QUEENSLAND COURTS

CORONERS COURT OF QUEENSLAND

FINDINGS OF INQUEST

CITATION:	**Inquest into the death of Roy Rodney Jacobs**
TITLE OF COURT:	Coroners Court
JURISDICTION:	Brisbane
FILE NO(s):	2016/3642
DELIVERED ON:	23 November 2017
DELIVERED AT:	Brisbane
HEARING DATE(s):	5 May 2017, 25-27 October 2017
FINDINGS OF:	Ainslie Kirkegaard, Acting Coroner
CATCHWORDS:	Coroners: rural hospital, failure to recognise & respond to clinical deterioration, early warning & response systems, Queensland Adult Deterioration Detection System (Q-ADDS), effective clinical communication, escalation of clinical concerns

REPRESENTATION:

Counsel Assisting:	Ms Melinda Zerner
Counsel for Mr Jacob's family:	Mr Henry Trotter (instructed by Aboriginal and Torres Strait Islander Legal Service)
Counsel for Darling Downs Hospital Health Service:	Mr Matthew Hickey (instructed by Minter Ellison Lawyers)
Counsel for Nurse A, Nurse C & RN Monaghan:	Ms Sally Robb (instructed by Roberts & Kane Solicitors)
Dr Sharon Maja	Ms Stephanie Gallagher (Corrs Chambers Westgarth)

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Introduction

Roy Rodney Jacobs was a 48 year old Aboriginal man who died unexpectedly at the Cherbourg Hospital in the early hours of 31 August 2017.

Roy was one of nine siblings and the only son of Elizabeth Jacobs. Mrs Jacobs described him as a good son who was always respectful towards her. Roy had seven children and 24 grandchildren. Although he was living in Brisbane at the time of his death, he was wanting to spend more time with them in the community.

Roy had travelled from Brisbane to Cherbourg on Friday 26 August 2016 to attend a funeral. He consumed alcohol at a gathering and had a fall while intoxicated.

Roy presented to the Cherbourg Hospital on three occasions after that fall – 28, 29 and 30 August – and was admitted to hospital on the final presentation for treatment of pneumonia. He was found unresponsive, not breathing and pulseless at 5:08am on 31 August. Unfortunately, despite emergency resuscitation efforts, Roy was unable to be revived.

The investigation

Roy's death was initially reported to police as the cause of his sudden unexpected death was unknown. The locum doctor subsequently issued a cause of death certificate attributing the death to lobar pneumonia due to cirrhosis of the liver due to alcoholic gastritis.

The then Deputy Registrar of the Coroners Court of Queensland was concerned that while Roy may have had pneumonia, the proposed antecedent causes did not logically explain the pneumonia. Further, no mention was made of any trauma, which appeared to have been at least a precipitating factor. For these reasons, the Deputy Registrar declined to accept the cause of death certificate and ordered a coronial autopsy.

Roy's mother subsequently expressed concerns about the circumstances in which he died.

The Darling Downs Hospital & Health Service (DDHHS) was given an opportunity to review the care provided to Roy during his three presentations and final admission to Cherbourg Hospital. The DDHHS undertook a SAC 1 Human Error and Patient Safety (HEAPS) analysis. The review team comprised a senior medical officer and a registered nurse from different rural hospitals within the DDHHS, an indigenous health worker, a workplace health and safety advisor and a patient safety clinical nurse consultant. In essence, the review team identified a range of issues culminating in a missed diagnosis and failure to recognise and respond to clinical deterioration. Specifically, it appeared to the review team that the clinical focus was possibly on Roy's intoxication/alcohol withdrawal rather than other possible causes; no thought had been given to excluding possible cardiac issues for his presentations; there was a failure to recognise Roy was seriously unwell when he re-

presented on 30 August 2016 and once admitted, nursing staff failed to appropriately monitor and escalate Roy's condition for medical review.

The review team considered these issues in the context of the then current clinical staffing model at Cherbourg Hospital – while the nursing staff were considered to have considerable experience, either in Cherbourg or at other rural centres, the medical staffing was provided by locums at the time of Roy's presentations, with the permanent medical officer absent on professional development leave.

The review team also considered the broader patient acuity mix and staff rostering over the course of Roy's admission. It identified nursing-medical officer interaction as impacting on clinical communication that night and that the failure to perform regular nursing observations and escalate Roy's condition for medical review occurred in spite of existing clinical guidelines for recognising and responding to clinical deterioration and escalating clinical concerns.

The investigation was further informed by independent emergency physician review and opinion provided by Dr Greg Treston, Director of Emergency Medicine, Mater Misericordiae. Dr Treston has significant experience working in regional and rural emergency department settings, both in the Northern Territory and throughout Queensland. In summary, Dr Treston considered:

- the care provided to Roy on his first presentation to the emergency department on 28 August 2016 was of a reasonable standard

- the care provided to Roy on the second emergency department presentation on 29 August was of a slightly lower, but still acceptable standard, and understandable in the context of the presentation

- the management of Roy's third presentation on 30 August was inappropriate as notwithstanding his markedly abnormal vital signs, there was no apparent consideration of alternative diagnoses or discussion with either a referral centre such as Toowoomba Base Hospital or an experienced critical care physician - having regard to the documentation of Roy's initial assessment on this occasion, Dr Treston considered his condition was such that his required care would overwhelm the available resources at Cherbourg Hospital without a rapid improvement in the hours after admission.

The doctors and nursing staff involved in Roy's care were asked to provide formal statements responding to the issues identified by the HEAPS analysis. The DDHHS was asked to provide a statement outlining its progress in implementing changes at Cherbourg Hospital to address those issues. Mrs Jacobs also provided a statement outlining her knowledge of Roy's condition and attendance in the emergency department on 30 August 2016.

Autopsy results

An external examination and full internal autopsy was performed at the Toowoomba Hospital mortuary on 7 September 2016.

The autopsy revealed left rib fractures (6^{th}-8^{th} left ribs and posterior auxiliary line), cirrhosis of the liver and lipoid pneumonia which the pathologist explained is frequently associated with aspiration of food, vomit or foreign material. There was severe triple vessel coronary artery disease with greater than 90% narrowing of the left anterior descending branch of the left coronary artery which contained thrombus. Toxicological analysis of the admission blood sample detected only paracetamol and a small amount of codeine. No alcohol was detected.

Having regard to the autopsy findings and the clinical history, the pathologist determined the cause of death to be coronary artery disease precipitating acute myocardial infarction (heart attack) resulting in cardiac arrhythmia and death.

The inquest

The inquest was held over two days, 25-26 October 2017. The medical and nursing staff involved in Roy's care gave evidence, as did Dr Treston, the Director of Nursing, Roslyn Hansen and the current Medical Superintendent of Cherbourg Hospital, Dr Robin Cooke. Mrs Jacobs also gave evidence and, other family members and friends were present throughout the hearing.

In addition to the findings required by the *Coroners Act 2003*, s. 45(2), the inquest examined issues arising from Roy's clinical management at the Cherbourg Hospital including:

(a) the adequacy of the management of Roy's multiple emergency department presentations and subsequent admission to the Cherbourg Hospital over the period 28-31 August 2016

(b) the appropriateness of the response of the Darling Downs Hospital and Health Service to the circumstances of Roy's death including measures to enhance the management of patients presenting with apparent intoxication, recognition and response to clinical deterioration and medical officer staffing at Cherbourg Hospital.

I have been greatly assisted by Counsel Assisting's detailed submissions, prepared without the benefit of a transcript, and those provided by Counsel representing the DDHHS, the various clinicians involved in Roy's care and the family. Dr Maja relied on the submissions made by Counsel Assisting.

Clinical narrative and discussion of inquest issues

Cherbourg Hospital – capacity and staffing model as at August 2016

Cherbourg is an indigenous community with a population of approximately 2000 people. Cherbourg Hospital is a small rural hospital which provides

most of the primary care for the community. The current Medical Officer Orientation Manual describes it as a 17 inpatient bed facility comprising male, female and paediatric wards, a higher acuity ward and a special needs bed. It has an emergency department with two beds and one quiet room. It also provides outpatient department clinics.

As at August 2016, Cherbourg Hospital was staffed by locum Senior Medical Officers (SMOs) on 1-3 week rotations. These doctors also staffed the nearby Murgon Hospital. The Senior Medical Officer shifts at the Cherbourg and Murgon Hospitals were divided into a day shift (8:00am – 4:30pm), an afternoon shift (midday – 8:30pm) and an on-call shift (8:30pm – 8:00am).

There were usually two SMOs working at the Cherbourg and Murgon Hospitals during the day-afternoon shifts, with one at Murgon and the other at Cherbourg. Only one SMO would be on call each night.

It was usual for the inpatient wards to be staffed during the day and evening shifts with 2-3 registered nurses or a combination of registered nurses and enrolled nurses, and for the emergency department to be staffed with one registered nurse or clinical nurse.

Nurse A has been working at Cherbourg Hospital for 20 years. She confirmed there were no permanent medical officers at Cherbourg Hospital as at August 2016. She described the impact of this on the local community for whom consistency of clinical staff was important as it was the community's first 'port of call' for health care – locum medical officers would be gone just as the community became used to them being there. Nurse A also explained that three-quarters of the senior nursing staff had left Cherbourg Hospital in 2015, leaving a situation in which at one stage, seven of the 22 nursing staff were agency staff. It is something the hospital is still recovering from as it has been difficult to recruit senior nursing staff.

Q-ADDS – Queensland Adult Deterioration Detection System

The Queensland Adult Deterioration Detection System (Q-ADDS) is a standardised vital signs or observation chart used in many Queensland public hospitals with the specific aim of detecting patient deterioration.

In essence, the Q-ADDS chart presents the most important vital signs for detecting patient deterioration - respiratory rate, oxygen saturation, oxygen flow rate, blood pressure, heart rate, temperature and level of consciousness. Each vital sign is presented as a separate graph. The chart incorporates a system for tracking changes in the patient's vital signs over time. It integrates both a single parameter system (in which an emergency response is required when any single observation is plotted outside the given range) and a multiparameter system (in which each vital sign is scored and then summed to produce a total score representing an indication of the patient's condition). The total score triggers a list of actions required when thresholds for abnormality are reached. Depending on the severity of the patient's score, the chart triggers actions ranging from notifying the nursing team leader, increasing the frequency of observations, escalating the patient for medical

review within a certain timeframe to initiating an emergency call – a higher Q-ADDS score requires higher levels of intervention. In this way, the Q-ADDS tool positions clinicians involved in a patient's care to track vital sign changes over time with a view to identifying clinical deterioration and appropriate interventions in a timely and consistent way.

As Counsel for the DDHHS observed, the instructions on the Q-ADDS tool are expressed in plain, prescriptive English, capable of being understood by any reasonably proficient reader.

The Deputy State Coroner considered the development, purpose and function of the Q-ADDS tool in his findings of the joint inquest into the deaths of Verris Dawn Wright and Jasmyn Louise Carter (Carter-Maher).[1]

The Q-ADDS Acute or Emergency Department, Children's Early Warning Tool (CEWT) Acute or Emergency Department and Queensland Maternity Early Warning Tool (Q-MEWT) are the standardised vital signs charts used within the DDHHS.

