambour and Redcliffe Hospitals all perform this type of surgery.

At the time of Mrs Crane's referral to RBWH, there were no established pathways for referral from Hervey Bay Hospital.

The hospital review noted that out of district referrals are now reviewed by the Urology New Case Coordinator and, where appropriate, will be referred to a health service closer to the patient's place of residence.

Should Mrs Crane have been reprioritised for surgery in August-September 2012?

The hospital review noted the urology team was aware of only one call from Mrs Crane on 6 August 2012 in which she is noted to have called to find out whether a date for the surgery had been booked. No other calls from Mrs Crane reporting increasing flank and abdominal pain are documented in the RBWH records.

The hospital review commented that had these symptoms been reported, it would have been appropriate for RBWH staff to refer Mrs Crane to her general practitioner for initial assessment, given she lived in Maryborough.

Outcomes of the RBWH Root Cause Analysis

The RCA team commissioned to review Mrs Crane's clinical management included a urology expert.

Opportunity for earlier diagnosis of the tumour spread?

The RCA noted Mrs Crane had a cT2 renal cell carcinoma for which a Category 1 allocation is generally made due to the risk of the condition progressing to metastatic disease.

The RCA noted the expert urologist's opinion that the rapid progression of Mrs Crane's disease was exceptionally rare. It was considered that for the majority of patients with this diagnosis, waiting for three months for treatment, while not ideal, would not result in an adverse outcome. The way in which Mrs Crane's renal tumour manifested was 'very rare' and the opportunity to identify and diagnose its spread was limited by the fact it was not visible on three separate CT scans. The RCA noted that an MRI scan or vena cava imaging may have detected the thrombus.

The RCA considered the Hervey Bay Hospital treating team had no reason to be concerned about Mrs Crane's condition when she presented there in September 2012. This is because a tumour such as hers would generally manifest slowly and she did not present with any concerns or acute symptomatology at that time. (*In relation to this finding her family states Sylvia presented with increased pain and blood in her urine, she also did have and duly voiced her concerns about the long wait for surgery, all of which were reported to have been clearly documented in her file at the Hervey Bay Hospital. Other than asking the Hervey Bay doctor if they contacted the RBWH urology surgeon about her, they do not know what else they could do about their concerns. At the open disclosure conducted with RBWH, family were advised that if the urology surgeon had been aware of her admission and her condition at the time he would have transferred her from Hervey Bay hospital to the RBWH.)* In respect to this issue RBWH states it is unlikely an earlier transfer would have been made as the date of 4 October was the first date available in any case.

Waiting list issues

According to the then Queensland Health Outpatient Services Implementation Standard:

- accepted referrals must be reviewed by a delegated nurse within 24 hours of receipt registered on a wait list within two days of receipt – Mrs Crane's referral was received by RBWH on 24 May 2012

- categorised according to their degree of clinical urgency within five working days of receipt - Mrs Crane was allocated a Category 1 on 1 June 2012

- an outpatient appointment for a Category 1 must be booked within 30 days from being placed on the wait list - Mrs Crane attended an outpatient appointment on 9 July 2012 , 44 days from the allocated two days allowed for placement on the waiting list

- in practice, once the patient has attended the outpatient appointment, they are then allocated a theatre date, ideally within 30 days of their outpatient appointment. The Category 1 timeframe begins on the day the patient is considered ready for care – Mrs Crane's allocated date for surgery was 88 days after her outpatient appointment

The RCA noted that had RBWH been in a position to meet their 30 day target from outpatient appointment to operation date, Mrs Crane's surgery would have been scheduled on or around 8 August 2012. She had phoned on 6 August to ask whether a date for surgery had been confirmed but at that time had not been allocated a date. On 21 August she was booked for surgery on 5 October 2012.

The RCA noted the Department of Urology was experiencing significant wait list management issues at the time Mrs Crane was referred – they were trying to prioritise 79 Category 1 patients, 40 of whom were 'long wait' patients (over 30 days since seen in outpatient clinical and confirmed for surgery) in addition to the pressure of reducing and managing high numbers of long wait Category 2 and 3 patients.

Review of the waiting list data between August–October 2012 identified a small number of patients with a similar diagnosis to Mrs Crane who were added to the wait list after her but were prioritised ahead of her. The RCA team was satisfied these cases were appropriately prioritised due to developing symptomatology and clinical urgency.

The RCA considered the practice of patients waiting for an outpatient appointment before getting onto the Category 1 waiting list, which effectively means a Category 1 patient can take up to 60 days from referral to acceptance for surgery. This practice has been identified as a problem at the national level with plans to address it in 2015.

The RCA noted that Urology theatre lists were fully booked during the time Mrs Crane was on the wait list, with no additional theatre time available.

The RCA also noted that RBWH was making a concerted effort in 2012 to reduce long wait Category 2 and 3 patients, whose conditions can also deteriorate quickly and unexpectedly resulting in poor outcomes. The RCA

recognised the competing need to review these patients on an ongoing basis and prioritise them according to changing clinical need.

