Government of **Western Australia**
Department of **Health**

From death we learn 2017

2018 Edition

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Acknowledgements

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Ms Evelyn Vicker, Deputy State Coroner, Western Australia

Mr Barry King and Ms Sarah Linton, Coroners, Western Australia

Dr Suzanne Redknap and Dr Astra Lees, Medical Advisors to the Office of the State Coroner

Dr David Forbes, A/Chief Medical Officer, Department of Health, Western Australia

Aboriginal Health Policy Directorate, Department of Health, Western Australia

The Office of the State Coroner, Western Australia

The Office of the Chief Psychiatrist, Western Australia

The Health Services' Safety, Quality and Performance Units

All medical and nursing staff involved in the reporting and review of death

The patients and their families

The Patient Safety Surveillance Unit (PSSU) welcomes suggestions on how this publication series may be improved. Please forward your comments to PSSU@health.wa.gov.au

From Death We Learn editions can be downloaded from the following website: http://ww2.health.wa.gov.au/Reports-and-publications/From-Death-We-Learn

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State Coroner's Foreword

The office of the Coroner is one of the oldest known to law, with the responsibility to investigate sudden or unexpected deaths continuing to this day. The current system reflects the original commitment to the deceased and the community but also extends to the deceased's family and friends. The *Coroners Act 1996* (the Act) recognises the stress and trauma experienced by family and friends of a loved one who died suddenly or unexpectedly and requires the Coroner to ensure that a counselling service is offered by the court.

Under the Act the Coroner seeks to determine the cause and manner of death and any contributing factors - a comprehensive fact finding exercise, that as such, can be a lengthy process. An ancillary function of the coroner, but a nonetheless important component of the investigative process is the identification of strategies to improve public health and/or safety; ultimately to prevent the reoccurrence of similar situations when possible. To this end the coroner may make recommendations aimed at preventing deaths in similar circumstances. This is in contrast to other legal proceedings which seek to establish liability or guilt.

It is to be borne in mind that an inquest is part of the investigative process, held in accordance with the principles of open justice, but not for the purpose of attributing blame or supplementing collateral legal proceedings (such as civil litigation).

It should be noted that by the time many cases reach inquest, appropriate measures have already been implemented by Health Service Providers to improve patient safety. This information is of significant assistance to the coroner and, properly undertaken, demonstrates the on-going commitment of health services to continually improve and adapt to better meet the needs of the public and provide safe, high-quality services.

Similar to previous *From Death We Learn* editions, the cases herein once again display the importance of communication and the dire outcome that can result should a communication gap occur. I cannot over emphasise the importance of appropriate and timely communication between health care providers, as well as between health care providers, patients and their families.

I hope that these cases are utilised to stimulate patient safety discussions across health disciplines. I encourage organisations and individual health care providers to consider these cases in the context of their service, with a quality improvement lens, seeking to identify opportunities for improvement. Whilst each inquest summary only provides a glimpse of some of the issues, if readers are interested, the full inquest findings can be accessed on the website of the Coroner's Court of Western Australia.

I acknowledge the friends and families of loved ones whose deaths have been investigated by the Coroner. It is with the utmost respect to them that I support this publication in the hope that it helps to prevent harm to others in similar circumstances.

Ms Ros Fogliani

STATE CORONER

Editorial

High quality organisations and systems routinely utilise both internal and external processes to review and improve their services, with coronial inquests being one important external mechanism from which to learn. This is the twelfth edition of *From Death We Learn*, produced by the Coronial Liaison Unit at the Department of Health, which covers health-related coronial inquest findings from the 2017 calendar year.

As per previous years' editions, this edition includes key messages and discussion points, extracting what the Coronial Liaison Unit believes to be the significant health-related learnings from a coronial inquest. Also provided in this edition are suggested further reading and resources, to further enhance individual and organisational learnings.

One striking theme throughout many of the cases within is the significance of timely and appropriate communication. These demonstrate the importance of enhancing communication between healthcare providers during discharge planning, provision of test results, documentation and escalation of care as well as with patients to ensure understanding of the clinical situation with delivery of information in a manner that is person-centred and culturally appropriate.

The coronial requirement surrounding the death of a person who was 'held in care' immediately before their death is reflected in many of these cases, with several cases having undergone mandatory inquest as the deceased was incarcerated, a patient under the *Mental Health Act 1996* or a child/young person under the care of Child Protection and Family Support. In circumstances such as these, and in accordance with the *Coroners Act 1996*, the death must be reported to the Coroner for investigation and, as part of this investigation, the Coroner is required to comment on the supervision, treatment and care that was provided to the deceased – an important mechanism to assess the quality of care that is delivered to vulnerable individuals.

Consideration of these coronial inquests by individuals and organisations is one of several mechanisms that can be used to identify health care system factors that could be implemented or enhanced to improve patient outcomes, using a no-blame culture. The Coronial Liaison Unit intends that through sharing these cases, this will complement the death prevention and public safety role of the Coroner, and ultimately improve the safety and quality of care delivered to patients.

Abbreviations

AHPRA	Australian Health Practitioner Regulation Agency
AORC	Adult Observation and Response Chart
ARF	acute rheumatic fever
ATSI	Aboriginal and Torres Strait Islander
AWOL	absent without leave
CBT	cognitive behavioural therapy
CLU	Coronial Liaison Unit
CMHS	community mental health service
CO2	carbon dioxide
CPR	cardiopulmonary resuscitation
CRC	Coronial Review Committee
CRP	C-reactive protein
CT	computed tomography
CTG	cardiotocography
CTO	community treatment order
ECG	electrocardiogram
GP	General Practitioner
IBD	inflammatory bowel disease
ICU	Intensive Care Unit
NSQHS	National Safety and Quality Health Service
OSC	Office of the State Coroner
PCIA	patient-controlled intravenous anaesthesia
PROM	prolonged rupture of membranes
RHD	rheumatic heart disease
PSSU	Patient Safety Surveillance Unit
SSCD	State-wide Standardised Clinical Documentation
TGA	Therapeutic Goods Administration
TPMT	thiopurine methyltransferase
VBAC	vaginal birth after caesarean section

Introduction to the Coronial Liaison Unit

The Coronial Liaison Unit (CLU) sits within the WA Department of Health and consists of the Chief Medical Officer, Patient Safety Surveillance Unit (PSSU) Assistant Director as well as PSSU Senior Clinical Advisor(s) and Senior Policy Officer(s). The CLU was established in 2005 as a health initiative to improve communication between the WA health system and the Office of the State Coroner. The CLU facilitates the allocation of health related findings from coronial inquests for implementation by Health Service Providers.

The CLU, in conjunction with the Coronial Review Committee (CRC), reviews all public inquests that have a health care aspect to them and communicates the recommendations via the Chief Medical Officer to the appropriate area within health. Expert advice and comment on the recommendations and actions taken to improve patient safety are fed back to the State Coroner in a biannual report.

The CRC operates in connection with the CLU by providing executive strategic support. The Committee was formed in January 2014 with its main purpose being to improve the governance and decision making in relation to state-wide implementation and response to coronial recommendations. The CRC evaluates coronial recommendations and makes decisions about the level of response required. Members also review stakeholder responses to the CLU, to assess the progress or completeness of strategies implemented in response to coronial recommendations. Stakeholder responses are included in WA Health's biannual report to the State Coroner.

The CLU continues to work with the Office of the State Coroner to share lessons learned from mortality review to improve future patient care.

Introduction to inquested cases

Under the *Coroners Act 1996 (WA)* every regional magistrate is contemporaneously a coroner. However, in practice the majority of Western Australian inquests in 2017 were conducted by the State Coroner Ms Rosalinda Fogliani, Deputy State Coroner Ms Evelyn Vicker, and Coroners Mr Barry King and Ms Sarah Linton.

There were 2,422 deaths reported to the Office of the State Coroner for full investigation in the 2016-17[1] financial year, an increase from 2015-16 (n=2214). There were 1174 deaths in 2016-2017 that were dealt with by review of the treating doctor's death certificate recording a cause of death, and were accepted by the coroner. This was similar to the previous year (1198 in 2015-16). In 2016-17, 53 investigations were finalised by public inquest, with just over half of these being mandated in accordance with the *Coroners Act 1996*.

Public inquests are judicial proceedings conducted in open court. The coroner is a judicial officer and receives evidence that is relevant to the inquiry. The objective of an inquest is to establish the facts surrounding the death of the person; the coroner must not appear to determine any question of civil liability or to suggest any person is guilty of an offence.

After taking the evidence at an inquest, a coroner must find, if possible:

- the identity of the deceased;
- how the death occurred;
- the cause of death; and
- the particulars needed to register the death under the *Births, Deaths and Marriages Registration Act 1998 (WA)*.

Where an inquest is mandated, for example, in the case of an involuntary mental health patient, the coroner must also comment on the quality of the deceased's supervision, treatment and care.

The coroner may also make comments and/or recommendations regarding any matter connected with the death, including public health or safety or the administration of justice. For example, comments may be made about the provision of health care or the actions of other public sector agencies. Where the death is of a person 'held in care' (which includes involuntary mental health patients, prisoners and persons in the custody of police officers, amongst others), a coroner is required to comment on the quality of the supervision, treatment and care of the person while in that care.

The CLU notes all coronial recommendations pertaining to health care and provides regular reports to the Office of the State Coroner outlining the responses to each recommendation from relevant stakeholders. These responses have been included in this report where the timeframe has allowed a response to be formulated prior to publication. In accordance with agreement from the members of the Coronial Review Committee, the executive summaries of the biannual 'Progress Report for Health Related Coronial Recommendations' (WA Health's report to the State Coroner) have been made available online[2] since February 2015.

[1] Office of the State Coroner. Annual Report: 2016-2017 [internet]. 2017. Government of Western Australia. Accessible at http://www.coronerscourt.wa.gov.au/_files/Annual_Report_2016_17.pdf

[2] http://intranet.health.wa.gov.au/osqh/reports/ (WA health system access only)

Suicide whilst in care

Key Messages

- The health needs of persons with mental health issues should be addressed with a holistic approach.
- Prisoners are a vulnerable group, with limited agency to arrange for their own health care.
- The continuity and availability of prescription medication is critical for people in prison.

Case 1: Suicide in prison

A sentenced prisoner committed suicide in prison.

The deceased had a history of amphetamine use, drug-induced psychosis, and depression. Following his most recent admission to hospital, planned follow-up with a community mental health service was not possible as he was sent back to prison three days after discharge. His discharge medications included an antidepressant and an antipsychotic (Olanzapine), which were prescribed to him by the Prison Medical Officer whilst he was in prison. It was planned that he would be reviewed by the mental health team whilst in prison, but this had not occurred by the time of his death due to limited clinic availability.

The deceased found his mood improved whilst in prison, and so stopped taking the antidepressant. He continued to take Olanzapine as he found it helped him to sleep, which also helped his mood. After his prescription for Olanzapine ran out, he requested another prescription. This repeat prescription was not sought by the prison nurse, as it was believed that the deceased would be seen by a psychiatrist in the next few weeks, and that would be a more appropriate setting for a decision to be made about continuing Olanzapine. A few days later he hung himself, and was found 90 minutes after evening lock-in.

A medical emergency was called and CPR commenced immediately. He was noted to be cyanosed, with fixed and dilated pupils. Paramedics arrived 20 minutes after being called. There was thought to be intermittent moments of return of circulation during the resuscitation attempts, though for most of the time the deceased was in asystole. When the ambulance officers called the nearest emergency department to advise them of their intention to transport the deceased, they were told that resuscitation attempts would be futile and should be ceased without transfer to hospital, as two hours had passed already with poor outcome. Resuscitation attempts were withdrawn after another 45 minutes of unsuccessful CPR and one further phone call to the emergency department where the same advice was given.