As at August 2016, the Rural and Remote Emergency Q-ADDS and the Q-ADDS for rural and remote facilities were in use for adult patients at Cherbourg Hospital.

Extent to which Roy was previously known to Cherbourg Hospital

The Cherbourg Hospital records show Roy had presented there intermittently over the years. He was well known to Nurse A who described him as a loveable man who presented over the years when he was sick.

Roy is documented as having an extensive history of alcohol misuse. Over the 12 months preceding his death, Roy had presented to the emergency department several times and was noted to be intoxicated on each occasion:

- On 18 December 2015, he presented intoxicated and hearing voices. He declined to see the Alcohol and Other Drugs Service (AODS) and left without being seen.

- On 21 February 2016, Roy presented intoxicated and requesting detox. He was admitted overnight but self-discharged the next day after being seen by AODS and declining inpatient detox.

- On 17 April 2016, Roy presented with a forehead laceration after a fall while intoxicated. He was admitted overnight and noted to have been experiencing chronic abdominal pain. The clinical impression included pancreatitis/alcohol gastritis. He underwent CT imaging of his head, abdomen and pelvis which revealed no intracranial abnormality, evidence of hepatic cirrhosis and mild splenomegaly, and a gallstone.

[1] Findings of inquest into the death of Verris Dawn Wright and Jasmyn Louise Carter (Carter-Maher) paragraphs 18-22 http://www.courts.qld.gov.au/__data/assets/pdf_file/0004/435073/cif-wright-vd-carter-jl-20150828.pdf)

Blood test results showed impaired liver function. Roy self-discharged to return to Brisbane on 19 April. He was given an abdominal ultrasound request form and advised to see a doctor in Brisbane as soon as possible.

First presentation to Cherbourg Hospital – Sunday 28 August 2016

Roy had travelled from Brisbane to Cherbourg on Friday 26 August 2016 to attend a funeral. He was drinking alcohol at a private residence that evening. At some stage he was observed to be lying on the grass. He told the host of the party he had tripped and fallen off the edge of the driveway due to his intoxication. Following Roy's death, police investigated this account and I am satisfied there are no suspicious circumstances surrounding the fall.

Roy presented to the Cherbourg Hospital by ambulance at around 9:30am on Sunday 28 August.

Roy was initially assessed by Clinical Nurse (CN) Allan Gray. CN Gray had been employed full time at Cherbourg Hospital since completing a 12 month graduate nurse program with DDHHS in 2013.

CN Gray recalled Roy being brought into the emergency department and telling him he had been intoxicated the previous night, had a fall and injured his ribs. At that time Roy did not appear to be intoxicated and did not smell of alcohol. He was co-operative with the assessment.

CN Gray took his vital signs which were noted to be within the normal range. He listened to Roy's chest, noting equal air entry on both sides. Roy's oxygen saturations were around 98% on room air. When entered on the ED Q-ADDS chart, Roy's vital signs scored 1 because his systolic blood pressure was 105.

Roy scored his pain as 7/10. This caused CN Gray to triage him as Category 3 meaning ideally he should be assessed within the next 30 minutes. CN Gray says he explained that the doctor was currently on the ward round but he wanted Roy to stay and see the doctor has he may order further investigations such as a chest-x-ray. Roy appeared to understand this and agreed to stay.

CN Gray did not consider there was any clinical indication at that time for immediate medical review. He went to the ward and interrupted the ward round in order to obtain an order for analgesia. He says he gave the locum medical officer, Dr Allan Nhapi, a summary of Roy's presentation and received a verbal order for analgesia. Dr Nhapi advised he would review Roy after the ward round was finished.

CN Gray returned to the emergency department and administered Paracetamol/Codeine to Roy, as prescribed by Dr Nhapi. He told Roy there would be a short wait as the doctor was finishing the ward round and explained that even though the pain medication might help the pain, he still wanted Roy to stay to be seen by the doctor. Roy agreed to wait. CN Gray then attended to other patients presenting at the triage area.

At around 10:30am, CN Gray went to take further observations from Roy but was unable to locate him. Roy had left the hospital before being seen by Dr Nhapi.

Roy then walked to his mother's house and spoke with her and two other family members. Mrs Jacobs noticed he was holding his chest at this time.

Appropriateness of the management of Roy's first presentation

Dr Treston described Roy's presentation as frequent to emergency departments in regional Australia. He felt the assessment was adequate. He commented that at some hospitals an electrocardiograph (ECG) might be done but given the clear history of intoxication and a fall, in the context of normal vital signs, this would not be mandatory. In Dr Treston's experience, a proportion of patients who present with similar sorts of presentation will often refuse even simple investigations such as an ECG. He considered there was nothing unusual about the care provided to Roy given an ECG may have been very technically difficult to do and Roy self-discharged.

I am satisfied that Roy's presentation was managed appropriately on this occasion.

Representation to Cherbourg Hospital – Monday 29 August 2016

Roy represented to Cherbourg Hospital by ambulance the next day at 2:46pm.

The ambulance report indicates Roy told the attending paramedic he had fallen and struck his ribs approximately three days ago and he now had pain on breathing in and movement. He was noted to be intoxicated (with slurred speech, unsteady gait and an odour of beer and wine), refusing any treatment and demanding to be taken to hospital.

Roy's pain is described as sharp and aggravated by movement, cough and breathing in and relieved by resting. The ambulance report does not document his complete vital signs as he was 'combative'. He was noted to be short of breath with a GCS 15/15.

Roy was initially assessed by Nurse B, who was working a day shift in the emergency department. Nurse B had been employed at Cherbourg Hospital since early June 2016. She holds a post-graduate qualification in rural and remote advanced nursing practice and had previously worked in remote locations including Doomadgee and Longreach.

Dr Nhapi was rostered on at Cherbourg Hospital that day. He obtained his medical degree in Zimbabwe in 1995 and was made a Fellow of the Royal Australian College of General Practitioners in 2008. He has been performing locum medical officer work in Queensland since 2010 with placements of varying durations at locations including Mundubbera (18 months), Mossman, Yarrabah (six months), Palm Island (six months), Collinsville and Sarina. He had been working with Queensland Offender Health prior to taking a two week placement at Cherbourg and Murgon Hospital in August 2016. He could not

recall how long he had been working there prior to Roy's presentation that day but thought it was less than two weeks.

Neither Nurse B nor Dr Nhapi had treated Roy previously.

Nurse B recalled Roy walked into the emergency department with a paramedic. She noticed he was staggering. The paramedic told her Roy had fallen a few days earlier and was complaining of rib pain.

When she spoke to Roy she noted his speech was slurred, his breath smelt of alcohol and when questioned, he confirmed he had been drinking. She noted her impression in the chart that he was intoxicated. Roy was accompanied by his partner who Nurse B thought was also intoxicated.

Nurse B took Roy's vital signs at around 2:50pm noting them on the ED Q-ADDS chart as:

- alert
- blood pressure 130/80
- heart rate 120 beats per minute
- respiratory rate 13-20
- oxygen saturations 90-94% on room air
- temperature normal.

When entered on the ED Q-ADDS chart, these vital signs scored 3 because of the elevated heart rate and decreased oxygen saturations. Roy's neurological assessment was GCS 15/15. He scored his pain as being 7/10.

Nurse B said Roy was demanding admission for alcohol detoxification. He was not aggressive or argumentative though his partner was. Nurse B felt he was looking for a bed, somewhere to have a rest from drinking. She was not convinced he really wanted to detoxify from alcohol. She described this as a common presentation at Cherbourg Hospital usually managed with referral to AODS and medical officer review to assess whether hospital admission is required.

Nurse B examined Roy's chest noting he had no obvious bruising or swelling or any signs of a flail chest (multiple rib fractures). She noted he had increased pain on respiration and decreased oxygen saturations due to pain. His breathing 'looked all okay'. She documented her impression that Roy may have a fractured rib or contusion. Her plan was to administer pain relief and arrange both AODS and medical officer review.

She was not overly concerned about Roy's elevated heart rate as she attributed this to him being dehydrated after drinking for a few days. His pulse was regular. Given his presentation and history she did not consider an ECG was needed.

Nurse B spoke to Dr Nhapi at around 3:00pm and asked him to review Roy, which she says he did immediately. This is reflected in the Emergency Department Clinical Summary as the time Roy was seen.

Dr Nhapi had only a limited recollection of his attendance on Roy that day. However, he recalled that Roy was moderately intoxicated but could converse with him. Roy was complaining of pain in the left side of his lower chest which he told Dr Nhapi he had sustained after a fall. He recalls examining Roy's chest and listening to his chest sounds, which were present and clear, and there was no indication of infection, such as pneumonia. Dr Nhapi recalled his impression was that Roy had sustained a soft tissue trauma to the left side of his chest.

Dr Nhapi said he would have ordered a chest x-ray if he thought Roy had fractured ribs but he did not think this was the case. Nurse B did not find it unusual that a chest x-ray was not ordered; in her experience some doctors would but others would not because it would not change the management plan. A fractured rib heals on its own.

Like Nurse B, Dr Nhapi was not concerned about Roy's elevated heart rate as he felt it was explained by Roy's chest pain and that Roy may be withdrawing from alcohol. He did not consider there was any indication to perform an ECG but, with the benefit of hindsight, freely acknowledged he should have requested one.

Dr Nhapi said he had been made aware of Roy's multiple presentations requesting alcohol detoxification though he could not recall how he came to know this. He did not feel Roy needed hospital admission that day but spoke to staff about the usual practice with the consensus being that Roy be reviewed by AODS to assess whether he needed detoxification.

There is no entry in the hospital chart documenting Dr Nhapi's examination findings, diagnosis or management plan. Instead, there is an undated and untimed notation made by Nurse B on the ED Q-ADDS that Roy was reviewed by Dr Nhapi and that AODS would follow up with Roy the next day.

At that time medical officers would usually enter their notes into the Emergency Department Information System (EDIS). However, locum medical officers, particularly those on short placements, did not have EDIS access because of the time this could take to arrange. Instead locum medical officers made handwritten notes on a continuation sheet which was separate to the hospital chart. Medical officers were to then place their notes in a filing basket in the outpatient room where the hospital chart was also placed. Nursing staff entered patient information into EDIS, printed it out and placed in the chart.

Dr Nhapi maintained that he did make a note of his assessment and examination of Roy. He explained his practice of seeing the patient in the emergency department area and then writing up his notes at a desk in the outpatient room which was off the emergency department. He recalled handing his notes to one of the nurses to place in the chart. He does not know what happened to the notes after that. Although Nurse B does not recall seeing Dr Nhapi writing notes or handing them to her, on the available evidence I consider it more likely than not that Dr Nhapi did record his

assessment and examination findings but for some unknown reason his notes were not filed with Roy's chart.

