



From Death We Learn

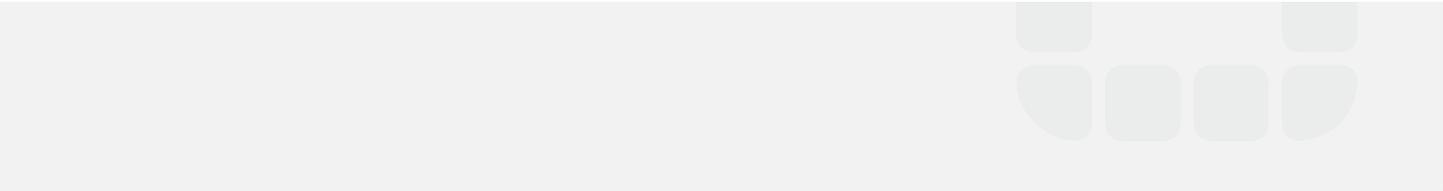
2009



The Office of Safety and Quality in Healthcare welcomes suggestions on how this publication series may be improved. Please forward your comments to safetyandquality@health.wa.gov.au.

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Editorial

Investigation of deaths provides valuable insight into the way our health system works and it remains important for the health system to share lessons and learn from unexpected or preventable events.

This is the fourth edition of From Death We Learn and we continued the format established in 2008 based on feedback from both within and outside of the WA Health system. In particular we have valued feedback from consumer organisations.

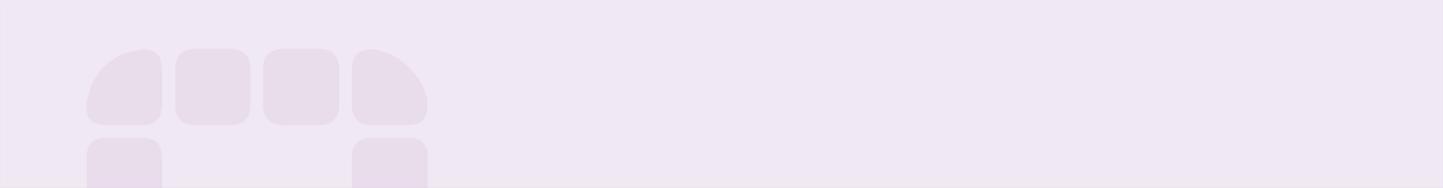
In the Office of Safety and Quality in Healthcare, we are learning that it is important to tell the story for individuals where things went wrong so they can help us to prevent things going wrong again.

All hospitals and health services are encouraged to use this document to raise awareness and educate health professionals, so this year we have prepared links to downloadable power-point presentations designed for use in an educational setting. The value of these narratives extends beyond what is written on the page.

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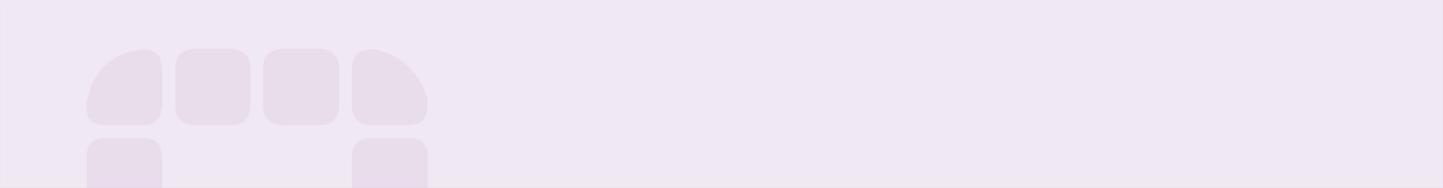
From Death We Learn and Coronial Inquest Finding documents identified in this text can be downloaded from the Office of Safety and Quality in Healthcare's website:

www.safetyandquality.health.wa.gov.au/mortality/coronal_liaison.cfm



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Reporting Deaths: Distinguishing Quality Improvement from Coronial Processes

The West Australian Review of Mortality (WARM) is now established as a standard process applying to all deaths in the West Australian health system, both public and private. WARM is essentially a screening tool - applied to all deaths in order to identify those that are possibly preventable. Once identified, these deaths undergo a detailed investigation for the purposes of making recommendations for systems improvements designed to prevent future harm or death from similar circumstances.

Deaths that are confirmed as preventable are now defined as Sentinel Events, and may be reported as such at any stage in the WARM process. Quality improvement processes are managed at a hospital level utilising State qualified privilege via registered committee; and/or Commonwealth qualified privilege within the Advanced Incident Management System (AIMS).

The Coronial process in the legal system is entirely separate to the quality improvement process in the health system. The reporting of deaths to the Coroner, and the investigation of those deaths, is managed within the legal system and defined by the *Coroner's Act 1996 (the Act)*. The Act defines reportable deaths and outlines the responsibilities of persons reporting deaths to the Coroner. For readers within WA Health, guidelines to the Act can be found at the Legal and Legislative Services intranet site.¹ For readers who do not have this access, key points from this site are provided.