Inquest findings and comments

The death occurred as a result of ligature compression of the neck (hanging) and the manner of death was suicide.

The coroner sought expert opinion regarding the deceased's access to psychiatric review, and the cessation of Olanzapine without review.

At the time of this incident, there was a severe shortage of psychiatric staff working in corrective services, and the deceased did not undergo review by a psychiatrist in prison before his death. There was uncertainty as to when he would be scheduled for review. The Department of Corrective Services had a policy that psychotropic medications would be continued until formal psychiatric review was available, and GPs would provide repeat prescriptions. It was unclear why further prescription of Olanzapine was not sought.

The decision to cease resuscitation and the advice given from the emergency department was reviewed. The emergency department consultant's opinion was that ongoing resuscitation and transfer would be futile, given the prolonged resuscitation attempts and hypoxia. The ambulance service conducted a full review and determined that their medical advisers would have given the same advice if contacted; however the phone call from the ambulance officer to the hospital should have been for the purpose of pre-arrival notification only, not to seek advice or authority to transport.

Coroner's recommendation

The coroner recommended that the Department of Corrective Services, when planning what future changes are to be made to the mental health services it provides to prisoners, should invest significantly more resources in ensuring that prisoners are given regular access to psychiatrists and that overall an emphasis be placed on providing a more holistic approach to mental health care.

WA Health action

Coronial Review Committee noted that since this case there has been some increase in the provision of psychiatry services within the Department of Corrective Services.

A project is underway to assess and allocate responsibilities for provision of health services within the justice system. This collaborative project involves the Mental Health Commission, the Department of Justice and the Department of Health.

Case 2: Missing in-patient

A 47 year old woman died as a result of multiple injuries after placing herself in the path of an oncoming train while she was an involuntary inpatient under the *Mental Health Act 1996*.

The deceased had a past history of depression and anxiety and had attempted suicide during a previous episode of depression. She had experienced recent psychosocial stressors including recent relationship breakdowns with her husband and a close friend. She had relocated to Germany with her husband then returned to Australia and was divorced from her husband. The deceased lived alone and was supported by family in Australia.

The deceased sought treatment for anxiety from a GP and was prescribed anti-depressant and anti-anxiety medications (Citalopram and Temazepam) and referred to a psychologist in the medical clinic. She attempted suicide by overdose the following month at which point she was found by her sister and taken to a tertiary hospital emergency department and admitted to a mental health service for ongoing treatment. She was diagnosed with Major Depression and Cluster C personality traits and initially treated as a voluntary patient on an open ward.

During her inpatient admission, the deceased was treated with Citalopram, followed by a combination of anti-depressant and anti-anxiety medications (Venlafaxine and Mirtazapine). She was seen by a clinical psychologist and engaged in cognitive behavioural therapy (CBT).

After disclosing suicidal intent to a family member, the deceased was placed under the *Mental Health Act 1996* and monitored with close visual observations but remained on an open ward. Despite close observations, she absconded from hospital and was declared absent without leave (AWOL). She returned to hospital two days later, stating that she had intended to end her life by jumping from a bridge but realised the bridge was not high enough. She was transferred to a secure ward for ongoing management.

Due to staff leave, the deceased was cared for by different consultant psychiatrists during the last two weeks of her admission. As her psychologist was away, her CBT was paused. Over the following two weeks, the deceased appeared to improve, and utilised escorted grounds access and escorted leave with family without incident. She was transferred to an open ward under close visual observations despite being assessed to be at moderate to high risk, in the context of the service needing to create a secure bed for a more acutely unwell patient. Over the following days, the deceased displayed fluctuation in her mental state, at times expressing thoughts of low self-worth and limited insight into her illness and at other times presenting as pleasant and reactive. Electroconvulsive therapy was discussed but this treatment was declined by the deceased. The frequency of visual observations was progressively decreased over several days.

Following this, the deceased indicated that she wished to return home in the foreseeable future, but not immediately. She denied any suicidal or self-harm ideation. She was last seen by staff and a fellow patient in the early evening on the day of her death. She was not found on the ward later that evening, so a local search was performed. Being unable to locate the deceased, she was declared AWOL.

That evening, the deceased stood in the path of an oncoming train. The train driver applied full brakes but was unable to avoid the deceased.

Inquest findings and comments

The inquest found that death occurred as a result of multiple injuries by way of suicide.

The coroner considered that the treatment, supervision and care of the deceased were reasonable and generally appropriate. The inquest explored the need to balance restrictive care against freedom and the therapeutic relationship.

The coroner noted that the provision of ongoing treatment by a psychologist may have improved the deceased's overall treatment, but was satisfied that any lack of this care was unlikely to have had any contribution to her death.

Coroner's recommendation

The coroner did not make any recommendations in this matter.

WA Health action

The mental health service where this incident occurred has taken steps to improve leave cover arrangements to ensure that ongoing psychotherapy is available to patients.

Since this incident, the WA Health mandatory policy *Clinical Care of People Who May Be Suicidal Policy* has come into effect. The guide *Principles and Best Practice for the Care of*

People Who May be Suicidal is accessible to support Health Service Providers, clinical teams and clinicians in their implementation of this policy.

References

- STUART inquest findings[3]
- SILVER inquest findings[4]
- WA Department of Health (2017). *Principles and Best Practice for the Care of People Who May be Suicidal*[5]
- WA Department of Health (2017). *Clinical Care of People Who May Be Suicidal*[6]

Discussion points

- What factors may increase the risk of harm for incarcerated persons with mental health issues?
- The practice of decreasing a patients' level of observation or restriction due to systemic pressures rather than clinical reasons can occur. How often does this occur and what safeguards are put in place to minimise any potential risk?
- Consider how staffing shortages (planned and unplanned) are managed. How does this management address staff workloads and patient safety?
- What processes exist to ensure staff members are aware of existing as well as new policies and guidelines? How effective are these processes? Is there opportunity for improvement?

[3] http://www.coronerscourt.wa.gov.au/I/inquest_into_the_death_of_barry_matt_stuart.aspx
[4] http://www.coronerscourt.wa.gov.au/I/inquest_into_the_death_of_annette_silver.aspx
[5] http://www.health.wa.gov.au/circularsnew/circular.cfm?Circ_ID=13383
[6] http://www.health.wa.gov.au/circularsnew/circular.cfm?Circ_ID=13383

Coordination of care

Key Messages

- Effective communication between clinicians from different agencies and adherence to the national handover standards is critical when coordinating the care of patients.
- The onus is on clinicians to ensure all information that is pertinent to the safety and wellbeing of patients is gathered from all relevant agencies.
- The *Health Services (Information) Regulations 2017* authorises sharing of information if the disclosure is reasonably necessary to lessen or prevent a serious risk to the life, health or safety of an individual.

A 47 year old woman died as a result of multiple injuries after placing herself in the path of an oncoming train shortly after mental health assessment while she was an involuntary patient under the *Mental Health Act 1996*.

The deceased was born in (then) Yugoslavia, where she was exposed to psychological trauma during the Yugoslavian civil war. She married and had one son, however, she was divorced from her husband (who subsequently died) prior to migrating to Australia with her seven year old son.

The deceased had a history of mental illness with diagnoses of post-traumatic stress disorder and bipolar affective disorder and had attempted to jump from a bridge previously. She frequently reported somatic symptoms with no physical cause identified. Her care providers believed her physical symptoms to be a manifestation of her mental illness, however the deceased attributed these symptoms to the medications she was prescribed. She was at times non-compliant with her prescribed medication. In the year leading up to her death, the deceased was cared for by her GP, a private psychiatrist (who spoke the deceased's first language and understood her cultural background) and a community mental health service (CMHS).

The deceased's GP had referred her to an emergency department due to concern about her mental state; she was assessed and voluntarily admitted to an inpatient mental health unit. During admission she was commenced on a depot antipsychotic medication (Olanzapine) and was discharged with planned follow-up with her private psychiatrist, her GP and the CMHS. There was confusion about her follow-up at the CMHS, with documentation of verbal handover to the CMHS including the due date of her depot injection; however she was not seen by the CMHS until after her depot was overdue. On assessment, the deceased was not cooperative with taking medication and was made an involuntary patient under a community treatment order (CTO). Despite the CTO, she was not prescribed any medication until her next review two weeks later, at which point she was prescribed an oral antipsychotic medication (Risperidone). At this time her GP and private psychiatrist believed her to be receiving depot Olanzapine, in part because the deceased requested that the CMHS not exchange information with her other care providers.

The deceased was later assessed at the CMHS, where she was found to be non-compliant with oral medication, but to be at low risk of suicide. She was commenced on depot Risperidone on that day.

Shortly after this she was seen by her private psychiatrist who expressed significant concern about her risk of suicide, and attempted to arrange admission to hospital with the assistance of

the CMHS. He wished to avoid involuntary admission due to the patient's background and distrust of external agencies such as police. Despite some apparent confusion regarding the urgency of the situation, the deceased was transported to the CMHS for review by the public psychiatrist. The CMHS staff did not believe the deceased was actively suicidal, but was distressed about her physical complaints which she attributed to her new medication. An agreement was made for her to take oral medication in place of the depot, and she was allowed to return home with planned phone follow-up the next day.

After leaving the CMHS, the deceased travelled to a train station. She was seen jumping off the platform into the path of an oncoming train. The driver was unable to avoid collision with the deceased.

Inquest findings and comments

The coroner found that death occurred as a result of multiple injuries by way of suicide.

The coroner considered that systems failures led to suboptimal care of the deceased. The coroner commented specifically on the need for appropriate care coordination between services.

Coroner's recommendations

The coroner made the following recommendations:

1. Patients with mental health issues which require treatment in either the public or private health system be provided with a community liaison person (coordinator) who understands the treatment/management plan in place for that patient and is in a position to ensure proper coordination of the patient's care between all relevant facilities and practitioners.
2. Discharge planning from a facility, or referral from one mental health practitioner to another, to always include the nominated community liaison person. The community liaison person should be present, in person, at any conference when the deceased and their community carers are present to ensure understanding and continuity of management for the patient.
3. The issue of patient confidentiality not to include the fact of treatment and management as between a community liaison person and other mental health practitioners, only the content of private disclosures.

WA Health action

Since this incident the *Mental Health Act 2014* has come into effect. The 2014 Act attempts to balance the need for consumer privacy and confidentiality, with the need for holistic, and often multi-disciplinary, treatment and care, and for continuity of care. The *Charter of Mental Health Care Principles* in the 2014 Act encourages clinicians and services to maintain privacy and confidentiality where appropriate; therapeutic relationships and trust need to be maintained, in addition to professional ethics.

Policies to facilitate transitioning and transferring care to the community have been implemented across health services. This includes procedures to facilitate follow-up post discharge to the community.

The WA Department of Health has implemented the mandatory policy: *State-wide Standardised Clinical Documentation (SSCD) for Mental Health Services*. The SSCD enables the consistent recording, retrieval and sharing of medical record information at all points of care with the primary goal of improving mental health outcomes by enhancing the clinical information available to inform care decisions.

In 2017 the *Health Services (Information Sharing) Regulations* came into effect. These regulations enable information sharing when reasonably necessary to lessen or prevent a serious risk to the life, health or safety of an individual. The Mental Health Commission has developed the *Information Sharing: Clinicians' Powers and Responsibilities* fact sheet to guide clinicians in the acceptable conditions for sharing patient information.