Nurse B administered Roy two paracetamol 500mg/codeine 15mg tablets for pain at around 3:10pm, as prescribed by Dr Nhapi.

She faxed a written referral marked urgent to AODS. She also phoned them as she wanted someone to review Roy that day. She followed up with a second phone call after which an AODS staff member came to the hospital. They did not review Roy but asked Nurse B to tell him to follow up with Community Health the following morning at 9:00am.

At 4:20pm, Nurse B performed a further neurological assessment noting a GCS 15/15 and another set of observations noting:

- alert
- blood pressure 110/70
- heart rate over 120 beats per minute
- respiratory rate 13-20
- temperature normal.

She recalled Roy and his partner were asking to see the doctor again. She asked Dr Nhapi to review Roy again which he did. Dr Nhapi said he again examined and listened to Roy's chest sounds, which had not changed. He described his usual practice as being to review the patient's observations prior to discharge. He told Nurse B Roy could be discharged.

Again, there is no medical entry documenting the examination findings, diagnosis or management plan after this second medical review.

Roy was discharged from the emergency department at around 4:20pm.

Appropriateness of the management of Roy's second presentation

The DDHHS clinical review identified this presentation as a missed opportunity for timely intervention, noting there was no evidence of chest auscultation, or a chest x-ray or ECG being obtained. Roy was discharged with oral analgesia following medical officer assessment of which there were no notes documented.

Dr Treston observed there was some aberration of Roy's vital signs, notably a fast heart rate and lower than normal oxygen saturations. He advised that in the context of a rib injury, the lower than normal oxygen saturations were understandable but the fast heart rate warranted some review. He confirmed that in the context of a patient requesting admission for an alcohol detoxification/withdrawal program this may not be unusual as a very prominent finding in alcohol withdrawal is a fast heart rate and this may have been the case in this situation.

Dr Treston suggested it may have been useful to obtain an ECG on this presentation. However, noting Nurse B and Dr Nhapi had attributed the

elevated heart rate to pain and dehydration after heavy drinking, he could understand how they came to that impression and how an ECG and chest x-ray might not add anything to the assessment. He reiterated that medical and nursing staff make these decisions having regard to recorded observations and their bedside clinical impression of the patient.

Dr Treston considered the management of Roy's presentation as being of a slightly lower, but still acceptable standard, and understandable in the context of the presentation. He was satisfied that a clear and adequate follow up plan was in place.

I am satisfied Roy's presentation was managed reasonably on this occasion.

Representation and admission to Cherbourg Hospital – Tuesday 30 August 2016

Roy arrived at his mother's home during the day. He told her he was unwell and wanted to stay with her. Mrs Jacobs described him as looking sick and feeble. He lay down on the couch, clutching the left side of his chest and ribs. Over time he seemed to be getting worse; Mrs Jacobs noticed he was struggling with his pain and there was a change in his breathing which became shallow and heavy. At around 4:00pm she asked if he needed to go to the hospital and he agreed. A neighbour drove them to Cherbourg Hospital.

Mrs Jacobs accompanied Roy to hospital, arriving there at around 4:55pm. She recalled he was weak and in a lot of pain. She described his legs shaking and he needed help to walk. She recalled the nurses brought out a wheelchair and transferred him to the emergency department. She stayed with Roy in the emergency department until around 6:00pm. While she recalled Roy being attended to by nursing staff, she did not recall him being seen by a doctor during this time.

Roy was seen by Nurse B who was working a day shift in the emergency department. Dr Nhapi was working a split shift at Cherbourg Hospital that day – a morning shift from 8:00am to 2:00pm and then from 4:30pm to 6:30pm.

Nurse A was helping out in the emergency department when Roy and Mrs Jacobs arrived. She spoke with them. She could see Roy was unwell.

Nurse B recalled Roy telling her he had a sudden onset of shortness of breath with rib pain that afternoon. She documented a history of a fall three days previously with possible fracture or left chest wall contusion, as well as a history of cough with yellow sputum and heavy drinking.

Nurse B's initial observations document a worsening of the vital signs recorded on his presentation the previous day. He was tachycardic with a heart rate of 152, an increased respiratory rate of 35 and reduced oxygen saturations (88% on room pair). On examination his lips and tongue were noted to be dry+++ and he was unable to deep breathe due to pain, which he self-scored as 8/10. She recalled he seemed agitated and restless. Her

impression was of a possible chest infection due to ineffective deep breathing from rib pain.

When entered in ED Q-ADDS chart, these vital signs scored 'E' – this triggered a requirement for immediate medical officer review. Nurse B notified Dr Nhapi, who she recalls attended Roy within minutes. While he was coming she placed Roy on supplemental oxygen via nasal prongs, cannulated him, took bloods and started him on intravenous fluids.

Nurse B noted on the ED Q-ADDS form that Dr Nhapi reviewed Roy at 5:00pm. This timing is consistent with the medication chart which documents Dr Nhapi's prescription of several medications, with the first intravenous antibiotic being given in the emergency department at 5:18pm. I am satisfied that Roy was medically reviewed soon after arriving in the emergency department.

Dr Nhapi recalled seeing Roy the previous day. He says he took a full patient history from Roy who told him he had a productive cough with yellowish phlegm and some chest pain. He then assessed Roy, including by listening to his chest, noting bilateral crepitations with reduced air entry. His progress note indicates he also examined Roy's abdomen, noting mild tenderness in the right and left upper quadrants, bowels sounds were present and normal and there were no palpable masses. He thought Roy looked unwell and in pain.

Dr Nhapi ordered a chest x-ray noting it showed consolidation in the left lower lobe and bilateral hilar shadowing. The x-ray report showed this was performed at 5:02pm. The x-ray was formally reported at 11:35am the next morning. The report states:

Both the lung fields are well inflated. Areas of opacification in both the lung fields identified much more of the right side in the lower lobe and also in the upper lobe. Even though these findings can be because of trauma, possibility of consolidation should be considered. Cardiac size is normal. No widening of mediastinum noted. There is no pneumothorax identified. Visualised ribs have not revealed any discrete focal abnormality.

Dr Nhapi noted Roy's observations as temperature of 38, blood pressure 114/70, an elevated pulse rate of 130 beats per minute, oxygen saturations 92% on room air and a high respiration rate of 38 breaths per minute. He was unable to reconcile these with the observations documented by Nurse B, particularly the elevated heart rate, which was 152 on arrival and then remained above 140.

His clinical impression was that Roy had community acquired pneumonia or aspiration pneumonia and alcoholic gastritis.

Neither Nurse B nor Dr Nhapi considered performing an ECG at this time. With the benefit of hindsight, both acknowledged the elevated heart rate of 152 should have prompted an ECG. Dr Nhapi explained it had not occurred

to him as it seemed obvious Roy's presentation was explained by his chest injury, the chest x-ray findings suggestive of chest infection and that he was coming off alcohol; he was otherwise cardiovascularly stable. He said one of the nurses had told him it was not unusual for Roy to come to hospital when he wanted to be away from alcohol. Roy's death has been a big learning curve for Dr Nhapi who sought to reassure the court he now actively considers other possible causes, even if unlikely, when assessing a patient.

The plan was to admit Roy for blood tests, intravenous fluids and intravenous antibiotics. He received a 2mg dose of Ceftriaxone in the emergency department. Dr Nhapi prescribed Benzyl penicillin 1.2g (4 times per day) intravenously and Doxycycline 100mgs (twice a day) orally, Somac 40mg once a day for the gastritis-related pain and Diazepam 10-20mgs to assist with any alcohol withdrawal symptoms (as per the Alcohol Withdrawal Scale). He was also prescribed Endone 5mg 4 hourly if needed, for any further pain.

The intravenous fluids and intravenous antibiotics were commenced at 5:10pm and 5:20pm respectively.

It was routine practice at Cherbourg Hospital to commence any alcoholic patient on an Alcohol Withdrawal Scale. Roy told Nurse B he had not consumed alcohol since the previous night and he was demonstrating several signs of alcohol withdrawal in that he was irritable and restless. She commenced him on an Alcohol Withdrawal Scale with his observations scoring 3, requiring him to be commenced on diazepam 10mg every 12 hours.

Nurse B changed Roy from nasal prongs to a face mask with increased oxygen due to his low oxygen saturations. This appears to have achieved an improvement in his respiratory rate (13-20) and oxygen saturation (90-94% on face mask).

Dr Nhapi's progress note did not stipulate an observation frequency. He said he expected the observations would continue to be monitored maybe half hourly and accepted that he should have written this as part of the management plan.

Roy remained in the emergency department until just prior to 6:50pm when he was moved to the observation ward. While in the emergency department, Nurse B performed regular observations as documented on the ED Q-ADDS chart:

Adult		Date	30/8/16										
		Time	1655	1710	1720	1745	1755	1805	1815				
Respiratory Rate (breaths / min) Measure for a Total minute	E	≥ 36											
	3	35	·										
	2	31–34											
	1	21–30							o				
	0	13–20		o	o	o	o	o	o				
	1	9–12											
	E	≤ 8											
O_2 Saturation (%)	0	≥ 98											
	0	95–97				o	o	o	o				
	1	90–94		o	o				o				
	2	85–89	·										
	3	≤ 84											
O_2 Flow Rate (L / min)	3	> 11											
	2	> 5–11			o	o	o	o	o				
	1	2–5	·	o									
	0	< 2											
RA Room air NP Nasal prongs FM Face mask NR Non Rebreather		Mode	NP	NP	FM	NR	NR	NR	NR / FM				
Blood Pressure (mmHg) Score systolic BP	3	≥ 200											
	2	190s											
	2	180s											
	2	170s											
	1	160s											
	0	150s											
	0	140s											
	0	130s											
	0	120s	✓		✓				✓				
	0	110s											
	1	100s				✓	✓	✓					
	2	90s											
	E	80s											
	E	70s			^								
	E	60s	^			^	^		^				
Heart Rate (beats / min)	E	≥ 140	o	o	o	o	o						
	3	130s	152					o	o				
	2	120s											
	2	110s											
	1	100s											
	0	90s											
	0	80s											
	0	70s											
	0	60s											
	0	50s											
	1	40s											
	E	30s											
Cardiac Rhythm													
Temperature (C)	2	≥ 39.5											
	2	38.5–39.4											
	1	38–38.4						o					
	0	37.5–37.9	·										
	0	37–37.4											
	0	36.1–36.9											
	1	35.1–36											
	2	34.1–35											
	3	≤ 34											
Consciousness If necessary, wake patient before scoring	0	Alert	·	o	o	o	o	o	o				
	1	Voice											
	E	Pain											
	E	Unresp.											
TOTAL Q-ADDS SCORE			E	E	E	E	E	6	7				
Interventions (page 3) ✓													
Initials			[illegible]	KW	[illegible]	[illegible]	[illegible]		KW				

Name:

URN: | DOB:

Q-ADDS Score

0	Score 0
1	Score 1
2	Score 2
3	Score 3
E	Emergency call

Rural and Remote Emergency Actions

*RSQ Retrieval Services Queensland

- Obtain a Total Q-ADDS score on every set of observations
- Any observation outside the range write the number