A death must be reported to a Coroner or to any member of the Western Australian Police Force immediately where the death is a 'Western Australian death' and one or more of the following applies:

- ***The death appears to have been unexpected, unnatural or violent, or to have resulted directly or indirectly from injury;***
- ***The death occurs during an anaesthetic, or as a result of an anaesthetic, and is not due to natural causes;***
- ***The death occurs in prescribed circumstances (there are currently no legislated 'prescribed circumstances');***
- ***The deceased immediately before death was a person 'held in care'***
- ***A person held in care includes individuals in the control, care or custody of the Police or Prison Service, or the Chief Executive Officer of the Department for Community Development under the Children and Community Services Act 2004. It also includes individuals admitted to a centre under the Alcohol and Drug Authority Act 1974; a person who is an involuntary patient under the Mental Health Act 1996, or who is apprehended or detained under Part 3 of that Act; as well as an individual detained under the Young Offenders Act 1994.***
- ***The death appears to have been caused or contributed to while the deceased was held in care (as defined in the above paragraph);***
- ***The death appears to have been caused or contributed to by any action of a member of the Police Force;***
- ***The deceased is a person whose identity is unknown;***

¹ <http://intranet.health.wa.gov.au/lisd/coronial/index.cfm>

- *The death occurs within Western Australia but the cause of death has not been certified under section 44 of the Births, Deaths and Marriages Registration Act 1998*
- *Section 44 requires the medical practitioner who immediately before death was responsible for the medical care of the deceased or of the mother of a stillborn child, or who examined the body after death, to complete and sign a medical certificate of cause of death within 48 hours of the death, and provide the certificate to the funeral director. However, the medical practitioner is not required to issue a certificate of cause of death in circumstances in which the death is reportable to a Coroner;*
- *The death occurred outside Western Australia but a medical practitioner legally qualified as such in the place concerned has not issued a certificate of cause of death;*
- *In the opinion of any medical practitioner present at or soon after death, the cause of death cannot be determined or the death has or may have occurred under suspicious circumstances.*

A 'Western Australian death' is a death:

- *that occurred in Western Australia; and*
- *where the body is in Western Australia; or*
- *where the cause of death occurred in Western Australia; or*
- *where at the time of death, the deceased ordinarily resided in Western Australia; or*
- *where the deceased is a person in an industry to which the Industrial Relations Act 1979 applies due to the operation of section 3 of that Act. For example, an employee of an oil rig company with connections to Western Australia but operating offshore.*

It is open to any person to report to a Coroner or member of the Western Australian Police Force where they believe a 'reportable death' has or may have occurred. In addition, the Coroners Act imposes a legal obligation on the following persons to report deaths that are or may be 'reportable deaths' under the Coroners Act:

- *Any person who has knowledge of an actual or possible 'reportable death' must immediately after he or she becomes aware of it, report the death to a Coroner or a member of the Western Australian Police Force unless there are reasonable grounds to believe the death has already been reported;*
- *Any medical practitioner present at or soon after an actual or possible 'reportable death' must report the death immediately to a Coroner if:*
 - *the medical practitioner is unable to determine cause of death; or*
 - *in the opinion of the medical practitioner, the death has occurred under any suspicious circumstances;*
- *Where immediately before death the deceased was a person held in care, the person under whose care the deceased was held must immediately report the death to a Coroner.*



During the past year there has been increasing engagement of health services in quality improvement resulting in increased reporting and investigations into possibly preventable deaths.

From these investigations some important issues have arisen that relate to the Coronial process. These have been addressed by the Office Safety and Quality in Healthcare's Coronial Liaison Unit. The general principle that applies is to separate the Coronial (legal) process from the quality improvement (health) process. Most issues can be defined and resolved by referring to the guidelines around *the Act*.

The following are frequently asked questions that were addressed by OSQH during 2008/09:

Q: Is failure to report a 'reportable death' to the Coroner a Sentinel Event?

This question arises from circumstances where cases are reported to the OSQH as Sentinel Events because of concerns that medical practitioners failed to identify that the death was a reportable death as defined by *the Act*.

A: Failure to comply with *the Act* is not a Sentinel Event and is not managed within the health system as a quality improvement process. The most appropriate action would be for the person who identified that the death may be reportable to discuss reporting with the Coroner's Office and, if necessary to make a formal report. Note that failure to report a 'reportable death' is an offence, in respect of which a fine may be imposed.

Q: If during an investigation there is a late discovery that a death is reportable to the Coroner is this still a 'reportable death'?

This question can arise during a quality improvement investigation when new information indicates the death was a 'reportable death'. This discovery is typically made several weeks after death when certificates have been signed and the patient buried or cremated.

A: There is a responsibility to report at the time when knowledge of an actual or possible 'reportable death' is available, **unless** there are reasonable grounds to believe the death has already been reported. The investigating team who make the discovery have a responsibility to report.

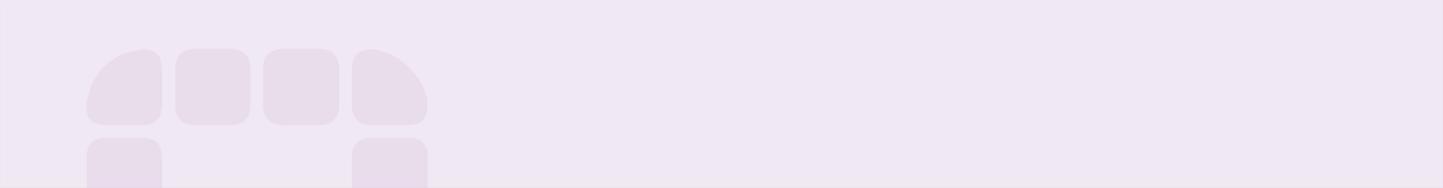
Q: If a patient is transferred to another State for treatment and they die there, is this death reportable to a WA Coroner and who is responsible for making the report?

This question arises from circumstances when patients are transferred interstate or overseas and die.

A: If the deceased's ordinary residence was Western Australia the Act identifies this as reportable to the WA State Coroner even if death has occurred outside of WA.