References

- MIHAJLOVIC inquest findings[7]
- Western Australian Legislation. *Mental Health Act 2014*[8]
- WA Health (2014). *State-wide Standardised Clinical Documentation (SSCD) for Mental Health Services*[9]
- Western Australian Legislation. *Health Services (Information) Regulations 2017*[10]
- Mental Health Commission (2017). *Information Sharing: Clinicians' Powers and Responsibilities*[11]

Further reading and resources

- Chief Psychiatrist's *Standards for Clinical Care*[12]

[7] http://www.coronerscourt.wa.gov.au/I/to_the_death_of_radinka_mihajlovic.aspx
[8] https://www.legislation.wa.gov.au/legislation/statutes.nsf/main_mrtitle_13534_homepage.html
[9] http://www.health.wa.gov.au/circularsnew/circular.cfm?Circ_ID=13105
[10] https://www.legislation.wa.gov.au/legislation/statutes.nsf/law_s48136_currencies.html
[11] https://www.mhc.wa.gov.au/reports-and-resources/resources/mental-health-resources/mental-health-act-2014-resources/
[12] https://www.chiefpsychiatrist.wa.gov.au/wp-content/uploads/2015/12/CP_Standards_2015.pdf

Discussion points

- Consider how information is collected and communicated between healthcare providers at your site and how the national handover standards are upheld in order to ensure the safety and wellbeing of the patient whilst moving in and out of services.
- What mechanisms are in place to support care coordination between persons/organisations (e.g. discharge planning)? Are there any real or potential gaps and if so, how could these communications be improved?
- How are patients and their family or carers proactively and constructively engaged when a patient declines to release information?
- When considering the need for admission, a clinician is required to perform their own assessment of the patient. When this assessment is in conflict with the assessment of another clinician (who may know the patient better), how should one weigh the importance of their own assessment versus the collateral information?
- In cases when multiple care providers or services are providing shared care of a patient and a need for an escalation in level of care is identified, who holds the responsibility for coordinating that care?

Equipment misuse

Key Messages

- Medical devices that are certified according to internationally recognised standards for safety and quality and approved for use in Australia are entered into the Australian Register of Therapeutic Goods, a national database that is maintained by the Therapeutic Goods Administration.

An 80 year old woman died as a result of gas embolism complicating surgical repair of her aortic aneurysm.

The 57mm diameter thoraco-abdominal aortic aneurysm was an incidental finding on a CT to investigate the deceased's ongoing back problems. The aneurysm was compromising the roots of several important abdominal arteries including her renal arteries and surgical repair with a fenestrated endoluminal graft was recommended in light of its diameter and risk of spontaneous rupture.

Due to her comorbidities including chronic obstructive pulmonary disease, Stage 4 kidney disease, and mild heart failure, the deceased was referred to multiple specialists to optimise her disease management and assess her suitability for surgery.

There was concern over the potential for kidney damage from the use of contrast during the procedure to help identify the location of the aneurysm and affected branch arteries. CO_2 gas is routinely used in addition to traditional contrast to mitigate this risk as it readily dissolves in the blood and is expired from the lungs. The deceased's surgeon had over 15 years of experience with this technique.

CO_2 is stored in a high pressure cylinder and there is a TGA approved device available to control the flow of gas from the high pressure system to a syringe and from there to the patient in low volume, low pressure aliquots. A two way tap is involved, and it is not possible for gas to flow directly from the cylinder to the patient.

The surgeon had found this equipment was prone to failure, and routinely used a device of his own making to perform the same function, also using a two-way tap to prevent any direct path from the gas cylinder to the patient.

On the day of surgery, there was no two way tap available, so the surgeon accepted a three way tap, believing that as he would be the only person using the equipment, he would be able to safely control the tap. It is likely that an error was made in controlling the flow of gas via the tap allowing the direct injection of pressurised gas into the deceased's circulation, as during resuscitation attempts when the deceased suffered a cardiac arrest mid-procedure, nearly half a litre of gas was drawn from her central venous catheter.

Inquest findings and comments

The cause of death was found to be gas embolism and the manner of death by way of misadventure.

An independent expert witness was critical of the decision to proceed with surgery given the deceased's co-morbidities and risk of death; however, the coroner acknowledged that the

deceased had been keen to proceed with surgery despite the risks instead of living with the fear of spontaneous rupture of the aneurysm.

Concern was also raised over the methodology of gas delivery during the procedure, which allowed for inadvertent direct injection of pressurised gas into the deceased's circulation.

Coroner's recommendation

The coroner did not make any recommendations in this matter.

WA Health action

The Coronial Review Committee noted that the private hospital where this incident occurred have taken steps to ensure only TGA approved CO_2 delivery systems are used in the theatre.

References

- BEE inquest findings[13]

Discussion points

- What safety systems are in place at your site to approve the initial and on-going use of equipment? Are these systems consistently adhered to or is there opportunity for improvement?
- If an equipment safety issue is identified what notification process is in place to ensure the issue is addressed in a timely manner?

[13] http://www.coronerscourt.wa.gov.au/I/inquest_into_the_death_of_edith_catherine_bee.aspx

Management of test results

Key Messages

- Robust systems to track test results facilitate appropriate and timely results management.
- Discharge summaries should be completed and transmitted to patients' GPs as soon as possible, to support continuity of care.

Case 1: Thiopurine methyltransferase (TPMT) deficiency screening

A 41 year old man died after suffering complications from sepsis, brought on by a serious adverse reaction to a medication that had been prescribed to treat inflammatory bowel disease.

The deceased had a background of anxiety and depression, and suffered from bouts of abdominal pain. Following a CT scan, he was diagnosed with inflammatory bowel disease, most likely Crohn's disease, and admitted to a tertiary hospital for specialist care. Initial treatment with intravenous and then oral corticosteroids controlled the abdominal symptoms, but contributed to worsening symptoms of depression. The corticosteroids were ceased, and the deceased was commenced on mercaptopurine.

Mercaptopurine is a cytotoxic drug used in the treatment of inflammatory bowel disease (IBD) such as Crohn's. It can have toxic effects on the liver and pancreas, and can cause aplastic anaemia. The risk is increased in people who lack the metabolic enzyme TPMT, and thus accumulate high levels of mercaptopurine. TPMT activity testing involves checking phenotype and genotype, and can take four weeks to complete. Testing for TPMT activity is not standard practice across Australia, as some people with normal TPMT activity may still develop aplastic anaemia, and the test is not to be relied upon on its own. Weekly or fortnightly monitoring of blood cell counts and liver enzymes at the commencement of treatment is standard practice.

Testing for TPMT activity was ordered prior to the commencement of therapy, not by the treating team but by another registrar who was rostered to conduct the weekend ward rounds. The blood test request form was organised by a junior medical officer using another doctor's pathology program log-in details. The ward round entry in the notes mentioned that an immunomodulator screen had been undertaken, however this was later understood by the treating gastroenterology team to include testing for hepatitis, varicella, and tuberculosis, but not TPMT. When the gastroenterology registrar prescribed mercaptopurine the following Monday, it was without the knowledge that TPMT testing had been organised. Counselling regarding risks and the need for frequent blood tests to monitor the drug was undertaken, and verbal consent obtained. The junior doctor did not understand the significance of the TPMT testing and the expected delay to results being available, and did not know that the results would need to be followed-up.

The deceased was discharged from hospital the day after commencing mercaptopurine as he appeared to have been improving. His CRP result that day was 100, significantly higher than the day before, which the intern noted in the discharge summary but did not interpret as a potential sign of deterioration. The deceased waited many hours in the hospital discharge lounge for medications and a discharge letter to be provided. Whilst he was there, he had worsening pain, and was administered analgesia ordered by the team's intern, who did not reverse the consultant's decision to send the deceased home. The need for follow-up with the

GP and with blood tests was reiterated, and the plan for follow-up in clinic in one month's time discussed, and a copy of the discharge summary given to the deceased. The Coroner could not ascertain if the discharge summary was also sent successfully to the deceased's GP.

When the deceased went to the GP, he mentioned the new medication and plans for follow-up in the IBD clinic. He did not mention the need for blood tests, or show the discharge letter to the GP. The GP issued a further script for mercaptopurine, and assumed that the hospital staff would be responsible for monitoring this new and unfamiliar drug. No blood tests were arranged.

The deceased returned to the GP another two times, increasingly ill, but did not return to hospital as his GP urged on those visits. He returned to hospital nearly three weeks after leaving hospital with overwhelming sepsis and multi-organ failure, and succumbed four days later.

Inquest findings and comments

The coroner found that the cause of death was fulminant sepsis with multi-organ failure complicating severe pancytopaenia following the administration of mercaptopurine in a man with acute severe exacerbation of chronic colitis (Crohn's) and TPMT deficiency. The manner of death was misadventure.

TPMT testing was not routine at the treating hospital at the time of the deceased's death, and there was no policy or guideline available for the commencement of mercaptopurine therapy at the time of this case.

Preliminary results for TPMT testing at the treating hospital were not routinely released, and the abnormal results were not phoned through to clinicians. The junior doctors involved in the care of the deceased did not understand the significance of the test that had been ordered due to its specialist nature, and thus did not know to check for the results in the weeks after the deceased had been discharged.

There was no clinical nurse specialist recruited to the IBD clinic at the time of the deceased's death, so there was no one available to follow-up blood tests from recently discharged patients. There has subsequently been an increase in staffing in the clinic allowing for discharged patients to be monitored more closely.

It could not be ascertained if the GP had received a copy of the discharge summary, and thus most likely had not been informed of the need for regular blood tests.

The coroner was satisfied that the individual clinicians provided an appropriate level of care during both admissions, but that there was a lack of policies and safe processes around the prescription of mercaptopurine, follow-up of test results and follow-up care.

Coroner's recommendation

The coroner made the following recommendations:

1. That the hospital put in place its own internal robust systems for tracking lists of patients in the pathology software for whom tests have been ordered and received, including for patients that have been discharged. That those systems facilitate the conveyance of test results to the attention of the clinician who ordered the test and the consultant in charge

of the patient's treatment, and that those systems highlight urgent and/or abnormal test results.

2. That the Department of Health consider whether an operational directive or instruction is required to support governance within public hospitals regarding the implementation of systems for tracking test results, particularly where patients have been discharged. Such operational directive or instruction would include an alert to public hospitals regarding the need for robust systems to be in place to facilitate the conveyance of an abnormal laboratory result to the attention of the clinician who ordered the test and the consultant in charge of the patient's treatment.

WA Health action

The treating hospital has developed a policy for the prescription of mercaptopurine, which includes details around TPMT testing, written consent, and monitoring of other blood tests. All follow-up for the first three months is now through the IBD clinic, not the GP.

The pathology laboratory has sped up TPMT processing, and now calls abnormal preliminary and final results through to the treating team. The IBD clinic has improved staffing levels and subsequently has the capacity to track blood test results and ring patients who have been discharged.

In order to ensure pathology results are followed up and appropriately actioned when a patient has been discharged before a test result is returned, the hospital has revised the process for reporting pathology. As this case highlighted the importance of timely test result follow-up, amendments have also been implemented to allow radiologists to highlight requests where: a) critical or urgent findings are detected and it is has not been possible for the radiologist to discuss the findings with a member of the treating team; b) a probable or definite cancer is detected; or c) significant, important, unexpected and actionable findings are detected.

The Coronial Review Committee considered that a central operational directive or instruction would not be effective in treating the risk of results management, as health services maintain policies and procedures appropriate to their operational requirements. A range of strategies to manage and improve results follow-up have been implemented system-wide. This includes the ongoing monitoring of compliance and performance in relation to results management as well as completion and dissemination of discharge summaries.

Case 2: X-ray findings

A 69 year old woman died as the result of intra-abdominal sepsis following intestinal perforation complicating a recent lumbar spine laminectomy.

The deceased had a history of chronic back pain and osteoporotic fractures, and had previously undergone vertebroplasty and spinal fusions.