Total Q-ADDS Score 0–3

- Consider trauma record and guidelines for early notification to RSQ*
- Consider increasing frequency of observations, minimum hourly
- Consider consulting Team Leader / Medical Officer

Total Q-ADDS Score 4–5

- Consider trauma record and guidelines for early notification to RSQ*
- Consult Team Leader
- Medical Officer / Nurse Practitioner to review within 30 minutes
- Minimum 30 minute observations
- Obtain a Total Q-ADDS score after interventions
- If no review within 30 minutes, follow local escalation plan for medical support

Total Q-ADDS Score 6–7

- Consider trauma record and guidelines for early notification to RSQ*
- Consult Team Leader
- Medical Officer to review within 15 minutes
- If no review within 15 minutes, escalate as per facility protocol
- Record observations at least once every 15 minutes
- If review delayed >30 minutes or concern at bedside, notify Team Leader and Team Leader must notify RSQ* on 1300 799 127

Total Q-ADDS Score 8+

- Initiate emergency call
- Medical Officer to attend immediately
- Inform Team Leader and Team Leader must notify RSQ* on 1300 799 127

Initiate emergency department response if any of the following:

- Airway threat
- Apnoea
- Seizure
- Bleeding (major)
- Fall in GCS ≥2 points
- Any observation in the purple area
- You are worried about the patient

DO NOT WRITE IN THIS BINDING MARGIN

v3.00 – 4/2016 Mat. No.: 10273070

SW363

Cardiac Rhythm Legend

AF	=	Atrial Fibrillation
AFL	=	Atrial Flutter
HB	=	Heart Block
JR	=	Junctional Rhythm
SB	=	Sinus Bradycardia
SR	=	Sinus Rhythm
ST	=	Sinus Tachycardia
SVT	=	Supraventricular Tachycardia

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Acute Pain Assessment

		Date	30/8/16						
		Time	1720	1755					
Pain at Rest Score									
Severe		7–10	o	o					
Moderate		4–6							
Mild		1–3							
None		0							
Functional Activity Scale (FAS) Score									
Activity severely limited by pain		C	o						
Activity mild to moderately limited by pain		B							
Activity unlimited by pain		A							
Pain relief given		✓	✓						
Does this patient need neurovascular observations to be completed?		Y / N							
Neurovascular Obs Sheet in use		✓							

** If scores conflict, follow the highest score*

- Notify team leader
- Administer analgesia
- Notify medical officer to review if no improvement within 30 minutes of administering analgesia

- Administer analgesia
- Consider team leader / medical officer review if no improvement within 60 minutes of analgesia

- Consider simple analgesia

Treatment guided by PCCM ☐ No ☐ Yes, document page number(s) below

Date / Time	Interventions and Clinical Comments (including documentation family / carer concerns)	Initials
30/8/16 @1845	BIB mother. Sudden onset SOB ↑ rib pain this afternoon. Hx 3/7 ago fell, ? # or ? contusion left chest wall.	
	0/E. Pt lips + tongue dry +++. HR >150 bpm SaO2 88% RA. Pain score 8/10. Unable to deep breathe due to pain.	
	Impression – ? chest infection due to ineffective deep breathing from rib pain.	
	Plan – MO in attendance. – PIVC, IVAB, CXR ☑, pain relief, IV fluids. K Williams CN (Williams)	

The ED Q-ADDS chart demonstrates that Roy's heart rate remained above 140 until just after 6:05pm when it reduced to the 130-140 range. He continued to have reduced oxygen saturations with an ongoing oxygen requirement. His observations produced a Q-ADDS score of 'E' until 6:05pm, after which they scored 6 and 7 up until 6:15pm.

Dr Nhapi was in and around the emergency department for the time Roy remained there. Nurse B said she kept him regularly informed during this time but he did not review Roy again.

Dr Nhapi's evidence was that he had not seen a Q-ADDS chart before working at Cherbourg Hospital. He did not see or check Roy's ED Q-ADDS chart that evening. He said he did not know that Roy had a Q-ADDS score of 7 until the inquest and acknowledged *7 is a very high score*. He could recall seeing Roy after his initial assessment. He was not aware of the ED Q-ADDS actions required which for a score of 6-7 include consideration of early notification to Retrieval Services Queensland (RSQ) and medical officer review within 15 minutes.

In evidence Dr Nhapi commented there was a lot of documentation that as a medical officer he did not read, something he regrets and knows he needs to improve. He relied on his clinical judgement and even without being familiar with the Q-ADDS actions required, knew that if he was concerned he could call the nearest referral centre or the Queensland Coordination Centre or the Royal Flying Doctors Service for advice, something he had done previously many times. He frankly acknowledged this didn't happen that night, *I missed that and I am very sorry about that*. Now knowing Roy's observations and his ED Q-ADDS score at that time, Dr Nhapi said he would certainly not hesitate to seek advice.

Mrs Jacobs recalls Roy continued to complain of rib pain and kept holding his chest. She remained with him until shortly before 6:00pm when the nurses assured her Roy was fine and it would be alright for her to leave. She left under the impression he had not been seen by a doctor but the evidence is clear that he had been by then. Roy asked her for some toiletries and other belongings. She describes him as weak and barely able to get the words out at this time. She then left the hospital with Roy's daughter, Sophia. This was the last time she saw her son alive.

Nurse B explained that Roy was moved from the emergency department because they needed the bed. Had he been more stable he would have been moved to the men's ward. Instead, he was moved to the 'observation ward', a three bed ward opposite the nurses' station and located between the emergency department and the general wards. She explained it was quite common for a patient with a Q-ADDS score of 7 to be nursed in the observation ward because they could be monitored regularly and the medical officer called if they were deteriorating.

Appropriateness of the management of Roy's third emergency department presentation

Dr Treston considered that on this presentation Roy had markedly abnormal vital signs - they were so significantly altered that in many hospitals he would have been transferred to a High Dependency Unit or an Intensive Care Unit for further management.

Dr Treston explained that every time a doctor encounters a patient in the emergency department, there is an assessment of how unwell the patient is, how likely they are to become more unwell and what resources might be needed should they deteriorate. The normal process for a patient presenting with deranged vital signs is to identify the potential diagnoses, treat the most likely or most urgent diagnosis and then observe the patient's clinical progress to assess whether their condition is trending towards improving or towards worsening – this is not a static process and may change clinical decision making.

Dr Treston considered Roy's condition was such that his required care would overwhelm the available resources at Cherbourg Hospital, without a rapid improvement in his vital signs in the hours after admission.

He was not critical of Dr Nhapi's practice of relying on observations reported by nursing staff, commenting it is rarer to find a doctor who takes observations themselves.

Dr Treston observed that while Roy's condition did improve early on in his emergency department journey, with his respiratory rate normalising and his oxygen saturation improving with high flow oxygen delivery, his heart rate remained very high, as did his temperature. He considered Roy's heart rate as recorded by Nurse B at 152 initially and then greater than 140 as being of some significance. While this warranted an ECG, he acknowledged its interpretation may have been made difficult by Roy's rapid heart rate and laboured breathing which can obscure underlying changes.

While Dr Treston could understand why Dr Nhapi diagnosed and treated Roy for pneumonia, had he been caring for Roy, he would have been looking for more improvement in Roy's vital signs before transferring him out of the emergency department. As Roy's vital signs were still scoring very high on the ED Q-ADDS chart, Dr Treston considered it would have been sensible for Dr Nhapi or another doctor to have reviewed Roy after the initial assessment at 5:00pm or at least discuss Roy's condition with a clinical peer, a referral centre (such as Kingaroy or Toowoomba base Hospitals) or RSQ. In his words, *the 'Emergency' doctor needs to be quick to treat and ready to reassess as the patient's condition evolves over minutes or hours, as well as utilising available resources (phone, on-line, and in person) to maximise outcomes for their patients*. Instead there is no evidence of any discussion between Dr Nhapi and Nurse B about a plan in respect of the ongoing high ED Q-ADDS scores.

Whether intervention at this stage during Roy's presentation would have altered the trajectory of his clinical course can only be speculated upon. Even had Dr Nhapi sought advice from Toowoomba Base Hospital or RSQ and a decision made to transfer Roy out of Cherbourg, in Dr Treston's experience, at that time of year (being the flu season in Queensland and consequently a very busy period in public hospitals) it may have taken quite some time for Roy to be retrieved and admitted to a high acuity destination. Given the logistics of patient retrieval in regional Queensland, clinicians in regional facilities need to be proactive in considering whether and if so when retrieval may be necessary so the retrieval process can be initiated sooner rather than later.

Dr Treston advised that had a transfer decision been made, Roy would have remained in the emergency department with cardiac monitoring and a defibrillator pad on his chest in preparation for transport. I accept Dr Treston's advice that while this scenario would have provided a greater chance of identifying a cardiac arrhythmia, Roy's death may still not have been prevented as not all arrhythmias are amenable to resuscitation efforts.

I accept that Nurse B's and Dr Nhapi's clinical assessment and management of chest infection in the context of chest injury following a fall and alcohol withdrawal was reasonable in the circumstances, though Dr Nhapi should have actively considered other possible causes for Roy's presentation. While an ECG was clinically indicated, I accept Dr Treston's opinion that even had one been performed at this time, it may well not have been diagnostic of anything and that Roy's pain on presentation was consistent with chest injury rather than myocardial infarction.

Nurse B was monitoring Roy closely in the emergency department and keeping Dr Nhapi informed. However, this was a missed opportunity to have optimised Roy's care by formulating a definite plan for his continued abnormal vital signs, monitoring him in the emergency department for longer and proactively seeking advice from a referral hospital or RSQ about whether he warranted transfer out to a higher acuity centre. Dr Nhapi has appropriately acknowledged his contribution to these missed opportunities and changed his clinical practice as a result.

Events following transfer to the observation ward

Roy arrived in the observation ward at around 6:45pm. He complained of 10/10 rib pain after mobilising from the emergency department bed to the wheelchair and into the bed on the ward.

Nurse B commenced a new Q-ADDS chart for him now that he was an inpatient. She performed the next set of observations at 6:50pm – these scored an E. The exacerbation of Roy's rib pain prompted her to seek an analgesia order from Dr Nhapi. The medication chart shows he prescribed 5mg IV morphine which Nurse B administered around 7:00pm, with some effect. She noted *MO aware*. *IVT✓ IVAB✓* in the interventions section on the Q-ADDS chart for this set of observations.

I am satisfied Nurse B discussed Roy with Dr Nhapi after he was moved to the observation ward but Dr Nhapi did not review him before prescribing the morphine. This was another missed opportunity to have optimised Roy's care with further medical review and the chance to reassess his management plan.

Nurse B then provided handover to the oncoming night shift nurses, Registered Nurse (RN) Ewan Monaghan and Nurse C, at the bedside.