Summary points

- *The legal Coronial process is separate to the health quality improvement process.*
- *Within WA Health if there is uncertainty about reportable deaths and the responsibility to report, guidelines to the Act can be found at <http://intranet.health.wa.gov.au/llsd/coronial/index.cfm> or by contacting the Office of the State Coroner.*
- *Failure to report a 'reportable death' to the Coroner is not a Sentinel Event.*
- *Responsibility to report a 'reportable death' relates to knowledge and is not limited by time or person.*
- *If a deceased's ordinary residence was Western Australia it is classified as a 'West Australian Death' and potentially reportable to the WA Coroner, even if the death occurred outside of WA.*



Inquest into the deaths of twenty-two Kimberley Aboriginal people

Key Message:

- ***The Aboriginal Kimberley people are suffering a complex social and health crisis.***

In February 2008 State Coroner, Alastair Hope, released his inquest findings into the deaths of twenty two Aboriginal people from the Kimberley region of Western Australia. This inquest was conducted in the setting of an increasing suicide rate in Aboriginal Kimberley people and deaths that appeared to have been caused or contributed to by alcohol and cannabis use.

The inquest focused on what was found to be extreme distress and psychological pain being suffered by many Aboriginal people in the Kimberley.

In relation to Aboriginal Kimberley people, the Coroner noted:

- An increase in self harm rates compared with the non-Aboriginal population, which was particularly noted in Fitzroy Crossing;
- Appallingly bad living conditions for many, and in particular children;
- High rates of fetal alcohol syndrome.

Evidence at the inquest in relation to Aboriginal Kimberley people revealed:

- No realistic leadership or coordination and a lack of accountability from any agency in response to living conditions;
- That from birth to death Kimberley Aboriginal people suffer from very poor health compared to other Western Australians;
- A widening 'gap' in wellbeing between Aboriginal and non-Aboriginal people despite funded Commonwealth and State programs targeting indigenous people;
- No single individual or organisation in government responsible for achieving outcomes for Aboriginal people;
- Levels of educational achievement with skills inadequate for employment in the majority of students;
- Public housing is in a disgraceful condition;
- Aboriginal people are experiencing a health crisis;
- Alcohol abuse as the cause and as a result of many of the problems facing many Aboriginal people;
- Serious challenges and extreme difficulty in providing comprehensive mental health and drug and alcohol care.



Mr. Hope's comments follow:

'In concluding, I adopt as appropriate to the living conditions of Aboriginal people in the Kimberley, the comment of the then South Australian State Coroner, Mr Wayne Chivell, who having referred to socio-economic factors faced by Aboriginal people in remote regions of South Australia including poverty, hunger, illness, low education levels, unemployment, boredom and feelings of hopelessness, observed,

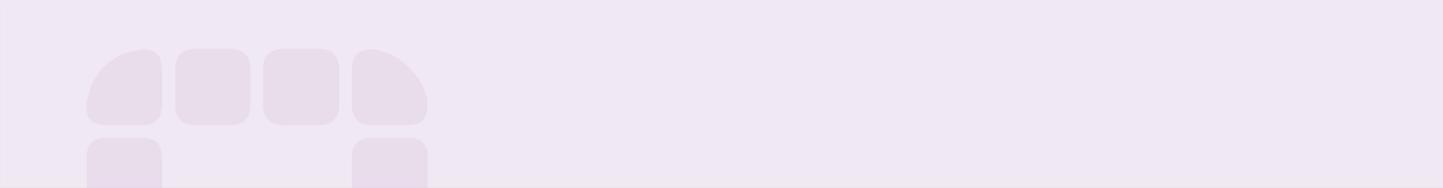
"That such conditions should exist among a group of people defined by race in the 21st century in a developed nation like Australia is a disgrace and should shame us all".

This inquest (has) not only highlighted the fact that urgent action is called for to address these living conditions, but also revealed that there is strong support for change among a wide range of committed and dedicated people throughout Western Australia and particularly from many Aboriginal people.'

The inquest documents the cause of death of 22 people and makes 27 recommendations for multiple government departments.

Reference: Kimberley Report on Miscellaneous Aboriginal Deaths

See also: Kimberley Power Point slides



Head Injury due to intoxication in a regional hospital

Key messages:

- ***The management of patients with head injuries who are intoxicated is challenging;***
- ***A period of observation and an assessment of competence should guide decisions about discharge;***
- ***Physical restraint and sedation may be needed to manage patients appropriately;***
- ***Reasonable access to early CT scanning is the standard for all patients with significant head injury;***
- ***Guidelines for the management of head injured patients and the indications for CT scanning are available.***

A man in his 40s presented to a regional hospital Emergency Department following a series of closed head injuries while intoxicated with alcohol consumed over the previous 36 hours. On one occasion he fell from a bar stool after which he was observed to be bleeding from the ear. In the hospital he was intoxicated and aggressive, and could not be managed with the resources available. He was advised to stay for observation but he refused. Head injury advice sheets were provided and he was discharged accompanied by a friend.

The man and his friend returned to a social event where he displayed erratic behaviour for a period of time before falling asleep on a trampoline in full view of the party. The social event ended, and he was left to sleep. The following morning he was unrousable, then later found deceased.

Post mortem examination revealed a fractured base of skull, significant alcohol intoxication and fatal head injuries.

At inquest the Deputy State Coroner, Evelyn Vicker, noted:

- The deceased had a very high tolerance to alcohol and was well known for his erratic behaviour;
- The deceased had a series of alcohol related closed head injuries in the 36 hours before he presented to the hospital;
- There were indications for admission and observation when the deceased presented to the hospital, however this was not possible because the deceased's behaviour could not be controlled and there was no capacity at the hospital to restrain or sedate him;
- There were indications for urgent CT scanning around the time the deceased was at the hospital but this was not possible because the patient did not remain in the hospital for observation and the hospital had no CT scanner.