Her surgeon recommended surgical decompression of L3/4 with vertebroplasty and dynamic fusion to treat a new osteoporotic fracture, and this took place at a private hospital. During the procedure a small leak of cerebrospinal fluid was noted, and so she was required to lie supine in bed for two days following the operation. In the early hours of the morning of the second day the deceased complained of abdominal discomfort and distension. The nursing staff thought this was most likely due to constipation as a result of immobility and analgesics, and treated her with laxatives. Later that Saturday morning, her surgeon referred her to a geriatrician for further rehabilitation following the surgery.

The following day the deceased continued to have worsening abdominal pain and distension. Her oxygen saturation dropped to 84% and so she was given supplemental oxygen by nasal prongs. That evening the junior doctor who was covering the wards was called to prescribe an enema, which had no result. He called the surgeon about her abdominal pain, and was advised to contact a gastroenterologist for advice. None were available, so he spoke with the on-call physician, who suggested obtaining an abdominal x-ray. Nursing staff advised the junior doctor, a locum working his first shift having had no orientation to the hospital, that this would not be possible after hours, and so the doctor assumed that the x-ray would be performed the following morning, along with medical review by her treating surgeon. At the end of his evening shift the junior doctor handed over to the night nurse manager, as there was no on-site medical cover for the wards. The deceased's pain worsened overnight.

The following morning the deceased was not seen by a doctor until the geriatrician reviewed her at 6pm. The x-ray, which had been performed late in the morning, reported on two hours later, and the report faxed to the surgeon's rooms two hours after that, was reviewed by the geriatrician. The geriatrician noted that there was gas under the diaphragm on the x-ray and organised her transfer to a public hospital for emergency laparotomy as there was no general surgeon available at the private hospital.

In theatre it was seen that she had a perforated caecum with patchy necrosis and extensive faecal contamination. She was admitted to ICU after undergoing a washout and hemicolectomy. She was taken back to theatre the next day, and at that stage the bowel and anastomosis appeared viable, however she continued to deteriorate and on further laparotomy three days later it was determined that the distal bowel was irretrievably ischaemic and nothing further could be done. She died later that night.

Inquest findings and comments

The cause of death was found to be intra-abdominal sepsis and shock with multi-organ failure following intestinal perforation complicating a recent lumbar spine laminectomy, the manner of death natural causes. There was no suggestion that the perforation was caused directly by the spinal surgery, rather it was due to ischemia.

The coroner commented that the delay in diagnosis of perforation did not improve the deceased's prospects for a successful outcome, and that earlier intervention would have improved the deceased's chance for survival.

The delay to diagnosis was exacerbated by systems in place at the private hospital at the time, including a lack of medical cover and supervision over the weekend and at night.

The coroner noted that there was a protocol for reporting radiology results to appropriate people, but was concerned that it appeared to have been in place during the deceased's admission with no evidence that such reporting occurred.

Coroner's recommendation

The coroner made the following recommendations:

1. The hospital ensure the radiologists contact the appropriate consultant under whom a patient is admitted where there is a serious radiological result requiring urgent attention.

2. Where the overnight care of a patient has required intensive intervention the clinical nurse manager should ensure that patient receives appropriate medical review the following morning if observations have not warranted a medical review earlier.

WA Health action

The Coronial Review Committee noted that the private hospital where this case occurred has made changes to medical staffing, with improved medical cover out of hours. There is improved orientation of medical staff to ensure they know how to access information and support during their shift.

WA Health Service Providers considered the two coronial recommendations arising from this inquest, with the aim of ascertaining the current WA health system situation and to identify any opportunities for improvement. It was noted that urgent and/or significant radiological findings are reported verbally in addition to provision of a written report to support timely management of findings. Policies and charting templates are in place to aid the identification of clinical deterioration and escalation of care. Should medical review or escalation of care be warranted this is done via on call clinicians (available around the clock) and/or through clinical response teams.

If a situation occurs where clinical deterioration and prompt escalation of care is not identified early and this impacts or could have impacted, on a patient's outcome, this is reported as a clinical incident. Reporting and investigation of clinical incidents and 'near misses' is a mandatory requirement under the WA Health *Clinical Incident Management Policy*. From reporting and investigating incidents, recommendations to improve patient care are identified and implemented.

References

- OLSEN inquest findings[14]
- LOBBAN inquest findings[15]
- WA Department of Health (2015). *Clinical Incident Management Policy*[16]

Further reading and resources

- Australian Commission on Safety and Quality in Health Care. Clinical communications program resources[17]

[14] http://www.coronerscourt.wa.gov.au/I/inquest_into_the_death_of_jared_charles_olsen.aspx
[15] http://www.coronerscourt.wa.gov.au/I/inquest_into_the_death_of_june_valerie_lobban.aspx
[16] https://ww2.health.wa.gov.au/Articles/A_E/Clinical-incident-management-system
[17] https://www.safetyandquality.gov.au/our-work/clinical-communications/resources/

Discussion points

- Consider how test results are managed at your site. Do any gaps exist and if so, what strategies could improve this process?
- What processes are in place to ensure discharge summaries are written and sent to a patient's GP in a timely manner? Do opportunities exist to improve this process and/or monitoring of compliance?
- Reassessing a patient's diagnosis is important when a patient's condition changes or does not improve as expected. What strategies can ensure reassessment occurs and diagnostic fixation avoided?

Opioid toxicity

Key Messages

- Opioid transdermal patches should be avoided for acute pain due to the length of time required to reach steady state and their delayed onset of action.

A 54 year old woman died in hospital as the result of opioid toxicity following a surgical procedure.

The deceased suffered from recurrent groin infections requiring multiple surgeries to incise and drain abscesses. She was overweight, smoked heavily, and suffered from Type 2 diabetes. She had been intolerant of a range of opioid medications, which caused her nausea and vomiting. She had been able to tolerate pethidine, fentanyl transdermal patches, and an over-the-counter painkiller containing codeine, paracetamol and doxylamine.

A few weeks prior to her death, she was admitted to a small private hospital for management of her recurrent groin infection. She was commenced on intravenous antibiotics, as well as pethidine, and pregabalin to be taken in addition to the over-the-counter painkiller she had taken previously. Her treating surgeon requested a review by a pain specialist to assist with long-term management of her chronic pain. The specialist expressed concerns about the use of fentanyl due to its potency and role in developing hyperalgesia, and suggested that methadone be used instead, with the aim of eventually changing the deceased over to buprenorphine in an attempt to wean her from opioids.

The day after this review she suffered dehiscence of the wound in her groin, and surgery for this was planned for four days later.

The deceased was met by the anaesthetist on the morning of surgery. The anaesthetist had not been informed of any concerns regarding pain medications for the deceased by the surgeon, and did not have access to the advice given by the pain specialist five days previously. The anaesthetist recommended patient-controlled intravenous anaesthesia (PCIA) however the deceased refused this option due to a prior unpleasant experience with PCIA. Given the deceased's intolerance of many painkillers and preference for transdermal fentanyl patches, and limited analgesics available at a small private hospital, the anaesthetist decided to prescribe transdermal patches for the deceased, despite this not being her usual practice for managing post-operative pain, with extra pethidine if needed. The anaesthetist calculated the required dose of the fentanyl patch based on the deceased's recent opioid use whilst in hospital.

Intraoperatively and postoperatively the deceased required high doses of intravenous fentanyl, and the first patch was applied after the deceased had returned to the ward. The following day she reported feeling much better than she had been, and was able to walk around outside unassisted. That night after returning to her bed after walking outside she called the nurse, stating she had vomited up her methadone, amitriptyline, and over-the-counter painkiller. The nurse contacted the surgeon rather than the anaesthetist to report this, and was asked to re-administer the medications. A couple of hours later the deceased was found to be unresponsive. Resuscitation attempts including administering naloxone and transferring her to a nearby emergency department, were ultimately unsuccessful.

Inquest findings and comments

The cause of death was accepted as opioid toxicity, predominately fentanyl. The manner of death was found to be misadventure.

Expert opinion was that fentanyl patches should not be used for acute or post-operative pain management, due to difficulties in titrating the dose; but rather be used preferably in hospital for palliative care patients. The absorption of drug can be variable and unpredictable, with the dose accumulating to a peak at 24 hours after application, and safe doses are difficult to predict. Given the deceased's refusal of PCIA and multiple drug intolerances, the coroner accepted advice that a fentanyl patch was probably not unreasonable in the circumstances, but that in hindsight the dose calculated was too high.

Deaths from fentanyl in Australia and around the world were discussed, noting that the majority of deaths from fentanyl in Australia relate to the use or accidental misuse of prescribed transdermal fentanyl patches. Expert opinion was that fentanyl patch use should be limited to palliative care, and avoided in opioid-naïve patients.

Coroner's recommendation

That the Department of Health amend the Department of Health *Schedule 8 Medicines Prescribing Code* to limit the authorisation to prescribe fentanyl transdermal patches to approved specialists for the treatment of pain, as set out in 2.5.8 of the current Schedule (2017). The current system in place for methadone, as set out in 2.5.3, might provide a helpful guide.

WA Health action

The Coronial Review Committee considered the coroner's recommendation and noted that outside a hospital setting, a specialist is required to commence treatment (this would not include a GP). Subsequently, prescription of fentanyl patches is already restricted.

Further, the Coronial Review Committee determined that as Part 2 of the *Schedule 8 Medicines Prescribing Code* – Opioids, benzodiazepines and miscellaneous Schedule 8 medicines - does not apply to inpatients, the recommended changes would unfortunately be ineffective at preventing similar deaths.

References

- JARICK inquest findings[18]
- WA Department of Health, Medicines and Poisons Regulation Branch (2017). *Schedule 8 Medicines Prescribing Code.*[19]

Further reading and resources

- WA Department of Health (2017). *Recommendations for prescribing analgesia on discharge following surgery or acute injury. Information for health practitioners preparing the patient for discharge*[20]

[18] http://www.coronerscourt.wa.gov.au/I/inquest_into_the_death_of_marjorie_joy_jarick.aspx
[19] http://ww2.health.wa.gov.au/Articles/N_R/Opioids-benzodiazepines-and-other-S8-medicines
[20] http://ww2.health.wa.gov.au/~/media/Files/Corporate/general%20documents/WATAG/Analgesia-Discharge-After-Surgery-or-Injury.pdf

Discussion points

- What policies and processes are in place for prescribing and administering opioids at your site? How well do these assist in appropriately managing the patient's pain whilst considering the patient's individual preferences and situation?

Physical comorbidities in mental health patients

Case 1: Atherosclerosis

Key Messages

- Patients with mental health issues often have coexisting chronic physical health issues.
- Health services should strive to deliver care in alignment with the *Charter of Mental Health Care Principles* as outlined in the *Mental Health Act 2014* and the Chief Psychiatrists *Clinical guidelines for the physical care of mental health consumers.* This includes the need for services to consider patients' physical and mental health and their inter-relation.
- All mental health and non-mental staff have a responsibility to ensure that physical health care is given significant priority in mental health patients, who are a vulnerable population in terms of insight into their physical health care needs.
- Clinicians working in inpatient units should consider the daily living needs and the risks to mental health patients in a psychosocial context before discharge or leave.

A 50 year old man died of coronary artery atherosclerosis whilst under a Community Treatment Order (CTO) under the *Mental Health Act 1996*.

The deceased had been diagnosed with schizophrenia in his 20s, and had multiple hospital admissions and poor response to medication. He was convicted of the murder of his father when he was 27, and whilst sentenced to indefinite imprisonment, he was released on parole 15 years later.