RN Monaghan graduated from nursing in 2005. From 2008, he had been working predominantly in rural hospitals and primary health care centres in Barcaldine, Normanton, Cloncurry and Boulia. He had been employed at Cherbourg Hospital since November 2015 working in both the general ward and the emergency department. He was rostered to work a 12-hour night shift commencing at 7:00pm in the emergency department. He was also allocated nursing Team Leader for the general ward as he was the more senior nurse.

Nurse C graduated from nursing in 2013. She had been employed at Cherbourg Hospital since March 2014. She had experience working between the emergency department and the general ward. She was rostered to work a 12-hour night duty shift from 7:00pm – 7:30am.

There was also an Enrolled Nurse (EN), Janice Allen, working the late shift finishing at 11:00pm.

Nurse B says she took RN Monaghan and Nurse C through the Q-ADDS chart during the handover so they understood what Roy was scoring. Both nurses recall being made aware Roy had an elevated Q-ADDS score.

It was a busy night so Nurse B remained on the observation ward to complete Roy's admission paperwork while the night nurses finished shift handover. This meant she was available to continue frequent observations which she entered on the Q-ADDS chart. She says when completing the Integrated Care Plan, she left the frequency of observations section blank because Roy's Q-ADDS score at that time mandated at least half-hourly observations.

Roy had been on an oxygen face mask but appears to have been changed to a non-rebreather mask from 7:08pm.

Over the following hour Roy's Q-ADDS score remained at 7.

Queensland Government

Queensland Adult Deterioration Detection System (Q-ADDS)

For rural and remote facilities

Facility: Cherbourg

Cherbourg Nanango Wondai Murgon
801236
JACOBS
ROY RODNEY M 15/10/1967
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MC:4103133876 ID:1 Exp:UNK

General Instructions

- *Total Q-ADDS Score* = Respiratory Rate + O_2 Saturation + O_2 Flow Rate + Blood Pressure + Heart Rate + Temperature + Consciousness.
- You must calculate a *Total Q-ADDS Score* for each set of observations and record it in the *Total Q-ADDS Score* box. Follow the actions table for each *Total Q-ADDS Score*.
- When graphing observations, place a dot (•) in the appropriate box and join to the preceding dot (e.g. •–•). For blood pressure, use the symbols indicated (˅˄).
- Score each observation by referring to the Score Legend or by aligning the dot with the scoring columns on either side of the graph. Add up all observation scores to calculate the Total Q-ADDS score and record this in the Total Q-ADDS score row, even if the score is zero.
- You must write any observation outside the range of the graph as a number.
- You must record all observations including Pain, Functional Activity Scale and Sedation scores (p4) at a frequency appropriate to the patient's clinical condition.

Modifications

- Modifications can ONLY be made on the basis of chronic abnormal physiology
- Modifications must be authorised by a SMO / registrar / PHO (or equivalent)
- Modifications must be assessed and rewritten with each new Q-ADDS chart

Diagnosis which justifies modification (e.g. chronic obstructive pulmonary disease):

Authorised by (SMO / registrar / PHO):

Doctor's name (please print): Designation:

Signature:

Date: / / Time: :

Write the acceptable range (will score zero) below:

Respiratory Rate		to	breaths/min
O_2 Saturation		to	%
O_2 Flow Rate		to	L/min
Systolic BP		to	mmHg
Heart Rate		to	beats/min

Scoring Note: for observations outside the modified range, revert to the original score on Q-ADDS

For example: if an O_2 saturation of 90–94% is tolerated (score of zero), and the O_2 saturation falls to 89%, it would score 2

NB: tick modifications box at bottom of page 3 to indicate modifications are in use

Interventions Relating to observations

If an intervention is administered, record here and note letter in *Intervention* row on page 2 in appropriate time column

A MO aware, IVT ✓ IVAB ✓
B MO contacted. Continue c current care.
C RN aware encourage deep breathing
D
E
F

Q-ADDS

RURAL AND REMOTE

Pain and Sedation Assessment

- If the patient reports any level of chest pain, please follow local chest pain procedure
- If you are concerned about the patient's pain but they do not fit the below criteria notify Medical Officer
- If documenting pain and sedation on a PCA/Epidural Monitoring form, this section does not need to be completed

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Ph(M)
MC:4103133876 ID:1 Exp:UNK
Date of birth: Sex: M F I

Date	30/8/16			31/8/16
Time	1830	1917	2145	0150
Pain Score at Rest				
Severe 10	0			
9				
8				6
7				
Moderate 6		0	•	
5				
4				
Mild 3				
2				
1				
None 0				
Functional Activity Scale (FAS) Score (perform during cough / movement)				
Activity severely limited by pain C	0	•		
Activity mild to moderately limited by pain B		0		
Activity unlimited by pain A				

** If scores conflict, follow the highest score*

- Notify team leader
- Administer analgesia
- Notify medical officer to review if no improvement within 30 minutes of administering analgesia

- Administer analgesia
- Consider team leader / medical officer review if no improvement within 60 minutes of analgesia

- Consider simple analgesia

Sedation Score (for patients receiving potentially sedating medication)				
Patient must be woken to assess sedation score 0	0	0		
1				
Note: DO NOT add the Sedation Score to the Q-ADDS Score. Follow actions below 2				
3				

0 = Awake	Continue to monitor patient's Q-ADDS, Sedation and Pain Score in accordance with individual monitoring plan
1 = Mild (easy to rouse, able to keep eyes open for 10 secs)	Increase monitoring of Q-ADDS, Sedation and Pain score; Recheck Sedation score before administering potentially sedating medication
2 = Moderate (rouseable, but unable to keep eyes open for 10 secs)	Ensure patient receives oxygen and monitor oxygen saturation; Withhold additional sedating medication (until medical review); Notify team leader; Notify medical officer to review within 15 minutes (remain with patient until review); Monitor Q-ADDS, Sedation and Pain score (minimum 15 minutely); If concerned, initiate Emergency Response
3 = Severe (difficult to rouse or un-rouseable)	Initiate Emergency Response; Ensure patient receives oxygen and monitor oxygen saturation; Determine need for reversal agent (naloxone, flumazenil)

Additional Observations

Date	3/8/16
Time	
Height (cm) Bowels	
Passed urine	
Weight (kg)	82.1
Other (e.g. urinalysis)	

DO NOT WRITE IN THIS BINDING MARGIN

DO NOT WRITE IN THIS BINDING MARGIN

Adult

Date	30/8/16						31/8/16						
Time	1850	1908	1917	1947	2145	0015	0150	0415					

Respiratory Rate (breaths / min) — Measure for a full minute

Score	Range
E	≥ 36
3	35
2	31–34
1	21–30
0	13–20
1	9–12
E	≤ 8

O_2 Saturation (%)

Score	Range
0	≥ 98
0	95–97
1	90–94
2	85–89
3	≤ 84

O_2 Flow Rate (L / min)

Score	Range
3	> 11
2	> 5–11
1	2–5
0	< 2
	Mode: FM, NC FM, NR, NC, NCO, NCS, NC

RA Room air NP Nasal prongs FM Face mask NR Non Rebreather

Blood Pressure (mmHg) — Score systolic BP

Score	Range
3	≥ 200
2	190s
2	180s
2	170s
1	160s
0	150s
0	140s
0	130s
0	120s
0	110s
1	100s
2	90s
E	80s
E	70s
E	60s

Heart Rate (beats / min)

Score	Range
E	≥ 140
3	130s
2	120s
2	110s
1	100s
0	90s
0	80s
0	70s
0	60s
0	50s
1	40s
E	30s

142 129

Temperature (C)

Score	Range
2	≥ 39.5
2	38.5–39.4
1	38–38.4
0	37.5–37.9
0	37–37.4
0	36.1–36.9
1	35.1–36
2	34.1–35
3	≤ 34

Consciousness — If necessary, wake patient before scoring

Score	Level
0	Alert
1	Voice
E	Pain
E	Unresp.

TOTAL Q-ADDS SCORE	E	1	1	1	5	7	6	6	Tick box if modifications in use
Intervention (e.g. 'A')	A	A	A	B	C	A			

v5.00 - 08/2014
Mat. No.: 10234592
SW149

Score Legend

- 0 Score 0
- 1 Score 1
- 2 Score 2
- 3 Score 3
- E **Emergency Call**

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Actions Required for Rural and Remote Facilities

Total *Q-ADDS* Score 0

- Minimum 8th hourly *Total Q-ADDS Score*

Total *Q-ADDS* Score 1–3

- Carry out and document appropriate interventions as prescribed
- Consider increasing frequency of observations (minimum 4th hourly)
- Manage fever, pain or distress
- Review oxygen requirement
- Consider notifying team leader

Total *Q-ADDS* Score 4–5

- Notify medical officer to review within 60 minutes
- Notify team leader
- Carry out and document appropriate interventions as prescribed
- Hourly observations (or more frequently if indicated)
- Obtain a *Total Q-ADDS Score* after interventions
- If no review within 60 minutes, follow local escalation plan for medical support or advice

Total *Q-ADDS* Score 6–7

- Local doctor to review within 30 minutes
- Notify team leader
- Local doctor to discuss with relevant medical officer at their regional or tertiary facility. If unavailable, and patient likely to require transfer, contact QCC† (1300 799 127) or RFDS† (if normal referral pathway)
- Carry out and document appropriate interventions as prescribed
- Half hourly observations (or more frequently if indicated)
- Obtain a *Total Q-ADDS Score* after interventions
- If review delayed or concern at bedside, **nurse to directly notify QCC† (1300 799 127) or RFDS† (if normal referral pathway)**

Total *Q-ADDS* Score ≥ 8

- Initiate emergency call as per local facility protocol
- **Local doctor to attend immediately**
- **Nurse to directly notify QCC† (1300 799 127) or RFDS†** (if normal referral pathway)

† QCC = Queensland Emergency Medical System (QEMS) Coordination Centre
RFDS = Royal Flying Doctors Service (Cairns Base: 4040 0500; Charleville Base: 4654 1443; Mt Isa Base: 4743 2802)

Emergency call if:

- **Any observation is in a purple area**
- Airway threat
- Respiratory or cardiac arrest
- New drop in O_2 saturation < 90%
- O_2 saturation < 85% without response to O_2
- Sudden fall in level of consciousness
- Seizure
- Sedation score of 3 (severe)
- You are concerned about the patient but they do not fit the above criteria

Ward handover finished at around 7:30pm, at which time RN Monaghan left the ward to attend his duties in the emergency department. Nurse C remained on the ward with EN Allen and commenced preparing a shift plan and giving evening medications.

The on-call medical officer that night was Dr Sharon Maja. Dr Maja obtained her medical degree in South Africa in 1998 and became a Fellow of the Royal Australian College of General Practitioners in 2011. Since then, she has worked in locum roles in regional, rural and remote hospitals across Queensland and New South Wales. In August 2016, she had been contracted to work as a locum SMO at the Cherbourg and Murgon Hospitals for two weeks. Prior to that she had worked there for two weeks in June-July 2016. On 30 August, she was working a day shift at Murgon Hospital which finished at around 4:30pm. She was rostered on call that night commencing at 8:30pm.