The Deputy State Coroner found that the death arose by way of accident. She commented that the care at the hospital, although understandable, was not optimal as the deceased should have been restrained with the assistance of security and a CT scan performed. She found the staff at the hospital were working in conditions that do not allow the provision of proper medical care.



The Deputy State Coroner made the following recommendations:

- That the hospital be funded for a CT scanner and ongoing staffing and maintenance for the scanner;
- That the hospital be adequately funded to provide appropriate care to patients in the developing region where it is situated;
- That the issue of adequate security for staff and patients be addressed immediately;
- That Head Injury criteria sheets are posted in the Emergency Department so they are obvious to patients as well as staff in stressful circumstances.

Reference: Kidner Inquest (If you require a copy of this report please email: safetyandquality@health.wa.gov.au or call 9222 4080)

See also: Kidner Power Point slides

Rapid investigation for gastrointestinal haemorrhage

Key messages:

- ***Gastrointestinal haemorrhage can be a rapidly progressing life threatening condition despite stabilisation after initial resuscitation;***
- ***Clinically determining whether a gastrointestinal bleed is upper or lower can be difficult;***
- ***There is a need to establish clear pathways for the emergency management and referral of patients with gastrointestinal haemorrhage;***
- ***Where emergency services are provided, clear lines of responsibility for 24 hour coverage need to be established.***

A man in his 60s presented to a tertiary hospital emergency department at night, in shock, following an episode of syncope due to a gastrointestinal bleed. He had symptoms consistent with both upper and lower gastrointestinal bleeding having mixed altered and fresh blood on rectal examination.

He was resuscitated and stabilised with intravenous packed cells and intravenous fluids. The patient was referred to surgical and medical (gastrointestinal) units and investigation was withheld until daylight hours.

Prior to investigation, the patient became hypotensive due to haemorrhagic shock. Urgent endoscopy could not be arranged and the patient remained in the Emergency Department. He died from peptic ulceration with secondary gastrointestinal haemorrhage despite aggressive attempts at resuscitation.

The inquest revealed that:

- The patient had a recent history of abdominal pain diagnosed as constipation in a general practice setting as well as a peripheral hospital emergency department;
- The patient had been self medicating with aspirin and ibuprofen but did not report this when initially asked about his usual medications;
- There was clinical uncertainty about whether the patient was suffering an upper or lower gastrointestinal haemorrhage that resulted in referral to both medical and surgical teams. Uncertainty arose from this situation about which inpatient service was actually managing the patient;
- Urgent endoscopy was indicated after the initial resuscitation in ED but had not been requested by the medical or surgical teams. When urgent endoscopy was requested after the patient's second period of instability it was not immediately available because staff with endoscopy skills were already committed to their day's work;
- There was inconsistency between medical and nursing documentation and that some of the medical documentation could be missing;
- The patient's death occurred by the way of natural causes but may have been preventable with timely and appropriate investigation and treatment.



It was demonstrated before the Deputy State Coroner that there can be difficulty accessing emergency surgical and gastroenterology services within office hours once day commitments are commenced unless dedicated cover for such events is pre-arranged. Since the patient's death, the hospital has revised its gastrointestinal haemorrhage protocol and formed an agreement with surgeons and gastroenterologists to improve cover for emergency procedures.

The Deputy State Coroner recommended that the proposed plans for a High Dependency Gastrointestinal Unit with safer endoscopy suites, with an extended Intensive Care Unit be progressed.

Reference: Fox Inquest

See also: Fox Power Point slides

Diabetic Keto-Acidosis (DKA) causing death

Key messages:

- ***Diabetic Keto-Acidosis is a preventable cause of death in young people;***
- ***Urinalysis is a very useful bedside test in acutely unwell patients; in this case for assessing both dehydration and the presence of Diabetic Keto-Acidosis;***
- ***Perceptions about waiting times in Emergency Departments should not influence decisions to send acutely unwell patients to hospital.***

A rural university student with a rare autoimmune condition became unwell with vomiting and lethargy over a 48 hour period. She was seen three times in general practice without having her urine checked in the 24 hours before her death and was treated for gastroenteritis and food poisoning. She suffered a cardio-respiratory arrest at home and was taken by priority one ambulance to the Emergency Department of a tertiary hospital where the diagnosis of Diabetic Keto-acidosis was made during her resuscitation. She did not respond to advanced resuscitation and died later that day in ICU.

The inquest identified that:

- The diagnosis of DKA was missed in the general practice setting; however, given the circumstances this was not unreasonable;
- Perceptions that people wait a long time in Emergency Departments and that tertiary hospital care can be accessed by General Practitioners may have influenced the patient's and the family's decision not to access hospital care directly;
- That if the deceased had presented to an Emergency Department at an earlier stage it is most likely the diagnosis of Diabetic Keto-Acidosis would have been made and death prevented by timely treatment.

The Deputy State Coroner found that death arose by way of Natural Causes and made the following recommendations:

- That the Royal Australian College of General Practitioners attempt to elevate awareness of sudden onset Diabetic Keto-Acidosis in young people;
- That General Practitioners not overlook the utility of urinalysis as a means of assessing both dehydration and the presence of Diabetic Keto-Acidosis;
- That General Practitioners understand and educate patients about the functions of the Emergency Department to prioritise care and provide access to specialist support;
- That General Practitioners consider that one rare autoimmune condition may indicate a propensity to another.