The RCA concluded that:

- the management of Mrs Crane's referral to allocation of Category 1 was timely (even though it was slightly outside the five day key performance indicator)

- the waiting time for outpatient appointment (44 calendar days) was reasonable in the context of the volume of referral and the availability of clinic appointments at that time

- the waiting time from outpatient appointment to theatre date (88 days) was excessive.

The RCA concluded that had Mrs Crane been allocated a date for surgery with the Category 1 timeframe, the surgery may have been performed before the tumour had progressed into the inferior vena cava and reduced the risk of pulmonary thromboembolism (which largely consisted of tumour cells). Consequently, the excessive waiting time from her identification as a Category 1 patient to the allocated date for surgery on 5 October 2012 was a root cause.

The RCA noted the many improvements made to waitlist processes and compliance with NEST key performance indicators since Mrs Crane's death. These initiatives over the past two years have resulted in the current status of no long wait Category 1 patients and a significant reduction in Category 2 and 3 long wait patients. The RCA team considered these initiatives and reporting requirements were achieving better control of the waiting lists and more timely management of waitlist patients. Provided these processes are maintained, the RCA team felt no further recommendations were necessary in relation to waitlist management.

In view of the RBWH resources to manage more complex presentations and to deal more effectively with adverse surgical outcomes, the RCA team considered these resources should be utilised to their full potential. The RCA noted the opinion of Department of Urology staff that more stringent triaging of less urgent cases and re-direction of more routine referrals to other hospitals outside RBWH could lead to more timely management of more urgent or complex cases and assist with more efficient waitlist management by maximising theatre time for acute presentations, Category 1 patients, more urgent Category 2 patients and more complex cases. The RCA recommended that RBWH Surgical & Perioperative Services consider reviewing the access criteria for the Department of Urology in relation to less acute referrals.

It is noted the RBWH Executive Director Medical Services and the urological surgeon have since met with Mrs Crane's family to discuss the outcomes of these reviews.

Conclusion

Mrs Crane died from a known complication of a cT2 renal cell carcinoma. Although she had been appropriately referred to the RBWH Department of Urology and allocated as a Category 1 patient, significant waitlist management issues at the time of her referral resulted in her waiting an excessive period for surgery. While the rapid progression of her disease may have been rare, it is possible that earlier surgical intervention may have prevented the death by removing the cancerous kidney before the tumour spread into the inferior vena cava and lessening the risk of pulmonary thromboembolism, which caused her death.

The waitlist management issues that delayed the scheduling of Mrs Crane's surgery have been comprehensively reviewed by way of an internal clinical incident review and a root cause analysis. These reviews highlight significant changes made by the RBWH Department of Urology since Mrs Crane's death to improve waitlist management. These new processes appear to have had a significantly positive effect on Urology wait lists.

Hervey Bay Hospital appropriately sought advice from the RBWH urology team about the management of Mrs Crane's new symptoms in September 2012. Whilst it is accepted that her symptoms and CT findings at that time would not have expedited her surgery, it is concerning that the RBWH records do not document any contact made with the urology team either by Mrs Crane or the Hervey Bay Hospital treating team about her changing clinical symptoms.

RBWH are encouraged to give careful consideration to the RCA recommendation for strategies to maximise the specialist resources of the Department of Urology by reviewing the access criteria for less acute referrals.

Finalisation of Findings

I do not propose to hold an inquest because the investigation has revealed sufficient information to enable me to make findings about Sylvia's death and there does not appear to be any prospect of making recommendations that would reduce the likelihood of similar deaths occurring in future or otherwise contribute to public health and safety given the findings and recommendations that have come out of the RCA.

The family of Sylvia Crane agree with this outcome. Given the issues raised the family have been consulted and agree that these findings should be published in the public interest in accordance with section 46A of the *Coroners Act 2003.*

Since Sylvia's death her family have become aware of the existence of the *Australian Charter of Health Care Rights*. This includes a right to be informed about services, treatment options and costs in a clear and open way. They are of the view that if the family had been informed about what surgical category Sylvia had been given and what this meant, this may have helped to reduce

the risk of failure of internal hospital processes and they could have brought this to the hospital's attention at an earlier time.

Findings required by s. 45

Identity of the deceased – Sylvia Crane

How she died – She died from complications of renal cell carcinoma of the right kidney. There had been a 5 month delay in scheduling her Category 1 surgery to remove the cancerous kidney.

Place of death – 2 Longridge Street, MacGregor, QLD

Date of death– 4 October 2012

Cause of death – 1(a) Pulmonary Thromboembolism
1(b) Renal vein thrombus
1(c) Renal cell carcinoma (right kidney)

I close the investigation.

John Lock
Deputy State Coroner
Brisbane
11 August 2014