Nurse A was still at the hospital that evening because it had been busy in the emergency department. She was assisting another nurse with a baby. Dr Maja had been called in to review the baby.

Nurse A recalled speaking to Nurse B about Roy at some stage. She knew he hadn't improved. She described Roy as being *the sickest patient in the hospital at that time*. She was aware Nurse B was going to speak to Dr Maja about him when she arrived at the hospital.

Dr Maja recalled arriving at the hospital at around 8:00pm. Nurse A was packing up her car when she saw Dr Maja drive in. She said she spoke to Dr Maja, telling her the baby was fine but she would need to review Roy and decide what she wanted to do, to which Dr Maja said 'okay'. After this conversation she expected Dr Maja would physically assess Roy and make a decision about his future care. Dr Maja did not recall this conversation but confirmed they had a good working relationship so if Nurse A had asked her to review Roy she would have. She did not recall anyone asking her to review him. Nurse C recalls seeing them talking outside near the car park but could not recall what they were discussing. While I am satisfied that Nurse A did speak to Dr Maja as she arrived that evening and is more likely than not to have mentioned Roy to her, I am unable to make a finding as to what was discussed about Roy during that interaction.

Nurse B intercepted Dr Maja to tell her about Roy as she was leaving the hospital after reviewing the baby in the emergency department. She told her Roy had a Q-ADDS score of 7 with high oxygen requirements. Nurse B claimed Dr Maja suggested Roy probably had COPD (chronic obstructive pulmonary disease) but Dr Maja rejected this claim, suggesting she was unlikely to have said this as she had not seen Roy. Dr Maja accepted she possibly advised Nurse B to change the mode of oxygen delivery to nasal prongs as the delivery mode in use was not effective.

Dr Maja's evidence is that Nurse B used words suggesting she had to tell Dr Maja about Roy because of the Q-ADDS score but Nurse B did not

specifically ask her to review him. Nurse B could not recall specifically asking Dr Maja to review Roy but said this is what she was expecting to happen because in her experience if a nurse advised a doctor of a concern *that's what they do*.

Dr Maja recalled their conversation occurred when she was *10 steps away from the observation ward*. She assumed Roy was stable as Nurse B had not voiced any concerns Dr Maja considered warranted medical review. Her evidence was that having recommended a management change, she would want an update after about an hour to see if that change had made a difference.

It is clear Nurse B and Dr Maja had a professional but somewhat tense working relationship. Whereas other nursing staff who gave evidence at the inquest described Dr Maja as approachable and good to work with, Nurse B cited instances when she considered Dr Maja had been slow to respond. Dr Maja suggested that had she not acted on a request to review a patient, Nurse B would have *kicked up a big row, put it in the notes and the DON would know in five minutes*.

By the time of their conversation, Nurse B had been caring for Roy for over three hours. In evidence she confirmed she agreed with his diagnosis and management plan and that he was not actively deteriorating but had shown *a little* improvement over that time. She commented that his oxygen requirements *bumped up his numbers*. I am satisfied that Nurse B did not specifically ask Dr Maja to review Roy but merely notified her of his Q-ADDS score as she was required to do, and which she conveyed as being high due to his oxygen requirements.

Dr Maja left the hospital after their conversation. She received no further contact about Roy until after he was found unresponsive the following morning.

Dr Maja's evidence was that at that time she did not realise that a Q-ADDS score of 7 triggered actions required including local medical officer review within 30 minutes. With the benefit of hindsight, Dr Maja accepted it would have been prudent for her to review Roy before she left the hospital that evening rather than rely on what she was told by Nurse B. She wished she had.

Dr Nhapi was rostered on until 8:30pm. While he said his usual practice was such there was no way he would have left the hospital without providing a medical handover, he could not recall speaking to Dr Maja that night but suggested he vaguely recalled the 'other doctor' was aware of Roy. Dr Maja confirmed she did not speak to Dr Nhapi about Roy. That said, she had been made aware of him by at least Nurse B.

Nurse B returned to the observation ward and made an entry in the progress notes at around 8:30pm noting *ADDS score 7. Dr Maja notified. Score high due to O2 requirements + Sa O2 92% & RR 28.* She also noted *MO*

contacted. Continue [with] current care in the interventions section on the Q-ADDS chart. After that she left for the night and had no further involvement in Roy's care.

Nurse B told both RN Monaghan and Nurse C she had spoken to Dr Maja about Roy. While both nurses say they expected Dr Maja would review Roy, neither could recall being told this would occur. Notwithstanding their shared expectation, neither took any action that night to follow this up. RN Monaghan accepted it was his responsibility as Team Leader to have done so.

There are then no more entries in the progress notes until after Roy's death the following morning. More concerning is a significant reduction in the frequency of Roy's observations despite his high Q-ADDS score which still mandated at least half hourly observations.

Nurse C had completed a shift plan which recorded when patient medications and observations were due. In preparing this document she relied on the Integrated Care Plan for information about a patient's frequency of observations. It seems that sometime after Nurse B prepared the Integrated Care Plan, another person entered *Q 4 hourly* which is crossed out with *Q2H* entered beneath (it is unclear when these notations were made or by whom). Nurse C acknowledged that if a patient had a high Q-ADDS score, that score dictated the frequency of observations. However, she was unable to explain why Roy's observations were only taken roughly two hourly after Nurse B went off duty.

This may be in part explained by Nurse C being called to help RN Monaghan in the emergency department at around 8:00pm. She left EN Allen to attend to the inpatients with instructions to report any concerns to her. She did not advise EN Allen of Roy's observation frequency – she said EN Allen would have had to look at his chart to know when they were due. Fundamentally, Nurse C's evidence demonstrated a concerning lack of understanding about the trigger effect of the Q-ADDS scoring system. This is despite her having completed her annual Q-ADDS competency training only a week previously on 23 August 2017.

It appears the next set of observations recorded at 9:45pm were taken by EN Allen. They scored 5 on the Q-ADDS which triggered actions required including notifying the Team Leader, notifying the medical officer for review within 60 minutes and at least hourly observations. The intervention notation for this set of observations indicates *RN aware encourage deep breathing.*

At around 10:00pm, EN Allen came into the emergency department to tell Nurse C that a new bag of intravenous fluid needed to be put up for Roy. Nurse C returned to the ward and replaced the bag, which she noted in the fluid balance and Intravenous and Subcutaneous Fluid Order form at 10:10pm. She said she asked Roy how he was and he replied 'alright'. She did not look at his observation chart and while she can't recall whether EN Allen gave her an update at that time, she conceded this was likely given the intervention notation. Nurse C then returned to the emergency department to

help RN Monaghan and remained there until 11:00pm when EN Allen finished her shift. EN Monaghan may also have returned to the ward around this time as things had settled in the emergency department by then.

Roy's next set of observations were taken by RN Monaghan at 12:15am which when entered on the Q-ADDS chart scored 7. This was an increase from 5 as at 9:45pm signifying a deterioration in Roy's vital signs. Like Nurse C, RN Monaghan's evidence demonstrated a concerning lack of understanding about how the Q-ADDS tool operated to trigger escalation of clinical deterioration. He did not take any of the actions required by the score of 7. Instead he simply recorded the intervention as A, this being a reference to the interventions noted earlier by Nurse B, because he knew Dr Maja was already aware of Roy's earlier observations and he was already receiving treatment. He claimed not to understand that the new score required documentation of a new intervention. This is despite RN Monaghan having completed his annual Q-ADDS competency training on 1 March 2016.

In evidence, RN Monaghan acknowledged there had been a deterioration in Roy's Q-ADDS score which should have triggered medical officer review within 30 minutes. However, this did not prompt him to consider whether Dr Maja had in fact seen Roy yet, as he said he was expecting to happen, and follow up with her about this. Nor did it prompt him to commence more frequent observations. Neither nurse could recall discussing Roy's condition after this set of observations. I consider it most likely they did not or if they did, it was not a meaningful discussion. This was yet another missed opportunity to have optimised Roy's care with medical review and a chance to reassess his management plan.

RN Monaghan was called back to the emergency department at around 12:45am to attend another presentation (who was discharged from the emergency department at around 1:15am).

Nurse C performed Roy's next set of observations at 1:50am which when entered on the Q-ADDS chart scored 6. This prompted her to speak to RN Monaghan about Roy and suggest that Dr Maja be notified. To her credit, this is what the Q-ADDS score required her to do (notify team leader). RN Monaghan's evidence was that he considered this score to be slightly better than the last one and he felt Roy was stable at that level, with there having been no steep decline in his scores during the night. He felt Roy's observations were consistent with his presentation. He readily acknowledged it was his judgement call that there was no need to call the doctor. Nurse C accepted this as he was senior to her. This decision meant there was no medical officer review with 30 minutes or more frequent observations as required by a Q-ADDS 6-7.

Nurse C recalled Roy buzzed at around 2:10am complaining of right upper quadrant pain. She told RN Monaghan and administered Endone 5mg with good effect. This is recorded on the medication chart. It did not prompt more frequent observations as required by then current DDHHS clinical procedure for observations following administration of an opioid.

Nurse C recalled seeing Roy walking back from the men's toilets towards his room unaided approximately 30-40 minutes later. She said she approached him and walked with him advising he could use the toilet near his room. He reportedly told her he was not comfortable doing that as it was being shared with a palliative patient and he preferred to walk down to the men's bathroom.

RN Monaghan was called back to the emergency department at around 3:10am to attend another presentation (who was discharged from the emergency department at 3:50am).

Nurse C recalled seeing Roy get up again at around 4:00am to use the toilet. He reportedly declined her offer of assistance saying he was fine to walk by himself.

Nurse C performed Roy's next set of observations at around 4:15am, which when entered in the Q-ADDS chart scored 6. She recalled Roy was not tolerating the non-rebreather face mask as he was pulling it off his face but she could not recall whether he had shortness of breath or respiratory distress. She told RN Monaghan who ordered nurse initiated nebulised Ventolin which she administered at around 4:30am. RN Monaghan could not recall why he initiated this treatment and confirmed he took this action without assessing Roy first. In evidence he accepted he should have carried out a clinical assessment before ordering the Ventolin. Their combined failure to act as required by a Q-ADDS 6 represented a further missed opportunity to at least reassess Roy's management plan, with or without initiating medical review.

Given there were 8 or 9 patients on the ward that night the nurses decided to start their 6:00am duties (observations, medications and blood sugar readings) at around 4:45am. RN Monaghan started at the men's ward and Nurse C started in the children's ward.

Nurse C said she saw Roy sitting up in bed as she walked past his room on the way to the children's ward at 4:45am. RN Monaghan could not recall when he last saw Roy alive.

At around 5:07am, RN Monaghan found Roy was not breathing. Nurse C had returned to the observation ward to collect a glucometer and saw RN Monaghan at Roy's beside. He called out that Roy was not responding and commenced CPR. This occurred at 5:08am. Nurse C collected the resuscitation trolley from the emergency department and asked the security guard to assist with the CPR. She also phoned Dr Maja, QAS and the nurse on call, Nurse B. Pending their arrival, the security guard assisted them with the resuscitation.

