QUEENSLAND COURTS

OFFICE OF THE STATE CORONER

FINDING OF INQUEST

CITATION:	**Inquest into the death of Yvonne Alice DAVIDSON**
TITLE OF COURT:	Coroner's Court
JURISDICTION:	Rockhampton
FILE NO(s):	2007/152
DELIVERED ON:	16 December 2009
DELIVERED AT:	Rockhampton
HEARING DATE(s):	22 & 23 July 2009
FINDINGS OF:	AM Hennessy, Coroner
CATCHWORDS:	Whether protocol applying to percutaneous tracheostomy procedure was followed by Consultant at Rockhampton Hospital, whether unsuccessful procedure contributed to death, disciplinary action taken against doctor.

REPRESENTATION:

Counsel Assisting:	Mr C Press
Family:	Mrs Kathy Barrie (Daughter) (other children of deceased present)
Other Appearances:	
For Dr's Buxton, Austin, Beresford, Nurses Shearer, Stewart, and Doherty:	Mr C Fitzpatrick, Counsel I/by Corrs Chambers Westgarth
For Dr Holland:	Mr D Boddice, Senior Counsel I/by Blake Dawson
For Nurses Gillespie & Cookson:	Ms K Forrester, Counsel I/by Robertson & Kane
For Dr Gutierrez-Bernays:	Ms PK Feeney, Counsel I/by Moray & Agnew Solicitors

These findings seek to explain, as far as possible, how Mrs Yvonne Davidson's death occurred on 11th September 2007. Following on the court hearing the evidence in this matter where learnings can be made to improve safety, changes to hospital and/or industry practice may be recommended with a view to reducing the likelihood of a similar incident occurring in future.

THE CORONER'S JURISDICTION

1. The coronial jurisdiction was enlivened in this case due to the death of Mrs Davidson falling within the category of a death as an unexpected outcome of medical procedure under the terms of s8 of the Act. The matter was reported to a coroner in Rockhampton pursuant to s7(3) of the Act. A coroner has jurisdiction to investigate the death under Section 11(2), to inquire into the cause and the circumstances of a reportable death and an inquest can be held pursuant to s28.

2. A coroner is required under s45(2) of the Act when investigating a death, to find, if possible:-
   - the identity of the deceased,
   - how, when and where the death occurred, and
   - what caused the death.

3. An Inquest is an inquiry into the death of a person and findings in relation to each of the matters referred to in section 45 are delivered by the Coroner. The focus of an Inquest is on discovering what happened, informing the family and the public as to how the death occurred, but not on attributing blame or liability to any particular person or entity.

4. The coroner also has a responsibility to examine the evidence with a view to reducing the likelihood of similar deaths. Section 46(1) of the Act, authorises a coroner to "*comment on anything connected with a death investigated at an inquest that relates to – (c) ways to prevent deaths from happening in similar circumstances in the future."* Further, the Act prohibits findings or comments including any statement that a person is guilty of an offence or civilly liable for something.

5. Due to the proceedings in a Coroner's court being by way of inquiry rather than trial, and being focused on fact finding rather than attributing guilt, the Act provides that the Court may inform itself in any appropriate way (section 37) and is not bound by the rules of evidence. The rules of natural justice and procedural fairness apply in an Inquest. The civil standard of proof, the balance of probabilities, is applied.

6. All interested parties can be given leave to appear, examine witnesses and be heard in relation to the issues in order to ensure compliance with the rules of natural justice. In this matter, the doctors and nurses involved in the care of Mrs Davidson and the family of the deceased (informally) were represented at the Inquest.

7. I will summarise the evidence in this matter. All of the evidence presented during the course of the Inquest, exhibits tendered and submissions made have been thoroughly considered even though all facts may not be specifically commented upon. I have fully considered all of the submissions made by the parties.