Conditions relating to his release on parole included further treatment and management by a Forensic Mental Health unit, initially with inpatient management prior to his transition to supported accommodation in the community several months after his release from prison. The deceased had been commenced on an anti-psychotic (Clozapine) prior to his release, and throughout his life underwent regular monitoring for Clozapine side effects. When his parole period ended, the deceased was placed under a CTO and his care transferred to a Community Mental Health Clinic.

Several years after the CTO had expired; his regular case manager became concerned that the deceased might not have been taking his medications regularly as he was noted to be increasingly irritable and verbally aggressive. He was admitted to hospital, recommenced on Clozapine, and discharged one month later back to the care of the Community Mental Health Team.

A follow-up appointment was planned for the deceased four weeks after discharge. Unfortunately the doctor who normally worked with the deceased was ill that day, and the appointment was rescheduled for the following week.

The day before the rescheduled appointment the deceased was seen by his neighbours out washing his car. He did not attend his appointment, and staff found him dead in his unit the following day when they went to check on him. There was no sign of any break-in or struggle, and it was presumed that he had collapsed.

Inquest findings and comments

The opinion given by the pathologists was that a sudden fatal cardiac arrhythmia on a background of coronary artery atherosclerosis with some scarring of the heart muscle was most likely.

The deceased had been managed on Clozapine for over a decade, with regular monitoring including blood count, weight, blood pressure and cholesterol. There had been no indications for further investigations.

The coroner found that the supervision, treatment and care of the deceased was reasonable and appropriate in the circumstances. The cause of death was given as coronary artery atherosclerosis, and the manner of death natural causes.

Coroner's recommendation

The coroner did not make any recommendations in this matter.

Case 2: Bronchial asthma and emphysema

A 56 year old woman died as the result of bronchial asthma and emphysema whilst on overnight leave from hospital where she was an involuntary patient under the *Mental Health Act 1996*.

The deceased had a history of paranoid schizophrenia, emphysema and congestive cardiac failure. She lived alone with a cat on an isolated property and continued to smoke heavily. She was admitted to hospital with a non-infective exacerbation of emphysema, requiring treatment with supplemental oxygen and prednisolone. Whilst in hospital, her mental health deteriorated, likely as a result of treatment with prednisolone as well as non-adherence to her usual anti-psychotic medication, and her care was transferred from the medical team to the psychiatric team under the *Mental Health Act 1996.*

Whilst on the mental health unit she continued to require medical attention for her emphysema, with the medical registrar advising that she receive treatment to keep her oxygen saturation over 85%, and that further medical review be sought if she became persistently hypoxic.

A week later, her oxygen saturation levels were below 85%, and she spent a night in the High Dependency Unit receiving treatment for her emphysema. However in the weeks that followed, her oxygen saturations were sometimes recorded as low as 80% with no or minimal interventions noted.

After three weeks in hospital the deceased had improved to the point where her team were happy to allow her to take overnight leave to go home and check on her cat. The Council of Official Visitors had been providing care for her cat whilst she was in hospital, however the deceased had remained quite anxious about the cat's wellbeing. On leaving hospital her vital signs were normal, other than oxygen saturations of 83% on room air.

She did not return to the ward the next morning as agreed. By the time her consultant was informed, he deemed it too late in the day to arrange a visit to her property, and so went there the following afternoon along with two other staff members. The deceased's body was found at the top of a steep gravel access road with her salbutamol inhaler in one hand and a bag of medications and personal items in the other. Resuscitation was not attempted as it was deemed that she was not recently deceased.

Inquest findings and comments

The cause of death was determined to be bronchial asthma and emphysema. The coroner thought the time of death likely to have been on the morning of the day she was found, and no earlier than the previous evening, whilst in the process of leaving her home. The coroner commented that a welfare check on the day she was supposed to have returned to hospital might not have prevented her death, as it was unlikely she would have agreed to return voluntarily if she hadn't found the cat.

The coroner accepted expert opinion from a respiratory physician that the deceased's mental health problems made it impossible for her to quit smoking, and that she would eventually die as a combined result of her emphysema and mental health issues.

Coroner's recommendation

The coroner did not make any recommendations in this matter.

References

- MEHINOVIC inquest findings[21]
- TURVILLE inquest findings[22]
- Stanley, S. and Laugharne, J. (2010). *Clinical guidelines for the physical care of mental health Consumers*. Community, Culture and Mental Health Unit, School of Psychiatry and Clinical Neurosciences, The University of Western Australia. Perth: The University of Western Australia[23]

Further reading and resources

- Department of Health, Respiratory Health Network (2012). *Chronic Lung Conditions Model of Care*[24]
- Western Australian Legislation. *Mental Health Act 2014*[25]
- Mental health Commission (2015). *Charter of Mental Health Care Principles brochure*[26]
- WA Department of Health (2015). *Mental health smoking assessment checklist*[27]
- Australian Government. *Smoking and mental illness: A guide for health professionals*[28]
- Tobacco in Australia (2018). *Facts & Issues, Smoking and mental health*[29]

[21] http://www.coronerscourt.wa.gov.au/I/inquest_into_the_death_of_ejub_mehinovic.aspx
[22] http://www.coronerscourt.wa.gov.au/I/inquest_into_the_death_of_christine_turville.aspx
[23] https://www.chiefpsychiatrist.wa.gov.au/standards-guidelines/
[24] http://www.healthnetworks.health.wa.gov.au/modelsofcare/
[25] https://www.legislation.wa.gov.au/legislation/statutes.nsf/main_mrtitle_13534_homepage.html
[26] https://www.mhc.wa.gov.au/reports-and-resources/resources/mental-health-resources/mental-health-act-2014-resources/
[27] https://ww2.health.wa.gov.au/Articles/S_T/Smoke-Free-WA-Health-policy-and-mental-health-exemptions
[28] http://www.quitnow.gov.au/internet/quitnow/publishing.nsf/Content/mental-health-and-quitting
[29] http://www.tobaccoinaustralia.org.au/chapter-7-cessation/7-12-smoking-and-mental-health

Discussion points

- Consider the collaborative processes in place between services, including specialist and allied health services (on-site and off-site) and the degree to which these meet the holistic needs of patients. Do opportunities exist to enhance this collaboration to better meet the needs of patients?
- Patients with mental illness have a right to access smoking reduction and cessation strategies. Consider how consistently smoking cessation strategies are implemented at your site. Could these be delivered more often and/or more intensively?
- Mental health providers are encouraged to address the physical as well as the mental health needs of the patient. Conversely, how well do non-mental health services assess and meet the mental health needs of patients? Do mechanisms exist, or are there mechanisms that could be implemented to routinely assess for mental health issues in patient cohorts known to be at increased risk (e.g. pregnant women, chronic illness)?

Assessment and documentation

Key Messages

- History guides relevant physical examination and appropriate clinical decision making.
- Documentation provides a record that competent and appropriate practice occurred.

Case 1: An unusual diagnosis

A 23 year old woman died as a result of chronic hydrocephalus with brain swelling.

The deceased had been born prematurely at 28 weeks gestation, with complications including interventricular haemorrhage, ventricular dilatation and consequent macrocephaly, but it is unlikely that the doctors who saw her when she was an adult had access to this information.

She lived on her own in a country town near her mother and sister, and worked as a registered nurse at a hospital in another country town.

A few days before her death, the deceased experienced an increase in the neck pain that she had been suffering from for a few months. She was also suffering from headaches daily, including upon waking each morning. Her GP prescribed a nonsteroidal anti-inflammatory drug for pain relief, and referred her to a physiotherapist. Two days later, she presented to a regional hospital emergency department closer to her home with severe head and neck pain associated with vomiting. The GP on duty spoke briefly with the deceased and prescribed a nonsteroidal anti-inflammatory (ketorolac) and a sedative (diazepam), but did not examine her.

The deceased vomited 400ml of dark green vomitus, which was reported to the GP. He was not concerned, believing it to be related to the non-steroidal medication she had taken earlier that day. The deceased left the department with her mother, stating that she felt a little bit better.

She returned to her mother's house where she continued to vomit and complain of severe head and neck pain. Her mother sat up with her until around 4:30 in the morning when the deceased appeared to settle and go to sleep. Unfortunately the deceased was found to be unresponsive at 6am when her mother came in to check on her. Resuscitation attempts were unsuccessful.

Inquest findings and comments

Post mortem examination revealed chronic hydrocephalus with cerebral swelling and likely raised intracranial pressure, but no herniation or haemorrhage. It was postulated with reference to a journal article about sudden unexpected death in young people with chronic hydrocephalus that the cause of death may have related to minor changes in intracranial pressure affecting the brain stem and medulla's control of the heart and breathing. The coroner accepted that the cause of death was chronic hydrocephalus with brain swelling, by way of natural causes.

The coroner noted three independent reviews of the care provided at the regional hospital.

1) The Chief Medical Officer for the Department of Health reviewed this case and five others from the same hospital over a two year period. He found that the management of

the deceased was not consistent with best medical practice, noting the treating doctor's failure to take an adequate history or to examine the deceased. The Chief Medical Officer also raised concern over the lack of medical leadership at the emergency department, poor communication and uncertain roles within and between medical and nursing staff. Multiple recommendations have been made and implemented since the time of the deceased's death.

2) A conduct review panel convened by the area health service reviewed this case and 11 other cases managed by the same doctor. The panel found that the care provided by the doctor was adequate, but his documentation did not meet the expected standard. The panel recommended he receive further training with regard to contemporary standards of history taking, clinical examination and documentation.
3) The Australian Health Practitioner Regulation Agency found that the treating hospital doctor's actions constituted unsatisfactory professional performance. A reprimand was issued and conditions imposed on his registration.

The coroner noted that the doctor's care provided appeared to reflect the clinical environment of the hospital at the time, and that any criticisms of his conduct related to procedural practices rather than to the care that the deceased received.

Coroner's recommendation

The coroner did not make any recommendations in this matter.

WA Health actions

The coroner noted that a revision of the model of care at the regional hospital had been implemented since this incident, including the introduction of emergency department specialists, on-site medical ward cover and abolition of 24 hour shifts for medical officers. The coroner was satisfied that these changes adequately addressed the identified opportunities for improvement.

Case 2: Unexplained death in the post-operative period

A 69 year old woman died from an unascertained cause one day after undergoing uncomplicated elective laparoscopic surgery.

The deceased suffered from chronic pain related to severe lumbar spondylosis, neck pain with headaches, and knee pain. She had a knee replacement six months prior to her death, and had undergone spinal fusion in her early 50s. She took oxycodone and tramadol for her pain, complicated at one point by serotonin syndrome.

She also had longstanding depression and anxiety, which had developed after her husband was diagnosed with cancer, and was treated with antidepressants and antipsychotics.

When she was in her late 50s, the deceased was seen by a cardiologist to investigate six months of shortness of breath and an abnormal exercise stress test. Her resting heart rate was noted to be elevated at 110 bpm and her blood pressure was raised at 160/90. The cardiologist concluded that other than a benign congenital coronary artery abnormality, the deceased had no evidence of cardiac disease and that the shortness of breath related to her level of physical fitness.

When she was referred for elective laparoscopic cholecystectomy and hiatus hernia repair, it was felt that her chronic pain and depression meant she would not be suitable to have her operation at a smaller hospital's day procedure unit, but that she would be better cared for at a tertiary hospital.

The operation was performed without complication and the deceased was subsequently transferred to a surgical short stay unit to be monitored overnight. The following day she was reviewed by the treating team including the surgeon, and was referred to a dietician for advice on suitable post-cholecystectomy diet before going home. The deceased had worsening pain related to her not using the patient-controlled analgesia infusion, and so was started on oxycodone with good effect.