Dr Maja recalled receiving a telephone call at around 5:10am informing her that a patient had experienced cardiac arrest, that CPR had commenced at 5:08am and requesting that she attend immediately. She says she arrived at

around 5:20am at which time CPR was being performed by RN Monaghan and a paramedic. She then assisted in taking turns with the CPR.

Unfortunately, despite continued resuscitation efforts Roy was unable to be revived. Dr Maja certified Roy deceased at 5:45am.

There is no contemporaneous record of the resuscitation due to the lack of available staff at that time of day to scribe.

RN Monaghan made a retrospective entry in the chart at 6:30am stating:

Written at 0630 hours written retrospectively. At 1930 hours – Q-ADDS score sitting between 6-7 throughout shift. Not tolerating Hudson mask – attempted nasal prongs with minimal effect. SpO2 91% on nasal prongs. Patient last seen @ 0450 hours – tolerating nasal prongs – checked on patient @ 0507 hours – not breathing no pulse, ECG no cardiac output – pulseless electrical activity – not shockable rhythm – initially 2 sets of 1:10000 1ml of adrenaline given resus commenced 0508 hours – 2 staff members available only – 1 by security guard assisting CPR commenced 0508 total of 6mls 1:10000 adrenaline given during course of resus. Remained in asystole since commencement of resuscitation. Gurdle inserted size 8- paramedics assistance commenced 0520 hours LMA inserted unsuccessfully Dr in attendance at 0521 hours. CPR continued until 0545 hours where life extinct was called – pupils fixed and dilated no air entry pulseless no heart sounds.

Dr Maja made a timed entry initially for around 5:10am but then this is crossed out. Dr Maja noted that Roy had been admitted overnight with a lobular pneumonia and that the symptoms had started about a week ago. CPR was commenced at 0508hrs and Dr Maja joined the team at 5:20am. No response after 7mgs of adrenaline and continuous chest compressions. Roy was certified as deceased at 5:45am.

I am satisfied that the nurses and Dr Maja responded swiftly and appropriately once Roy was discovered not breathing at 5:07am.

Appropriateness of Roy's management in the observation ward

The DDHHS clinical review identified apparent failure to recognise a seriously unwell patient with respiratory sepsis – there was no evidence of an ECG, lactate, hourly urine measures, continual haemodynamic or oxygenation monitoring and no evidence of consultation with a tertiary facility and no notation of frequent reassessment despite ongoing aberrant vital signs.

The clinical review team noted the on call medical officer was in the hospital when the Q-ADDS of 7 was recorded at 8:30pm and did not review Roy and further, the Q-ADDS score did not lead to increased observations or asking for a doctor to review him during the night.

The clinical review team expressed concern that *potentially there was a focus on perceived intoxication/alcohol withdrawal rather than the deteriorating patient and/or co-existing conditions*.

Dr Treston identified the changeover of doctors at 8:30pm as a missed opportunity for Dr Nhapi and Dr Maja to reconsider with 'fresh eyes' whether Cherbourg Hospital was the right place to look after Roy – an effective medical handover would have provided a good opportunity to review his likely trajectory.

When considering the information Nurse B provided to Dr Maja about Roy, Dr Treston felt it would have been appropriate for Dr Maja to review him even without being specifically asked to do so. Given Dr Maja did not know Roy, had not received a handover from Dr Nhapi, was at the hospital and on call overnight, it would have been a good idea for her to review Roy before she left because patients typically become unwell overnight and it would have given her a feel for his illness and its severity

His opinion about the effectiveness of this interaction serves to highlight the importance of:

1. all clinicians understanding the significance of Q-ADDS scores in order for appropriate action to be taken

2. effective communication between clinicians – by using the following examples, Dr Treston demonstrated how the way in which patient information is conveyed to a medical officer who is not at the bedside can determine the outcome: *there is really no change but I had to let you know this patient is scoring 7* versus *I'm really concerned because patient is scoring 7*

3. using graded assertiveness to obtain the answer or action required.

Even if Dr Maja did not understand the significance of a Q-ADDS 7, it is difficult to understand the logic of an on-call doctor not taking the opportunity, while already at the hospital at night for another patient, to better acquaint herself with a patient not otherwise known to her and about whom she could possibly be contacted overnight. I agree with Dr Treston that this was yet another missed opportunity to have optimised Roy's care with a 'fresh eyes' medical review and a chance to reassess the management plan.

I am satisfied that Dr Maja has reflected on the shortcomings of her decision making that night and has since taken self-directed steps to better understand the significance of Q-ADDS scores.

Dr Treston observed that while the night nursing staff may have had the impression Roy was stable because there was no appreciable change in his vital signs, those vital signs were certainly not normal. While he considered Roy should have been on more frequent observations overnight, he cautioned that more frequent observations would only have made a difference if they were acted on – all of Roy's Q-ADDS scores bar the 5 (at 9:45pm) were unsatisfactory and the 5 was 'not flattering' yet they did not result in any defined change in Roy's management or the trajectory of his illness. He

expressed the view that reduced staffing levels at that time of night should trigger earlier escalation than during the day when more resources are available.

Roy did not receive the standard of nursing care his condition required over the course of the night shift. It dropped significantly once Nurse B went off duty. Both RN Monaghan and Nurse C attribute their failure to continue frequent observations and take the actions mandated by Roy's continuing high Q-ADDS scores to their respective lack of understanding of how the Q-ADDS tool operated. This is despite both of them having previously worked with the tool at Cherbourg Hospital and elsewhere and both having completed their annual Q-ADDS competency training that year.

I can not help but observe that despite RN Monaghan's professed ignorance of the 'full potential' of the Q-ADDS tool, he went on in evidence to claim never to have *sat on patients with these scores* but would *get rid of them* by getting them out to tertiary treatment. This indicates to me his understanding of the significance of Q-ADDS scores may not have been quite as lacking as he suggests. Yet in this instance he did not question why Roy was still at Cherbourg Hospital at handover even though he knew Roy had a high Q-ADDS score, nor did he take any action to follow up or notify Dr Maja when those high scores continued during the night. Instead he made a judgement call – it was the wrong one.

It may well have been a busy night at Cherbourg Hospital, but a patient described by Nurse A as 'the sickest patient in the hospital that night' warranted at the very least closer monitoring by the night shift nurses with a lower threshold for clinician escalation in a small rural hospital at night. Collectively, the night nurses' management of Roy represented yet further missed opportunities to have actively reassessed his management plan. I am satisfied both RN Monaghan and Nurse C now understand the shortcomings of their care and have since been educated in the proper use of the Q-ADDS tools and the expectations of them in escalating clinical concerns.

Mode of death

Dr Treston provided a thoughtful opinion about whether there were earlier signs heralding Roy's cardiac arrest. I accept his opinion that Roy's pain on presentation was more typical of chest wall injury than myocardial infarction, and it appears Roy did not exhibit any of the typical cardiac symptoms (looking grey, ashen or sweaty) overnight. Rather, Dr Treston considered Roy suffered an abrupt onset irregular heart rhythm resulting in no cardiac output that was not amenable to resuscitation efforts. In his opinion, this was likely precipitated by Roy's illness in the context of pre-existing coronary artery disease. I accept this opinion.

Appropriateness of the DDHHS response to Roy's death

The inquest examined the DDHHS response to Roy's death.

Medical staffing model

On 30 January 2017, Dr Robin Cooke commenced employment as the full-time Medical Superintendent at Cherbourg and Murgon Hospitals. Dr Cooke brings valuable experience to the role having previously worked in rural South Australia and in critical care at the Mater Private Hospital Brisbane. Another medical officer commenced on 6 February 2017 bringing the number of permanent medical staff to three. Dr Cooke advised this has helped reduce the use of locum medical officers from every week to approximately once a month.

Having regard to Nurse A's evidence about the importance of staffing stability and continuity of care for an indigenous community, I consider the DDHHS efforts to reduce reliance on locum medical officers goes a long way to enhancing the care provided at Cherbourg Hospital.

Both Dr Nhapi and Dr Maja spoke of receiving limited orientation on starting their locum placements at Cherbourg Hospital, though clearly they both had experience working in different regional and rural hospitals across Queensland prior to 2016.

Dr Cooke acknowledged that locum medical officers do miss out somewhat when it comes to training. She explained that in addition to providing locum medical officers with the newly revised Medical Officers Orientation Manual, she also meets with them to discuss her expectations of them and to orient them to the hospital's information systems, policies and procedures including those relating to use of the Q-ADDS tool. I am satisfied that the appointment of a permanent Medical Superintendent has improved orientation processes for all new medical officers.

Improving clinical handover

There was no requirement or formal process for medical handover at Cherbourg Hospital as at August 2016. Dr Cooke explained there is now a formal clinical handover process stipulated in the revised Medical Officer Orientation Manual. In practice, this comprises a formal videoconference handover at 8:30am involving medical officers at both Cherbourg and Murgon Hospitals and a less formal evening handover, usually by phone, between the afternoon and on-call medical officers.

Improving clinical documentation

EDIS is now used by medical and nursing emergency department staff to document all emergency department presentations. Access to EDIS at Cherbourg Hospital is provided to permanent medical staff and to regular locums. Locum medical officer access to EDIS is still dependent on whether they are there long enough for the approval process to be undertaken in time. This means some locums still need to document on paper. Dr Cooke advised that locums are informed of the requirement to ensure their paper progress notes are filed with the patient chart.

Since Roy's death, medical and nursing staff have been educated about their EDIS documentation requirements with compliance audits undertaken in April and August 2017.

DDHHS has also recognised the need for updated IT equipment and wi-fi access in the emergency department at Cherbourg Hospital to help staff use EDIS.

Indigenous Liaison Officers

The HEAPS analysis recommended the recruitment and backfill of Indigenous Liaison Officer positions with these positions to be based in the emergency department and on the wards. Dr Cooke advised that efforts to recruit Indigenous Liaison Officers are ongoing.

Clinical education

It is evident Roy's death has led to concerted efforts at Cherbourg Hospital, including through the provision of face to face training, to ensure nursing staff understand and comply with policies and procedures for reviewing, recording and actioning patient vital signs and other observations, and for escalating clinical concerns. They have also received graded assertiveness training.

Nurse A expressed her confidence in the hospital's junior staff, having observed a better take up of Q-ADDS since Roy's death and greater confidence by staff in escalating their concerns.

In 2017, Cherbourg Hospital commenced using the Telehealth Emergency Management Support Unit (TEMSU). This is a Brisbane-based service providing advice to rural nurses when assessing/triaging patients or when on the ward before contacting an on-call medical officer. Nurse A reported that Cherbourg Hospital is leading the take-up of this service. Dr Cooke advised this facility has in turn helped manage medical officer fatigue.

It was immensely reassuring to hear that Dr Cooke has observed a noticeable difference at Cherbourg Hospital since she arrived in January 2017 – on ward rounds and in their interactions with RSQ, clinicians are looking at the Q-ADDS chart, actively discussing the patient's Q-ADDS score and recording it in the notes. It is something that that has become part of the 'normal lingo'.