Reference: Halford Inquest

See also: Halford Power Point slides

Absconding from a Mental Health Unit

Key messages:

- ***Mental Health Services should utilise alerts for identifying patient's prior history of absconding from mental health care;***
- ***An order for release of an involuntary patient can only be made by a psychiatrist whilst the patient is detained and does not apply to a person who is absent without leave;***
- ***Illicit substance use can have harmful effects on the mental health of a patient;***
- ***Management of substance withdrawal is important in patient care.***

A woman in her 20s with an extensive history of drug induced psychosis, with mixed affective features associated with amphetamine and cannabis abuse, was admitted as an involuntary patient to a tertiary hospital mental health unit. The patient presented with psychotic symptoms including grandiose and religious delusional beliefs and had injected morphine the night before presentation. The patient had a prior history of absconding from the mental health unit.

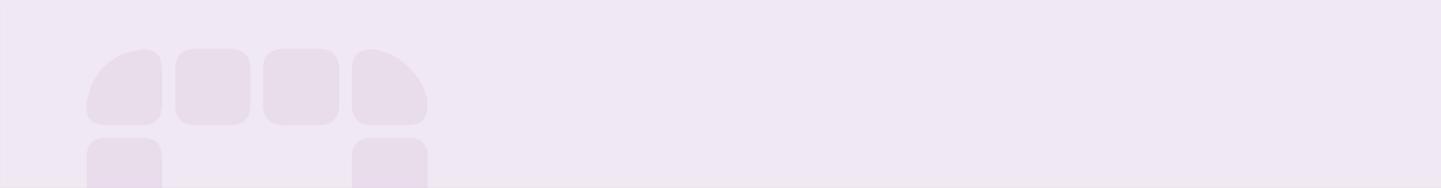
During the admission, the patient had persistent psychotic symptoms. The patient's usual methadone dose was initially given but subsequently withheld due to concerns regarding over-sedation.

Approximately one week after admission to the mental health unit the patient absconded from hospital. On the morning of the day she absconded, the patient did not sleep, became irritable, demanding and tearful, complaining of physical pain which she attributed to coming off methadone. However, she settled later in the day and was allowed nurse escorted ground access during which time she absconded.

The hospital notified the police but the patient was not located. The patient was listed by the hospital as absent without leave but was discharged after three days when she did not return. The patient was found deceased three days after she left hospital.

The inquest revealed that:

- The patient had died of a ligature injury to the neck (hanging) but had no other signs of injury;
- The patient had taken morphine, codeine, amphetamines and cannabis after absconding from hospital;
- The nurse escorting the patient at the time she left hospital was not aware of the patient's past history of absconding from the mental health unit;
- The patient was recorded on the police missing persons' database but police efforts to locate the patient were limited;
- Despite being absent without leave for three days, the deceased continued to be an involuntary patient pursuant to the terms of the Mental Health Act 1996 until a psychiatrist made a determination that she should not continue to be an involuntary patient.



The State Coroner noted that Section 52 of the Mental Health Act 1996 only enables a psychiatrist to order that a person who is “detained” no longer be an involuntary patient and the section does not apply to a person who is absent without leave.

The State Coroner was unable to determine how the death arose and recorded an open finding. He recommended that:

- Hospitals in Western Australia providing mental health services should ensure that their files, both paper and electronic, contain an alert section which records occasions on which an involuntary patient has absconded from hospital and the context in which the absconding took place;
- The mental health services policies and procedures manual relating to missing or suspected missing patients be amended.

Reference: Slater Inquest

See also: Slater Power Point slides

Heat stroke in an adult prisoner

Key Messages:

- **Heatstroke is a process by which the body's cooling mechanisms break down because the body can no longer lose heat by way of conduction, radiation or evaporation;**
- **Even otherwise fit healthy adults can suffer heat stroke when exposed to extreme heat conditions.**

An aboriginal male in his 40s was taken into custody in a remote town following a random breath test recording a blood alcohol level of 0.222%. The next morning he was well and received a visit from a family member before being transferred to a district custodial centre approximately 360km away.

Transfer occurred in a van near midday on a summer's day with an ambient temperature of above 40°C. The patient was supplied with a 600ml bottle of water and placed in an enclosed metal prisoner pod.

Approximately three and half hours into the journey the transport officers noticed that the prisoner had collapsed. The patient was taken to a regional hospital's emergency department.

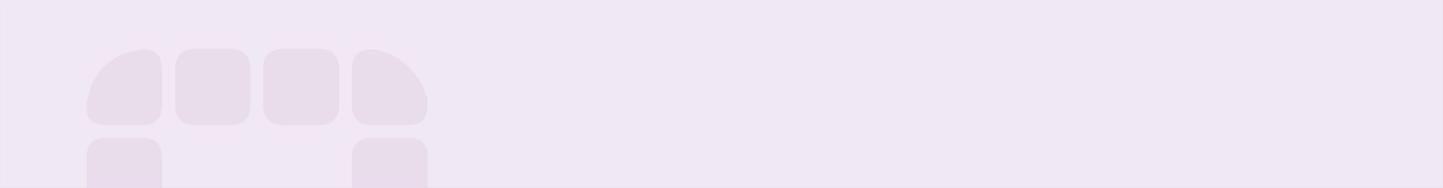
On arrival at the emergency department the patient was in cardio-respiratory arrest with non-reactive pupils and a core body temperature of 41.7°C. He had a laceration on his forehead and a large superficial burn on the right side of his abdomen. Advanced life support measures and aggressive active cooling with ice to the groins was commenced but despite ongoing resuscitation efforts and a brief return of supported circulation, the patient died.

Post mortem examination included an examination of the medical record and identified that he had died of heatstroke.