In the middle of the afternoon, the deceased was in severe pain again and a nurse noted her heart rate to be 110. Further oxycodone was given with good effect, and the nurse asked a doctor to review her. No notes were made by that doctor, but it appears that the deceased was cleared for discharge home, as she then called her husband to ask for him to pick her up later that afternoon. She was transferred to the discharge lounge to await her discharge medications, and she needed assistance from a nurse to stand and dress herself, which may be expected after surgery. When she complained of shaking and feeling ill a nurse asked her if she was well enough to leave, and the deceased replied that she had been discharged by a doctor a few hours previously.

On her return home the deceased walked in to the house from the car and lay down in the family room. Her husband called the hospital to ask if she should have been discharged home as she did not seem well. He was advised to check her blood sugar as she had Type 2 diabetes. He noted her breathing was laboured, but was not concerned as the deceased often had laboured breathing. Later in the evening he noticed that she was not breathing, called for an ambulance and started chest compressions under the direction of the '000' operator. Unfortunately resuscitation efforts by the deceased's husband and ambulance staff were unsuccessful.

Inquest findings and comments

Post mortem examination did not reveal a cause of death. There was no evidence of infection or drug toxicity. Cardiac causes for sudden death were considered in light of her congenital coronary artery abnormality and ECGs in hospital that occasionally showed a 'longish' QT interval, but genetic testing did not reveal any genes associated with cardiac ion channelopathy. An as yet undiscovered genetic abnormality could not be completely excluded.

The coroner found the cause of death to be unascertained, with an open finding as to the manner of death, unable to determine whether death occurred by way of misadventure or natural causes.

One expert witness expressed an opinion that the deceased had not received satisfactory post-operative care, and that the tachycardia had not been properly addressed; however, the coroner was satisfied with other opinions that the tachycardia was likely related to her post-op pain, and that discharge of the deceased was appropriate.

The coroner agreed that whilst her chance of survival might have been better had she remained in hospital another night, that chance would have been only marginally greater as it was unlikely that she would have been continuously monitored.

Coroner's recommendation

The coroner did not make any recommendations in this matter.

WA Health action

The coroner noted that an adult observation and response chart had been introduced to the hospital where this incident occurred as well as to other hospitals. This chart incorporates the *Adult Deterioration Detection System* which scores physiological variables and mandates a scale of escalation based on the score.

References

- ULLRICH inquest findings[30]
- STRONER inquest findings[31]
- Australian Commission on Safety and Quality in Health Care. *Recognising and Responding to Clinical Deterioration*[32]

Further reading and resources

- WA Health (2014). *Clinical Deterioration Policy*[33]

Discussion points

- Consider any barriers that you have encountered to taking a history, performing a physical examination and/or documenting these appropriately. What are potential strategies to minimise or overcome these barriers?
- What constitutes appropriate and thorough documentation?

[30] http://www.coronerscourt.wa.gov.au/I/inquest_into_the_death_of_tamika_patricia_carol_ullrich.aspx
[31] http://www.coronerscourt.wa.gov.au/I/inquest_into_the_death_of_christine_pearl_stroner.aspx
[32] https://www.safetyandquality.gov.au/our-work/recognising-and-responding-to-clinical-deterioration/
[33] http://www.health.wa.gov.au/circularsnew/circular.cfm?Circ_ID=13070

Far from home

Key Messages

- The *WA Aboriginal Health and Wellbeing Framework 2015-2030* adopts a cultural understanding of health that recognises the importance of physical health, psychological health, social health and wellbeing, spirituality and cultural integrity in achieving community wellbeing.
- What health care providers consider to be 'best care' might not always be truly patient-centred care, or preserve patient dignity and autonomy.
- The *National Safety and Quality Health Service Standards* second edition requires organisations to implement and monitor strategies to meet the organisation's safety and quality priorities for Aboriginal people and requires the organisation to have strategies to improve the cultural awareness and cultural competency of the workforce to meet the needs of its Aboriginal patients.

Case 1: Rheumatic heart disease

A 16 year old Aboriginal boy died from heart failure due to chronic heart disease.

The deceased lived most of his life with his family in a small remote community, and developed rheumatic fever when he was nine years old. He was to have life-long monthly intramuscular injections of benzathine penicillin to prevent recurrence of the disease, but unfortunately did not receive all of these, suffering a second bout of rheumatic fever when he was 10. The local regional hospital was 900km from his home, and difficulties with transport precluded him from attending the cardiology clinic there regularly.

The deceased developed valvular heart disease and heart failure when he was 13, and had to be flown to Perth for treatment which included heart surgery and 10 new medications, which he had difficulties in taking consistently when he returned home a few months later. After several further hospital stays in Perth over the following year, he was eventually transferred back to the local regional hospital instead of his home community, where he remained for most of the following year, interspersed with further admissions to hospital in Perth.

After having another procedure for his heart condition, it was decided that he was unsuitable as a candidate for a heart transplant or mechanical heart pump. The focus of treatment moved to providing him with optimal quality of life. His treating doctors advocated that he be taken into care and placed with a foster family in Perth to ensure optimal management of his medications and clinical needs. Some of his family tried to remain in Perth to be close to him, but struggled to cope with being far from home despite support and returned to their remote community. Over the following few months the deceased deteriorated and eventually died in hospital in Perth far from his family and community.

Inquest findings and comments

The cause of death was heart failure due to chronic rheumatic heart disease; the manner of death natural causes.

The Coroner was of the opinion that the deceased received exemplary care from the Department of Child Protection as well as from medical professionals, but it was too late to

overcome the effects of rheumatic heart disease and subsequent complications. Concern was expressed over the ongoing existence of rheumatic fever in Western Australia.

Coroner's recommendation

The coroner did not make any recommendations in this matter.

Case 2: Fungal brain infection

A 17 year old Aboriginal girl died in hospital as a result of fungal brain infection and infarction complicating fungal infection of a scalp laceration sustained in a motor vehicle collision.

The deceased had been in the care of the Department of Child Protection and Family Services from nearly 11 years of age. She rarely stayed with the relatives who were nominated to care for her, and frequently did not attend school. Her only medical care appeared to be when she attended hospital for treatment of injuries.

Around a month before her death she was involved in a motor vehicle crash, where the car she was driving rolled several times. She sustained facial fractures and an extensive degloving scalp injury. On admission to hospital for initial treatment prior to transfer to Perth, it was found that her blood sugar level was extremely high at 26 mmol/L, though she did not have ketones or acidosis.

Whilst in hospital in Perth, the deceased underwent surgical repair of her facial fractures, and cleaning, debridement and dressing of her various lacerations and abrasions. She had to be taken back to theatre multiple times for further debridement and dressing of the scalp laceration, which continued to deteriorate with the development of an abscess and necrosis despite antibiotic treatment. Care of the deceased and her wounds was hampered by her repeat absences from the ward, aggression towards staff, and frequent refusal to allow dressing changes or wound review due to pain. She required insulin whilst in hospital to control her blood sugar; however, the endocrinology service was not consulted for advice on diagnosis or management.

In the fourth week of admission to hospital the deceased became unwell, febrile and tachycardic. The antibiotics were changed; however, she continued to deteriorate and was admitted to the intensive care unit. By this stage the scalp wound had progressed to the bone and brain beneath, and fungal infection was detected. Despite further surgery and antifungal treatment, she deteriorated and life support was eventually withdrawn.

Inquest findings and comments

The cause of death was fungal brain infection and infarction complicating fungal infection from a scalp laceration sustained in a motor vehicle collision. The manner of death was by way of accident.

The coroner accepted that there were limits as to what the Department of Child Protection had been able to do to provide support and care to an older child unwilling to accept such support. It was likely that the deceased had Type 2 diabetes mellitus prior to the crash. Management of her blood sugar was described as being identified early and managed appropriately and effectively, but it was also stated that her blood glucose levels were rarely normal, and that endocrinology input was not sought during the admission.

Coroner's recommendation

The coroner did not make any recommendations in this matter.

References

- CNR inquest findings[34]
- JDC inquest findings[35]
- WA Department of Health (2015). *WA Aboriginal Health and Wellbeing Framework 2015-2030*[36]

Further reading and resources

- National Safety and Quality Health Service Standards (second edition) (2017)[37]
- National Safety and Quality Health Service Standards. *User Guide for Aboriginal and Torres Strait Islander Health*[38]
- WA Department of Health (2017). *Implementation Guide for the WA Aboriginal Health and Wellbeing Framework 2015-2030*[39]
- WA Rheumatic Heart Disease Register[40]
- WA Department of Health (2015). *Requirement for Notifications of Acute Rheumatic Fever (ARF) and Rheumatic Heart Disease*[41]
- WA Country Health Service, Kimberley. *Rheumatic Heart Disease: Kimberley Chronic Disease Guideline*[42]

Discussion points

- How do you provide patient-centred care? Consider barriers you have faced in delivering patient-centred care as well as strategies to remove or minimise these to improve patients' experiences and their health outcomes.
- From 2019 the National Safety and Quality Health Service (NSQHS) Standards (second edition) will be used to assess organisations. The new standards address Aboriginal and Torres Strait Islander (ATSI) health. Why are ATSI standards important to have? How well does your organisation currently meet the six new ATSI specific standards? What strategies could be implemented to better address these standards and improve the care delivered to ATSI persons?

[34] http://www.coronerscourt.wa.gov.au/I/inquest_into_the_death_of_cnr_subject_to_suppression_order.aspx
[35] http://www.coronerscourt.wa.gov.au/I/inquest_into_the_death_of_jdc_subject_to_suppression_order.aspx
[36] https://ww2.health.wa.gov.au/Improving-WA-Health/About-Aboriginal-Health/WA-Aboriginal-Health-and-Wellbeing-Framework-2015-2030
[37] https://www.safetyandquality.gov.au/our-work/assessment-to-the-nsqhs-standards/nsqhs-standards-second-edition/
[38] https://www.safetyandquality.gov.au/our-work/assessment-to-the-nsqhs-standards/nsqhs-standards-second-edition/
[39] https://ww2.health.wa.gov.au/Improving-WA-Health/About-Aboriginal-Health/WA-Aboriginal-Health-and-Wellbeing-Framework-2015-2030
[40] http://ww2.health.wa.gov.au/Articles/U_Z/WA-rheumatic-heart-disease-register
[41] http://www.health.wa.gov.au/circularsnew/circular.cfm?Circ_ID=13275
[42] http://ww2.health.wa.gov.au/~/media/Files/Corporate/general%20documents/Medical%20notifications/PDF/rheumatic-heart-disease-kimberley-chronic-disease-guideline.pdf

Multiple presentations to a health service

Key Messages

- Re-presentation can be a red flag.
- 'Did not wait' rates are a barometer of a department's functioning.

A 36 day old baby died from acute necrotising pneumonia following three brief visits to hospital.

The deceased was born at term following a mostly unremarkable pregnancy. Her birth weight was 2.6kg, but she had no problems in the first few weeks of life.

She developed a fever and cough when she was 32 days old and so her parents took her to a small country hospital's emergency department. There she was noted to be afebrile, with a respiratory rate of 40, oxygen saturations of 97% and a heart rate of 185. The deceased was seen by a doctor, who diagnosed her as having coryza, or a cold, and discharged her home with instructions to her parents to give her paracetamol, and to return if her symptoms worsened.

Two days later she was brought back to hospital by her aunt, who only waited 20 minutes before taking the deceased back home again without being seen by a doctor. The triage nurse did not know about the previous visit to hospital. The deceased was again afebrile, with a heart rate of 110, a respiratory rate of 38, and normal oxygen saturations despite having noticeable nasal flaring and grunting.

The following day the deceased was brought back to hospital by her parents, concerned over her cough and laboured breathing. Again, staff did not recognise that she had presented to hospital twice before. It was a busy day and the deceased and her mother waited nearly one hour in the waiting room before being brought through to a cubicle for a secondary nursing assessment and her first set of recorded vital signs: heart rate 140, respiratory rate 56, oxygen saturation 98% and afebrile.