Findings required by s.45 of the Coroners Act 2003

I am required to find, as far as possible, the matters set out under section 45(2) of the *Coroners Act 2003*. Having considered all of the evidence, including the material contained in the exhibits, I am able to make the following findings:

Identity of the deceased:	The deceased person is Roy Rodney Jacobs.
How he died:	Roy presented to the Cherbourg Hospital on three occasions over the period 28-30 August 2016 after a fall while intoxicated. He was thought to have sustained a chest wall injury. He was very unwell when he represented on 30 August 2016. He was diagnosed and treated with intravenous antibiotics and fluids for suspected community acquired pneumonia and alcoholic gastritis. His condition was such that the locum medical officer who admitted him should have sought guidance from a referral centre or Retrieval Services Queensland about whether he required retrieval to a higher acuity facility but this did not occur. Despite ongoing high Q-ADDS scores overnight which required frequent observations and medical review, nursing staff did not monitor him closely or escalate his condition to a medical officer. He was found in cardiac arrest at around 5:07am on 31 August 2016. Unfortunately, despite emergency resuscitation efforts, Roy was unable to be revived.
Place of death:	Roy died at Cherbourg Hospital, Cherbourg in the State of Queensland
Date of death:	Roy died on 31 August 2016.
Cause of death:	1(a) Coronary artery disease 2 Cirrhosis of the liver and lipoid pneumonia

Comments and recommendations

Section 46 of the *Coroners Act 2003* provides that a coroner may comment on anything connected with a death that relates to public health or safety, the administration of justice or ways to prevent deaths from happening in similar circumstances in the future.

Embedding clinician understanding and correct use of early warning & response tools to detect and act on patient deterioration

It is well recognised by the health sector that early recognition and response to clinical deterioration is an essential element of patient safety. Considerable work has gone into the development and implementation of early warning and response systems such as Q-ADDS, CEWT and Q-MEWT to help clinicians better detect and manage clinical deterioration.

This is the third patient death at a DDHHS hospital since 2013 where clinician understanding of and compliance with the Q-ADDS tools has been an issue examined at inquest.

The Deputy State Coroner's joint inquest into the death of Verris Dawn Wright and Jasmyn Louise Carter (Carter-Maher) noted the DDHHS clinical review findings that although in use at one of the hospitals concerned, the Q-ADDS and ED Q-ADDS tools were not well understood by clinicians, treated with indifference and seen as yet another document to complete. That inquest heard evidence about the efforts by DDHHS since 2014 to implement the clinical review recommendations regarding the use of Q-ADDS across its facilities.

The Deputy State Coroner delivered the Wright & Carter-Maher inquest findings on 28 August 2015, a year before Roy's death at a different DDHHS hospital. In making his findings, the Deputy State Coroner highlighted the need for hospital districts to be vigilant regarding education, use and compliance monitoring of use of early warning and response systems. He also directed a recommendation to the Department of Health to fund research to identify and address sociocultural factors influencing compliance with hospital care escalation systems.

This inquest heard evidence from the DDHHS Executive Director, Nursing & Midwifery, Andrea Nagel, about how the HHS currently delivers training to its clinical workforce – a combination of face-to-face, online, clinical placement and preceptorship models. The HHS has its own online platform, Darling Downs Learning Online (DDLOL), through which staff can access role specific training packages.

Ms Nagel advised there was a lot of face-to-face training when Q-ADDS tools were being rolled out in the DDHHS from 2011 and they are currently addressed as part of the staff orientation program. There is a specific DDLOL training package for early assessment and response to the deteriorating patient which staff are required to complete annually. This comprises a PowerPoint presentation for nursing staff addressing the rationale for using

deterioration detection tools and the criticality of measuring, analysing and actioning vital sign observations. It incorporates a nine minute 40 second video presentation demonstrating how to use the Q-ADDS chart. The video explains how to enter observations on the chart and use that information. It explains how the chart operates as a track and trigger tool using single and multiple parameters; how to correctly record and plot a full set of vital signs; how the chart shows trending observations; the requirement to calculate a total Q-ADDS score and how this correlates to actions required on the chart; how to escalate with reference to a clinical escalation algorithm and the DDHHS vital signs and observations procedure. The video also explains when and who can modify the tool and how this affects the patient's scoring. It demonstrates how to document interventions but does not address the situation when there are repeat scores of the same or similar value. It emphasises that the tool is not a substitute for clinical judgement.

Ms Nagel advised the module should take 25 minutes to complete. However, she acknowledged it is possible for users to skip the video. This is consistent with the Cherbourg Hospital training records which show some staff having completed it in as little as five minutes. Having viewed the complete module, I consider the video component to be the most instructive part. I am concerned that the module would be of limited utility to users who skip the video. Ms Nagel's evidence indicated there are currently no plans to address this – there should be.

At the end of the presentation, staff are required to confirm they have reviewed the information in the training package, understand the process of recording and completing an early warning detection tool and acknowledge that early detection and/or escalation can reduce the risk of an adverse event and improve patient outcomes. I note the training package does not incorporate questions to test the user's understanding of the information presented to them.

In June 2016, the DDHSS issued a memorandum to all clinical staff noting that despite ongoing education, communication and directives regarding clinical responsibility to comply with procedures including Q-ADDS/CEWT/Q-MEWT vital signs and observation and clinical concern escalation procedures, it was apparent that some staff either did not understand their responsibilities or chose to disregard them. This was in response to the finding of a recent clinical review regarding an apparent lack of understanding that a Code Blue was mandatory when a vital sign is plotted into an emergency call (purple) zone or the total Q-ADDS/CEWT/Q-MEWT score is 8 or more.

Nurse A advised there has also been local training at Cherbourg Hospital as well as monthly auditing of Q-ADDS charts, a process whereby any gaps identified are brought to the attention of the staff concerned.

Yet despite these HHS-wide and local facility efforts, this inquest heard evidence demonstrating a disturbing lack of understanding of the significance of Q-ADDS scores by the locum medical officers and night nursing staff involved in Roy's care. These are clinicians who had worked with the Q-

ADDS tools in various Queensland public hospitals and at Cherbourg Hospital prior to Roy's death.

Just as was found to have occurred in relation to Ms Carter-Maher's care in August 2014, the Q-ADDS tool was used by the night shift nurses at Cherbourg Hospital to record Roy's observations but they did not use it to escalate what those observations indicated about his condition. The locum medical officers both seemed to consider the Q-ADDS to be a nursing tool and had not considered how it should inform their clinical practice.

The critical issue appears to be a lack of understanding by medical and nursing personnel alike that Q-ADDS scores mandate the corresponding actions required unless the patient's parameters have been modified and appropriately documented by a senior medical officer. In particular, the mandatory nature of the actions required by medical officers appears to be less well understood or accepted. This is despite the DDHHS vital signs and observations procedure clearly stating its application to medical staff caring for patients where a Q-ADDS/CEWT/Q-MEWT action plan guides the process of prompt medical review and/or escalation to an emergency call when deterioration is evident. It is at this point in the clinical escalation process that strict application of the actions required by the tool versus the exercise of clinical judgment becomes cloudy.

I note the DDHHS vital signs and observations procedure, section 3.5.2, currently describes the action plan as *a guide that relates to the Q-ADDS/CEWT/Q-MEWT score where a higher score requires higher levels of intervention*. In Dr Cooke's opinion, while a local medical officer should review a patient scoring Q-ADDS 7 to assess whether it was a true score and what interventions may be required, it was not mandatory for the local doctor to also discuss the patient with a referral centre. Dr Treston's evidence in chief mirrored this, though under cross-examination by the family's Counsel, he conceded if there was no modification of the patient's acceptable vital signs, the actions required are mandatory. I suggest this aspect of the tool's application needs to be clarified (one way or the other) both on the tool itself and in the procedures and training for medical officers supporting its use. In making this comment, I acknowledge the inquest did not have the opportunity to examine the training delivered to DDHHS medical officers about Q-ADDS/CEWT/Q-MEWT.

The events of Roy's admission over 30-31 August 2016 demonstrate yet again the importance of all clinical staff understanding and using early warning and response systems correctly to maximise patient safety. When asked about the effectiveness of the online training, Ms Nagel advised it was regularly reviewed and updated. She believes it does work and observed it is 'up to the user'. Regular local compliance auditing is the way in which DDHHS assesses nursing take-up of the Q-ADDS/CEWT/Q-MEWT tools in its facilities, so in part, audit results should be informative in identifying underlying reasons for non-compliance such as whether the training in how to use these tools is effective. That said, the inquest did not hear evidence

about whether and if so, how the DDHHS formally evaluates the effectiveness of its online training and what information informs any such evaluation.

I acknowledge the benefit of online training as a means of providing consistent, current and evidence-based information to a large workforce dispersed across large geographical areas. The development and evaluation of training content and training delivery methods is an industry in itself so I do not propose to make a prescriptive recommendation about either aspect. However, I strongly encourage the DDHHS to ensure ongoing review of the content, and evaluation of the effectiveness of its procedures and training for all clinical staff in early assessment and response to clinical deterioration, with reference to the issues arising from this and previous inquests.

Being able to identify and understand the factors underpinning non-compliance with clinical escalation systems is vitally important to enhancing effective use of early warning and response tools and in turn, maximising patient safety. Unfortunately, I do not have the benefit of any evidence about the extent to which the Department of Health has implemented, if at all, the Deputy State Coroner's recommendation that it fund such research.

I am in no way suggesting the issues examined by this inquest are specific to Cherbourg Hospital or the DDHHS alone. Failure to recognise and respond to clinical deterioration and non-compliance with early warning and response tools is a recognised issue across the health sector, public and private. I take this opportunity to reiterate the importance of all hospital providers taking steps to embed early deterioration detection and clinical escalation in daily clinical practice and clinical culture through effective training, compliance monitoring and proactive feedback to staff whenever non-compliance is identified. These comments are directed to the broader clinical workforce, not just nursing staff, with particular attention to identifying strategies to target the training needs of the locum medical workforce for whom access to regular hospital training is limited by the very nature of their employment.

Finally, I observe that notwithstanding an employer's obligation to provide effective training for its clinical workforce, it remains the responsibility of individual health practitioners to maintain their professional competency and professional standards.

This inquest has identified multiple missed opportunities to have optimised Roy's care with further medical review and reassessment of the management plan. While I accept those opportunities, if taken, may not have prevented Roy's death, I do consider they were significant in maximising the potential for a different outcome for him. While aspects of his care were suboptimal, no one individual was responsible for these failings; rather a cascading sequence of events led up to his sudden and unexpected death. As such I do not consider the circumstances in which Roy died warrant referral of any of the clinicians involved in his care to the Health Ombudsman.

I offer sincere condolences to Roy's family, friends and his community.

I close the inquest.

Ainslie Kirkegaard
Acting Coroner
Brisbane
23 November 2017