The inquest revealed that:

- The deceased was a central figure in his family and his community at Warburton who played a crucial role in forging relationships between his own community and non-Aboriginal communities in Western Australia and overseas. *"A man who had worked for many years to bring together Aboriginal people and non-Aboriginal people and to promote cross-cultural interaction."* (State Coroner)
- The deceased died from heatstroke as a result of being held in the rear pod of the vehicle in conditions of excessive heat.
- The burn had been caused by contact with the metal steel pod suggesting that the deceased was unconscious or at least in an altered state of consciousness during transport.
- Following an attempted re-enactment in slightly cooler weather conditions the air temperature in the rear pod of the van was over 50°C and that surface temperatures were as high as over 56°C.
- The transport vehicle was in a state of poor repair with a non-functioning air-conditioning system that was not designed to be used in remote locations in conditions of extreme heat.

The State Coroner stated that in his view, *"... the use of this pod for long distance travel was inhumane" and that "... it is a disgrace that a prisoner in the 21st century, particularly a prisoner who had not been convicted of any crime, was transported for a long distance in high temperatures in this pod."*



The State Coroner noted that he is precluded by section 25(5) of the *Coroners Act 1996* from making a finding which would appear to suggest that any person is guilty of an offence and so was not able to determine whether the death arose by way of unlawful homicide or misadventure. In that context he made an open finding as to how the death arose.

The State Coroner made a number of recommendations to legislators, the WA Police, the Department of the Attorney General, the Department of Corrective Services and prisoner transport service providers.

Reference: Ward Inquest

See also: Ward Power Point slides

Death from constipation

Key messages:

- ***Constipation in patients taking psychotropic medication may lead to death;***
- ***A detailed physical examination is part of the assessment of all patients, including those with a primary mental illness;***
- ***Shared care arrangements require roles and responsibilities to be clearly defined and understood.***

A female in her 40s was admitted as an involuntary patient to a regional hospital psychiatric facility following a relapse of her schizoaffective disorder. The patient had an extensive psychiatric history and had been admitted to the same mental health unit for long periods on previous occasions. The patient also had a history of constipation and an undiagnosed episode of collapse associated with vomiting black fluid three weeks earlier.

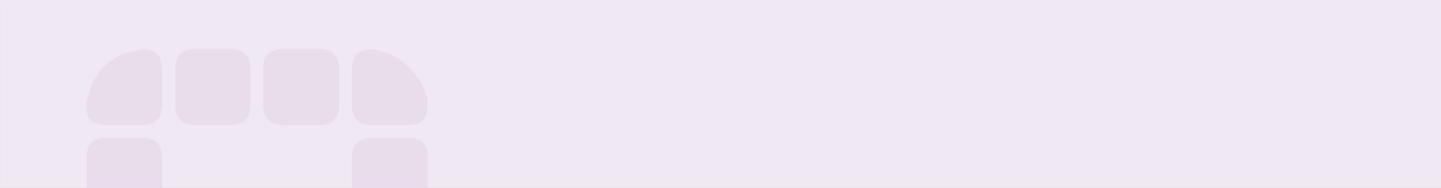
During the admission the patient's constipation worsened. Eleven days into the admission the patient complained of abdominal discomfort, then vomited faecal material. The patient was examined and found to be tachycardic and hypotensive with a distended abdomen. A diagnosis of acute bowel obstruction was made and the patient was transferred to a general ward. Chest and abdominal X-rays were taken which showed reduced lung capacity and impacted faeces respectively. A nasogastric tube was inserted.

The patient collapsed and aspirated. Intubation was attempted, respiratory support was given but the patient failed to respond to resuscitation and subsequently died.

The inquest revealed that the deceased:

- Died as a result of aspiration resulting from a bowel obstruction due to constipation;
- Was taking a cocktail of medications capable of causing constipation including Chlorpromazine, Olanzapine, Benztropine, Lamotrigine and Ferrograd C;
- Complained of her constipation on prior occasions although these complaints were not recorded;
- Had an abdomen that appeared distended and the extent of the distension would have been obvious on examination;
- Had not been physically examined at any stage during her admission to hospital because of uncertainty over the role of attending physicians in a shared care environment.

The State Coroner noted that there are multiple case reports in the literature of deaths in patients with psychosis due to constipation precipitated by medication. Most of the reported deaths are associated with clozapine; however other commonly used medications, particularly chlorpromazine and benztropine, also present a large anticholinergic burden and may cause constipation.



The State Coroner found that death occurred by way of misadventure and recommended that:

- For psychiatric involuntary patients a physical examination is conducted at a time when those patients have settled to the extent which would enable such an examination to be meaningfully conducted;
- For psychiatric patients receiving medications which can cause constipation, bowel charts are used to monitor this potential problem;
- The regional hospital's policies are reviewed to ensure that they clearly define the roles of visiting general practitioners and that steps be taken to ensure that any changes to those policies will be communicated to those practitioners.

Reference: Greeuw Inquest

See also: Greeuw Power Point slides



Lessons from the Quality Protection environment

Once again, in From Death We Learn, we are publishing cases that are subject to the restrictions of Quality Protection. Some of the following cases have been reported to, and investigated by the Office of the State Coroner as directed by the Medical Adviser to the Coroner. The Coronial Liaison Unit in the Health Department Office of Safety and Quality in Healthcare has access to the reports of the Medical Adviser to the Coroner within the limits placed by the Coroner's Ethics Committee. These limits are for the purpose of education and quality improvement only. At the time of publication there has been no Coronial inquest into these cases.

The other source of the material in this section is from hospital and health service investigations of possible preventable deaths reported to the Office of Safety and Quality in Healthcare. These are covered by Commonwealth Quality Protection (see Appendix).

Details allowing identification of individual patients or staff in this section have been removed.