An hour and a half after presentation, the deceased was seen by a final year medical student. He took a brief history, and then offered to help make up another bottle of formula as the deceased's mother was keen to go home to feed the baby instead of waiting any longer at the hospital.

Despite the medical student's introduction and explanation, the deceased's parents thought that he was a doctor, and were frustrated that he was talking too much and not checking the deceased. They left, saying that they would return the next day for review.

That night the deceased was placed in bed between her parents to sleep, and when they woke in the morning, the deceased was not responsive. She was taken to hospital but it was apparent that she had been deceased for some time and resuscitation attempts were ceased.

Inquest findings and comments

The cause of death was found to be acute necrotising pneumonia with the manner of death being natural causes.

Expert opinion was that the death might not have been preventable, but that admission to hospital during the course of the deceased's illness would have given her the best opportunity for survival.

On her first presentation, her heart rate was high, and combined with a history of fever could be an early indication of serious infection. Expert opinion was that admission for at least observation would have been advisable, and would have provided the opportunity for full septic screening and the commencement of antibiotics if the fever recurred. However it was noted that the treating doctor had no specialist paediatric training, and had not acted unreasonably by discharging the baby home and asking her parents to bring her back if she deteriorated. It was unfortunate that when the deceased was brought back to hospital, her family did not wait for her to be seen by a doctor and thus missed any chance for admission or treatment.

Coroner's recommendation

The coroner did not make any recommendations in this matter.

WA Health action

The WA Country Health Service has implemented a 'did not wait policy' which provides guidance around the follow-up of patients who do not wait to be seen.

The site where this incident occurred implemented a procedure for the assessment and management of an unwell child which addresses escalation of paediatric cases. Further, the triage form was amended to include a prompt to ask patients whether this is a representation or if similar symptoms have occurred within the previous 48 hours.

Rostering practices were improved, with more doctors employed to manage emergency department presentations. The hospital has been expanded to include an on-site paediatric service. As well, Aboriginal Liaison Officers are now available seven days a week.

References

- MOSBY inquest findings[43]
- WA Country Health Service (2017). *Management and Review of 'Did Not Wait' Patients that Present to Emergency Services Policy*[44]

Further reading and resources

- WA Country Health Service (2017). *Triage, Assessment and Management in the Emergency Department – Clinical Practice Standard*[45]
- Kimberley Aboriginal Medical Services Council and WA Country Health Service (2014). *Assessment and Early Management of the Unwell Child*[46]

[43] http://www.coronerscourt.wa.gov.au/I/inquest_into_the_death_of_masaly_mosby.aspx
[44] https://healthpoint.hdwa.health.wa.gov.au/policies/Policies/WACHS/Management%20and%20Review%20of%20'Did%20Not%20Wait'%20Patients%20that%20Present%20to%20Emergency%20Services%20Policy.pdf (WA health system access only)
[45] https://healthpoint.hdwa.health.wa.gov.au/policies/Policies/WACHS/Triage,%20Assessment%20and%20Management%20in%20the%20Emergency%20Department%20-%20Clinical%20Practice%20Standard.PDF (WA health system access only)
[46] http://ww2.health.wa.gov.au/~/media/Files/Corporate/general%20documents/WATAG/Symposium/2014/these-children-get-sicker-quicker.pdf

Discussion points

- Have you been involved in, or aware of, scenarios where patients did not wait to be seen or left against medical advice? What was the outcome of these scenarios and what was learned?
- Do you have any local principles or guidelines to identify patients who re-present within a short time frame? Are these mechanisms consistently effective or is there opportunity for improvement?

Metastatic bladder cancer

Key Messages

- The risks and benefits of surgical intervention in a terminally ill patient should be balanced with the anticipated improvement of a patient's quality of life, as well as the patient's wishes.

A 72 year old man died of complications arising from metastatic bladder cancer.

Four years prior to his death the deceased had suffered a kidney infection and had a bladder ultrasound as part of routine investigation of this condition. It showed a high post-void volume with bladder wall trabeculations and so he was referred to a urologist for an uncomplicated transurethral prostate resection. Several years later the deceased contacted his GP with a six month history of worsening right hip pain. X-rays showed severe degenerative changes and so the deceased was referred to an orthopaedic surgeon for a total hip replacement. This was performed four months later with excellent results, immediate relief of pain and improvement in mobility.

During the lead-up to the operation, the deceased suffered more urinary tract infections. These were treated with antibiotics and another ultrasound was performed. Again this showed a high post-void residual volume and bladder wall irregularities, though this time the possibility of bladder cancer was raised and the report recommended further investigation with cystoscopy. The deceased's GP referred him once more to a urologist, concerned as the deceased had been a life-long smoker, and should know if he had cancer before undertaking a hip replacement.

On review of the deceased, the urologist noted that he had significant residual prostate tissue which would warrant further resection at a later date. Prophylactic antibiotics were commenced to ensure there would be no infection at the time of hip surgery. The urologist believed that the bladder wall irregularities were most likely in keeping with recurrent urinary tract infections, but nonetheless asked his secretary to book a cystoscopy to investigate further. The referral was sent to the same peripheral metropolitan hospital that the orthopaedic surgeon had booked the hip replacement at, as both specialists believed the waiting lists for public patients were shorter there than at the tertiary hospitals. Neither specialist had any influence over these waiting lists. Whilst the urologist was hopeful that the cystoscopy would take place prior to the hip operation, this was not the case.

Ten days after the hip operation, the deceased was admitted to hospital with symptoms of a urinary tract infection. Further investigations revealed that he had locally invasive bladder cancer with widespread metastases, blocked ureters, and raised calcium levels. He subsequently developed a chest infection and a pulmonary embolism despite appropriate anticoagulation, and succumbed to the illness eight days after admission.

Inquest findings and comments

The coroner found that death occurred by way of natural causes, with complications arising from metastatic bladder cancer.

The coroner commented that it would have been preferable for the deceased to have known about the cancer and to have made his own decisions about management of both the cancer and his hip pain. Expert opinion was divided as to if earlier detection of the cancer would have prolonged the deceased's life, as it was an aggressive form of cancer, and may have already metastasised at the time of the ultrasound. The hip replacement had provided the deceased a marked improvement of quality of life and would still have been offered by the surgeon had the diagnosis of cancer been known beforehand.

Coroner's recommendation

The coroner did not make any recommendations in this matter.

References

- HOUGHTON inquest findings[47]

Discussion points

- Consider a scenario where a medical or surgical intervention presented an ethical dilemma. How was this managed and what was the outcome?
- How are wait lists monitored? What strategies are in place, or could be considered, to decrease patient wait times?

[47] http://www.coronerscourt.wa.gov.au/I/inquest_into_the_death_of_john_houghton.aspx

Communication

Key Messages

- Deficiencies in communication have been implicated as a major contributory factor in adverse events.
- Ineffective communication and differences in perceptions of communication between team members, or between staff and patients and their families, create opportunities for errors to occur.
- Graded assertiveness and closed loop communication can reduce the occurrence of error, and are non-technical skills that can be learned.

Case 1: Offshore retrieval

A man died of bronchopneumonia in 2012 on board an overseas registered iron ore carrier ship about 30 nautical miles north of Port Hedland.

A month before his death he was diagnosed as having a viral illness. He was given a script for an antibiotic (cephalexin), to be taken in three days-time if he was still unwell.

On the return journey to Port Hedland he became unwell with vomiting and abdominal pain. Crew members noted him to have very cold hands and feet. He remained in bed in his cabin. He asked for medical attention several times, offering to pay the costs himself. His crew mates also asked the Captain repeatedly during the day and overnight to organise medical retrieval from the ship. The Captain did not respond to these requests, but emailed the ship's agent the following day mentioning the sick crew member. The ship's agent planned to meet the ship when it berthed and drive the deceased to hospital, not knowing how sick the patient was. The Captain had also forwarded a report to the shipping company's doctor, but the report was not received until after the death.

The Captain contacted Port Hedland Tower several times on approaching Port Hedland harbour, as is usual practice. No mention was made of the sick crew member until he collapsed and was unresponsive in the early afternoon. A helicopter was about to take off to take the harbour's pilot out to the ship to steer it in to port, and a security company supervisor who had done a three day first aid course was tasked to accompany the pilot to the ship. He took a first aid kit, an oxygen cylinder, and an automatic defibrillator with him.

Crew members reported that the deceased was not breathing, had no pulse, and felt cold and lifeless. CPR was attempted for 2-3 minutes but ceased as they believed he had died. They brought him up to the deck by stretcher. When the helicopter arrived, the security supervisor thought he felt a faint pulse. He was reluctant to use the defibrillator on a steel ship, so only administered oxygen. The stretcher would not fit into the helicopter, so the deceased was bundled up in the helicopter and flown to the hospital. He was pronounced dead on arrival, though after the security company supervisor mentioned he thought he had felt a pulse, full resuscitation was attempted for half an hour with no success.

Inquest findings and comments

Expert opinion was that the death was probably preventable, had medical assistance been sought earlier.

The ship's Captain no longer works for the shipping company, and the coroner was unable to make contact with him. The coroner was satisfied that the Captain failed to appreciate the seriousness of the deceased's condition, and failed to arrange for timely medical transfer despite exhortations made by the crew.

The shipping company conducted an internal review of the incident, apparently without including any information from crew other than the Captain, and appear not to have made any changes to their processes.

The availability of helicopters suitable for offshore medical evacuation was discussed: there are no stretcher-capable helicopters permanently based in Broome. One private company in the East Pilbara has a rescue helicopter; Broome and Karratha have rescue helicopters, as do Jandakot and Bunbury. Issues around funding, staffing, and governance were mentioned.

Coroner's recommendation

The coroner recommended that the Government of Western Australia initiate an independent strategic review of the aeromedical (rotary wing) retrieval services in Western Australia. The review should include consultation with AMSA, WA Health, St John Ambulance, the Royal Flying Doctor Service, WA Police, DFES and the Harbour Masters of the various ports. A primary concern should be to ensure that there are appropriate assets that are stretcher capable, with properly trained medical staff, readily available. With that aim in mind, the review should consider whether it is practical to establish an emergency medical service involving rotary wing helicopters and staffed with trained medical personnel, in the State's North West.

WA Health action

Helicopter underwater escape training was provided for seven St John Ambulance officers in 2013, allowing them to be flown out to ships to assist with medical evacuations. This local informal arrangement was ceased in 2016.

The Department of Health is reviewing the feasibility of emergency off shore aeromedical retrieval.

Case 2: Vaginal birth after caesarean section

A baby died shortly after delivery at a small metropolitan hospital from hypoxia due to intrauterine pneumonia and haemorrhage with uterine rupture and prolonged rupture of membranes (PROM). He was deemed to have been born alive despite being born with no signs of respiration as a heartbeat may have been briefly detectable around 10 minutes after delivery during resuscitation attempts.

This baby was his mother's fifth child. The first had been born by emergency caesarean section, the next three by vaginal birth after caesarean (VBAC), so this pregnancy was high risk. The risks of VBAC including scar rupture were discussed with the mother during antenatal visits with an obstetrician.

The mother had PROM prior to establishment of labour as she had gone home against medical advice rather than commence Syntocinon to initiate contractions or antibiotics to reduce the risk of infection. When she eventually returned to hospital, antibiotics were started and eventually Syntocinon. She made slow progress, despite this being her fourth vaginal delivery, augmented by Syntocinon. After a few hours of labour, she developed worsening abdominal pain and the cardiotocography (CTG) tracing deteriorated.