Physical restraint and sedation

Key messages:

- ***Patients should not be prescribed infusions of Midazolam or other anaesthetic agents without being intubated and ventilated;***
- ***Any patient with a fall in Glasgow Coma Scale (GCS) > 1 point warrants medical review;***
- ***Any patient with GCS < 10 should have medical review and consideration of intubation and ventilation;***
- ***Emergency Departments should have protocols for the safe restraint and sedation of patients.***

An obese adult man with a history of recurrent psychosis presented to a rural centre Emergency Department by ambulance with the assistance of the police. He was noncompliant, and required physical restraint in order to prevent him leaving medical care.

The history available was that he had been prevented from attempting to hang himself. Examination revealed a man of approximately 130 kg with no physical injury; however, he was thought-disordered, disorganised, and anxious and identified auditory hallucinations. Observations recorded a tachycardia, orientation in time place and person, with a Glasgow Coma Score of 15.

A duty of care decision was made to sedate the man in order to prevent him leaving and harming himself, and he was referred to a psychiatric institution in Perth under the *Mental Health Act 1996*. He was initially sedated with intramuscular major tranquillisers [Haloperidol] and short acting sedatives [Midazolam]. Due to the location, transport could not be arranged for 6 to 8 hours.

The patient was difficult to restrain and sedate. After repeat doses of Midazolam and Haloperidol intramuscularly he received intermittent doses of intravenous Midazolam, then a Midazolam infusion. For the next four hours he was managed in the Emergency Department on oxygen 10 l/min by mask with ECG and oxygen saturation monitoring. Observation charts record a progressive fall in GCS from 15 on arrival, to 8.

When the transport service arrived, positional upper airway obstruction and poor airway reflexes were noted. The respiratory rate is recorded as 15 and GCS 6. He was intubated and ventilated for transport direct to a metropolitan ICU where chest x-ray identified right upper lobe pulmonary collapse and possible aspiration.

The patient remained on ICU for 5 days being treated for aspiration syndrome and sepsis. He was discharged extubated to the medical ward on day 6 awaiting psychiatric review. While mobilising on the ward he had a cardio respiratory arrest and died. Post mortem examination identified the cause of death as pulmonary embolus.

Review of the case identified that the quality of the patient's care could have been improved in the rural centre as it was during the period of sedation without airway protection when aspiration most likely occurred.

Percutaneous Endoscopic Gastrostomy (PEG) Tube Reinsertion

Key Messages:

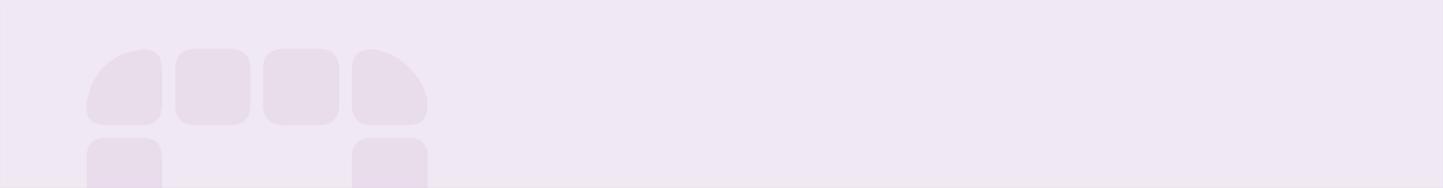
- ***PEG tube tracts close quickly and re-insertion of a new PEG through an existing tract is not always successful;***
- ***Within the first 3-4 hours gentle attempts at placing a PEG tube or soft catheter to maintain the patency of a well formed tract is appropriate;***
- ***Delayed attempts, forceful insertion, the use of an introducer or stylet, and insertion into a newly formed tract have a high rate of complication and should be avoided. Surgical referral for endoscopic management while addressing the patient's hydration is indicated;***
- ***If there are concerns about PEG placement abdominal X-ray after injecting contrast down the PEG tube will identify whether the tube enters the stomach.***

A man with multiple co-morbidities in his 80s had been receiving PEG tube feeds for several years following a cerebrovascular accident. He was taken to hospital by his carer as his PEG tube had fallen out. The PEG tube had been displaced some 12 hours earlier and the patient was dehydrated and had not been fed.

The PEG tube was well established and had fallen out and been replaced on several previous occasions, but never after a 12 hour delay. On one previous occasion a Foley catheter had been inserted by a trained carer to keep the tract open prior to re-insertion of a replacement PEG tube.

On this occasion replacement of the PEG tube failed on two occasions. On the third occasion a stylet was used in an attempt to dilate the PEG tract. The procedure was thought to be successful and a PEG feed with additional water was commenced immediately as the patient had not been fed all day and was dehydrated. This was stopped when the patient developed abdominal pain, and became cold and clammy. Chest and abdominal X-rays were normal. A CT scan with contrast medium was subsequently performed showing the PEG tube and contrast in the peritoneal space outside of the stomach. The patient's condition deteriorated and due to the patient's co-morbidities he was unfit for surgery. After discussion with family he was managed palliatively and died.

This case raised a number of concerns. The long period the PEG had been out did not prompt a referral for endoscopic management while the patient's immediate needs for hydration were managed. Multiple attempts at re-insertion were attempted including the use of a stylet. No test to confirm tube placement was done prior to feeding.



Remote and Regional Critical Care Transfers

Key messages:

- ***Patients should be transferred to tertiary centres on the basis of clinical need rather than bed availability;***
- ***An Intensive Care Unit (ICU) that is full has a responsibility to identify their limited capacity with hospital administration and to ensure that the best interests of referred patients are served.***

A critically unwell patient presented to a regional district hospital Emergency Department staffed by a local General Practitioner (GP) and two nurses. Appropriate resuscitation and management was delivered with the support and advice of a tertiary hospital specialist and it was determined after an hour that the patient required urgent transfer by air to an Intensive Care Unit (ICU).