The obstetrician on duty became aware of the possibility that uterine rupture had occurred approximately three hours prior to the birth and recommended an emergency caesarean section delivery; however, the parents decided to continue with their original birth plan. Throughout this time the baby experienced fetal hypoxia, both as a result of the developing infection and the effects of uterine rupture.

Once the mother became too distressed by her pain to fully engage in the decision-making process, the father appeared to have taken over that responsibility. It appears that his belief that this delivery would follow the pattern of previous ones led him to refuse permission for surgery or appropriate instrumental delivery despite the concerns expressed by doctors.

Eventually the father agreed to allow vacuum extraction without episiotomy, however the vacuum extraction attempt failed, and the baby was delivered shortly afterwards by forceps. The cord was wrapped around the baby's neck, and there were no signs of life initially. Resuscitation was ultimately unsuccessful.

The mother deteriorated, uterine rupture was diagnosed, and she underwent emergency laparotomy to repair the injury.

Inquest findings and comments

The cause of death was found, after discussion between the pathologist and an obstetrics expert, to be hypoxia due to intrauterine pneumonia and haemorrhage with uterine rupture in a neonate with PROM. The manner of death was found to be natural causes.

Expert opinion on obstetric care was sought. VBAC was noted to be high risk, and the risk is increased with the use of Syntocinon to augment labour, however expert opinion was that it was not unreasonable for the mother to attempt VBAC at this hospital, given that the risks had been discussed with her.

There was discussion around the risks of persisting with VBAC given PROM, slow progression of labour and signs of uterine rupture. The coroner supported the conclusion that the parents were not happy to have obstetric intervention, despite evidence being presented that it was in their best interests. There were differing reports of communication during the second stage, with the obstetrician believing he was communicating the urgency of the situation, but needing the woman's consent to proceed, and the parents feeling they did not fully understand how serious the situation was.

Coroner's recommendation

No recommendations were made, but the coroner emphasised the need for good communication between all parties prior to, and during labour so that informed decisions can be made.

WA Health action

Internal review resulted in changes being made to VBAC and intrapartum guidelines. This hospital has subsequently closed due to planned service reorganisation and obstetric services were transferred to a tertiary hospital.

King Edward Memorial Hospital has implemented the Clinical Practice Guideline: *Birth After Caesarean Section*, which is available to hospitals state-wide. Additionally the WA Health mandatory policy *Cardiotocography Monitoring Policy*, has been implemented.

Case 3: Unexpected deterioration

A 94 year old woman died from sepsis shortly after the uncomplicated insertion of a suprapubic catheter.

The deceased was described as being in fairly good health. She had high blood pressure and severe osteoarthritis, and was still very alert and engaged with her community. She attended her GP complaining of pain on passing urine, and was discovered to have vulval carcinoma. She was referred to a urologist for a catheter to help with urination. An indwelling catheter was placed initially, but as she found it uncomfortable, the urologist inserted a suprapubic catheter under local anaesthetic at a small private hospital. Originally it had been planned that she would go home after the procedure, but as the urologist was concerned by the appearance of the carcinoma he contacted a specialist gynaecologist oncologist for urgent review. The oncologist worked at another private hospital, and arranged a bed for the deceased to be transferred to so he could take over her care. There appeared to have been some confusion amongst staff as to when she would go to the other hospital and she remained at the first private hospital overnight. She experienced an episode of lower abdominal pain, which had resolved by the next morning.

There appeared to be more misunderstanding around how the deceased was to be conveyed to the second hospital. The nurse thought she was being discharged rather than transferred and so organised a taxi rather than an ambulance to take her to the second hospital. The deceased appeared well during the taxi ride, however on arrival at the second hospital; she suddenly became very unwell and was taken to ICU. A CT scan showed there had been no damage to her bowel during placement of the suprapubic catheter, and a urine sample grew bacteria. She was initially treated for septic shock, presumed to have arisen from her urinary tract and then in consultation with the deceased's family, it was decided that she be palliated and she passed away five days after her collapse.

Inquest findings and comments

At post-mortem the deceased was found to have pus throughout her abdomen and *Klebsiella pneumoniae* was cultured from a wide range of sites. There was no evidence of inadvertent damage from the suprapubic catheter insertion, and the coroner accepted expert opinion that the source of infection was likely to be the spontaneous rupture of a diverticulum or diverticular abscess, likely to have occurred at the time of her arrival at the second hospital, which would have sealed over by the time of death and not been apparent at post-mortem.

The cause of death was given as sepsis arising from a diverticulum that ruptured on her arrival at the second hospital, with the manner of death being natural causes.

The coroner stated that whilst the manner of her transfer between hospitals was not optimal, it did not cause or contribute to her sudden death.

Coroner's recommendation

The coroner did not make any recommendations in this matter.

References

- PU inquest findings[48]
- CJ inquest findings[49]
- WINTER inquest findings[50]
- King Edward Memorial Hospital, Clinical Practice Guideline (2017). *Birth After Caesarean Section*[51]
- WA Health (2018). *Cardiotocography Monitoring Policy*[52]

Further reading and resources

- WA Country Health Service (2018). *Offshore Aeromedical Retrievals Policy*[53]
- Australian Commission on Safety and Quality in Health Care. *Audit Tools and Quality Measures for Recognition and Response Systems*[54]

Discussion points

- When there is a conflict between a patient's choice and recommended clinical management how do you approach this situation?
- What are some effective strategies to communicate an urgent or serious situation to a patient whilst ensuring this information is still communicated sensitively?
- Consider a situation where you were concerned about a patient's safety. How comfortable were you with discussing this with others and/or questioning others? Would your comfort level change if the person you were questioning was in a position of authority?
- Consider a time when your decision or action was questioned out of concern for patient safety. How did you handle this? Is there anything you would do differently in the future?

[48] http://www.coronerscourt.wa.gov.au/I/inquest_into_the_death_of_maung_pu.aspx
[49] http://www.coronerscourt.wa.gov.au/I/inquest_into_the_death_of_baby_cj_subject_to_suppression_order.aspx
[50] http://www.coronerscourt.wa.gov.au/I/inquest_into_the_death_of_anna_maria_winter.aspx
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[53] https://healthpoint.hdwa.health.wa.gov.au/policies/Policies/WACHS/Offshore%20Aeromedical%20Retrievals%20Policy.pdf (WA health system access only)
[54] https://www.safetyandquality.gov.au/our-work/recognising-and-responding-to-clinical-deterioration/evaluating-recognition-and-response-systems/quality-measures-for-recognition-and-response-systems/

Fitness to drive

Key Messages

- Health professionals should advise patients if a medical condition impacts on their ability to drive safely.

Case 1: A presumed impulsive act

A 39 year old man died as a result of multiple injuries sustained in a motor vehicle accident by way of suicide while he was an involuntary patient under the *Mental Health Act 1996*.

The deceased was born in Guinea and migrated to Australia, where he was supported by his cousin, as his other family members lived overseas. He had a history of a psychotic illness, for which he had been receiving treatment for several years. After initial admission to a mental health unit, he was successfully managed by his GP for a number of years, but came to the attention of mental health services again several years later after his cousin expressed concern about his welfare. For the next two years, his compliance with medication was limited. He was made an involuntary patient under a community treatment order and treated with depot antipsychotic medication for a diagnosis of chronic paranoid schizophrenia.

He requested a fitness to drive assessment for a commercial driver's license from his psychiatrist. This request was declined due to concern that he had very recently been unwell with psychosis. Shortly after this, he requested the same assessment from his GP, who, not being aware that this request was recently declined by the psychiatrist, provided the requested assessment.

Following this, the deceased missed some medical appointments and refused his medication on some occasions, but generally presented well with no overt psychotic symptoms noted, and he continued to search for work. He was seen by his cousin and housemate in the days leading up to his death, and reportedly appeared to be well.

Despite some concern regarding his suitability for a commercial drivers license, none of his treating practitioners expressed any concern about his ability to hold a private drivers license. His cousin described him as "a meticulous driver, very careful and law abiding."

On the day of his death, the deceased drove his housemate to the airport, then ran some errands. The deceased was driving his car alone along the highway and suddenly swerved into the path of an oncoming truck. He was not wearing a seatbelt, and witnesses reported no obvious reason for him to swerve. He died at the scene of the accident.

Inquest findings and comments

The coroner found that the deceased died due to multiple, non-survivable injuries, by way of suicide.

It was noted that the supervision, treatment and care of the deceased was appropriate and of a high standard.

The coroner discussed fitness to drive assessment at length, including discussion of which professionals were qualified to make such an assessment in the case of applications for private and commercial licenses.

Coroner's recommendation

No formal recommendations were made; however, the coroner raised the possibility of making fitness to drive assessment forms more clear, and educating GPs regarding obtaining specialist opinions in relation to commercial driver's license applications.

Case 2: A tragic vehicle accident

A 42 year old man died as a result of multiple injuries sustained in a motor vehicle accident by way of accident while he was an involuntary patient under the *Mental Health Act 1996*.

The deceased was born in Hong Kong and later lived in the UK before migrating to Australia with his parents. He was highly intelligent and had previously worked as a mathematics tutor, although he had recently been unemployed and supported by a disability pension due to mental illness. He was known to enjoy driving into the countryside alone at night to see the moon.

The deceased was first diagnosed with mental illness in the UK. He had presented with psychotic and mood symptoms over several years, and had a final diagnosis of schizoaffective disorder. He was noted to have poor insight into his mental illness and was often non-compliant with his medication due to concern about medication side effects. He had had several inpatient admissions to mental health services in Australia and the UK including four involuntary admissions during a two year time span. When out of hospital, he had been an involuntary patient under a community treatment order up until his death.

In the months leading up to his death, the deceased's mental state had appeared to fluctuate, likely due to non-compliance with his medication. Shortly before his death he was assessed as starting to relapse and his treating team considered arranging a further hospital admission, but he then unexpectedly travelled to Melbourne for a holiday, where he came to the attention of police due to unusual behaviour. However, on his return to Perth, his parents reported that he seemed well.

Shortly after seeing his parents (where he reportedly appeared well), the deceased was found in his car following a single vehicle accident. The crash investigation indicated that he had been travelling at excessive speed on a dark, wet road with insufficient signage and failed to navigate a curve, resulting in a single vehicle accident. There was no indication that the crash was a deliberate act.

Inquest findings and comments

The coroner found that the deceased died as a result of multiple injuries by way of accident. No concerns were raised regarding the quality of the deceased's supervision, treatment and care.

The coroner discussed the complexities of assessing fitness to drive in people with serious mental illness, as guided by the Austroads "Assessing Fitness to Drive for commercial and private vehicle drivers'" guidelines. The deceased was regularly assessed under these guidelines and no concerns were raised regarding the quality or suitability of these assessments. It was noted that there was no periodic practical driving assessment and brief

discussion about whether this assessment would add value to the current guidelines, with no clear conclusion established.

Coroner's recommendation

The coroner did not make any recommendations in this matter.

References

- DIALLO inquest findings[55]
- YUNG inquest findings[56]
- Austroads. *Assessing fitness to drive 2016*[57]

Discussion points

- How is a patient's fitness to drive assessed in your clinical setting?
- What are the current requirements for assessing fitness to drive and who is qualified to perform this assessment?
- How can we strike the right balance between maintaining an individual's autonomy and managing our duty of care to the wider population when assessing fitness to drive?

[55] http://www.coronerscourt.wa.gov.au/I/inquest_into_the_death_of_mamadou_hady_diallo.aspx
[56] http://www.coronerscourt.wa.gov.au/I/inquest_into_the_death_of_james_michael_chee_ming_yung.aspx
[57] http://www.austroads.com.au/drivers-vehicles/assessing-fitness-to-drive/for-health-professionals

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