The air transport operator was contacted, however, this was not sent because the destination for the patient was not known. The GP then spent two hours on the telephone contacting, and re-contacting all tertiary ICUs in the metropolitan area in an attempt to locate a bed while simultaneously managing the clinical needs of the critically ill patient. Once this had been done a helicopter transported the patient to the appropriate hospital. The patient subsequently died 4 days later in a tertiary ICU.

This case highlights that communication and resource disparities between metropolitan and rural medical services have the potential to impact on patient care. Review of the case determined that, given the resources available at the district hospital, the patient was well managed. However, inappropriate delays in transport were identified. Recommendations were made that patients should be managed and transported on the basis of clinical priority rather than of ICU bed availability. Transport operators subsequently confirmed that transport would be tasked and patients transported on the basis of clinical priority regardless of bed availability.

This case is one of a group that has led to an examination of operations within the limits of current ICU bed capacity.

ICUs declare themselves full when:

- all beds are occupied by patients requiring ICU with no capacity to move any patients; or
- all beds are occupied but with some patients who could be stepped down to lower care but lower care beds are not available; or
- all beds are not occupied but occupancy of the unit is limited by lack of appropriately trained nursing staff.

A quality improvement process addressed systemic communication and functional arrangements. This review identified: that patients should be transferred to tertiary centres on the basis of clinical need rather than bed availability; that ICUs operating at or near capacity should take action by addressing local access and staffing priorities; that hospital administrations should have the capacity to identify vacant ICU beds in other metropolitan hospitals; and that if all public ICU beds are full then hospital executives need to consider solutions such as contracting private beds.



Appendix: Quality Protection

Quality improvement or quality assurance is a process of continually reviewing and evaluating patient care and patient outcomes using a variety of data sources to identify where care can be improved. The overall aim of quality improvement is to enhance the healthcare services provided to the community and reduce the risk of adverse events.

Quality improvement encompasses a wide range of activities and includes remedial action following activities such as morbidity and mortality audits, clinical audit, investigation of serious adverse events, and monitoring the rates of selected adverse events and comparing them against expected rates.

Effective quality improvement processes require open communication and acknowledgment of where care processes and outcomes can be improved. Some health care professionals may be reluctant to engage in this process because they fear that:

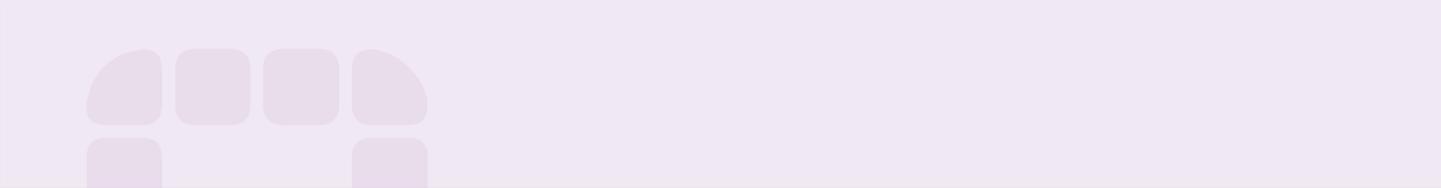
- the information gathered for critical review may be used to pursue legal proceedings against them; and,
- participation in the assessment and evaluation of services provided by other health care professionals may result in legal action being brought upon them by those individuals.

Legislation has been passed in Western Australia, other states and territories, and at the Commonwealth level, which seeks to encourage health care professionals to participate in quality improvement activities by providing for:

- confidentiality of some documents and proceedings of quality improvement committees;
- protection from these documents and proceedings being used in legal actions; and
- protection against legal liability for people who were acting in good faith in carrying out their responsibilities.

Western Australian qualified privilege scheme

The *Health Services (Quality Improvement) Act 1994* encourages health professionals to participate in quality improvement processes aimed at improving the quality of health care. The Act prohibits the disclosure of information that identifies, either directly or by implication, individual health care providers and/or patients. Individuals who acquire information solely as a result of the performance of the committee's functions are protected from the compulsion to give evidence, and documents produced solely for the purpose of the committee activities are not admissible in legal proceedings. Source documents that are not created specifically for the purposes of the committee (medical records for example) are not protected by the provisions of the legislation.



Commonwealth qualified privilege scheme

The Commonwealth qualified privilege scheme encourages health professionals to participate in quality improvement activities by providing two main areas of protection. It protects the confidentiality of information that identifies individuals known solely as the result of declared quality assurance activities, and the scheme offers protection from civil proceedings to people who participate in the declared quality assurance activity. For further information on the Commonwealth qualified privilege scheme please go to the Department of Health and Ageing website Programs and Initiatives section (www.health.gov.au). For State and Commonwealth qualified privilege information, please go to the Office of Safety and Quality in Healthcare website: <http://www.safetyandquality.health.wa.gov.au/>.

The investigation and analysis phase of the Advanced Incident Management System (AIMS) is a quality assurance activity that is declared under the *Health Insurance Act 1973*. AIMS is in place in all public hospitals and health services across Western Australia. It covers reporting, investigation, analysis and monitoring of clinical incidents that occur as a result of healthcare or related systems, and predominately involves patients. The goal of AIMS is to improve healthcare delivery. Incident reporting enables staff to commence investigations to identify the factors and system errors that may have caused or contributed to the occurrence of the incident. Preventative measures can then be put in place to protect patients from similar events in the future.

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