THE EVIDENCE

8. Mrs Davidson was 75 years old when she presented to the Emerald Hospital on 1/9/07 with diarrhoea and flu-like symptoms. In the past she had suffered from bowel cancer, a heart condition, hypertension and mild renal impairment. Mrs Davidson was flown by RFDS to Rockhampton Hospital as it was considered that she was suffering from rapid atrial fibrillation and respiratory distress secondary to pneumonia. She had an endotracheal tube inserted prior to departure from Emerald. In Rockhampton there were two attempts in the following days to extubate Mrs Davidson (on the 6th and 9th). After the second failure, a decision was taken by Dr Holland to perform a percutaneous tracheostomy on that afternoon, being a Sunday. Dr Holland was a locum Visiting Medical Officer at Rockhampton Hospital. His rotation was to end on that Sunday. The circumstances surrounding the decision to perform the procedure was subject to some dispute in the evidence.

9. Nurse Lois Gillespie recalls the day of the incident and was on duty at the Intensive Care Unit. She recalls printing off the protocol for the procedure after Dr Holland had made the decision to perform it. The protocol had been completed for a few months and Nurse Gillespie accessed it as she recalled that it contained a list of all of the equipment needed for the procedure. She gave the protocol to the doctors earlier in the day and advised them that it required two consultants to perform the procedure. They read the procedure and had reference to it later in the day. Dr Holland commented that Dr Bernays was as good as any consultant. In relation to the requirement to use a bronchoscope, Dr Holland informed the nurse that he would do the procedure blind as he did not need the bronchoscope. A CO^2 monitor was not completely operational. This was brought to the attention of the doctors and Nurse Gillespie was informed there was plenty of time but she was not given sufficient time to have it operational before the procedure commenced. The doctors were informed that the monitor was not properly operational. Dr Holland was in charge of the procedure and checking all the equipment and everyone was to follow his instructions. Nurse Gillespie had no concerns about Dr Holland's expertise. When the procedure was running into trouble, Nurse Gillespie had tactfully offered sutures on a number of occasions to try to bring the attempts to an end. These offers were not accepted by Dr Holland.

10. Nurse Shearer was responsible for obtaining the bronchoscope from outside the unit and setting it up. There was a problem with the power lead but another was obtained. She was present and participated in the discussions regarding the protocol with Dr Holland.

11. Dr Holland was qualified at the time of the incident as an Intensive Care Specialist and Anaesthetist and was filling a locum rotational position at the Rockhampton Base Hospital. Mrs Davidson had been on ventilation for 8 days. There had been 2 attempts to extubate her which were unsuccessful. Dr Holland considered that a tracheostomy would assist Mrs Davidson to recover more quickly and have a better chance at recovery than continuing ventilation. He was leaving his locum rotation the following day and thought it best to perform the procedure before he

left. He was comfortable that the procedure was within the skills of himself and the staff around him to perform. He was shown the protocol prior to the procedure but did not examine it or recognise it as a guideline. It was located on a trolley and he did not have reference to it. He could not recall the conversation with the nurses regarding it and assumed it was a process document for them. Dr Holland was not expecting this procedure to be the subject of a protocol as he had not seen one in the past and had not come across one for this procedure since. He was not aware that it required two consultants and did not follow it as he had confidence in Dr Bernays and his own experience with the procedure. He felt that it would be useful for the junior doctor to undertake the procedure. Dr Holland was unaware that the protocol required the use of a bronchoscope. He had previously used bronchoscopes many times in the past, including in Rockhampton. He would have preferred to use the tower but as the light source was not able to be connected, he did not use it and did not expect to find another (due to limitations with equipment in Rockhampton) so did not look. He was confident of achieving the same outcome for the patient without one. He was also unconcerned about the problem with the CO^2 monitor as they were usually not calibrated in any event. Dr Holland accepted that it was his responsibility for the equipment to be working.

12. Mrs Davidson's family had concerns that there was insufficient communication with Mr Davidson regarding the events of the day. Dr Holland was aware that Mr Davidson had been present with his wife during the discussions early in the morning but he did not speak to Mr Davidson again in relation to clinical decisions due to frequent changes. Dr Holland apologised to the family at the Inquest.

13. Upon commencement in Rockhampton, Dr Holland was not provided with orientation and could not remember seeing a locum handbook. Dr Beresford, the then Clinical Chief Executive Officer of the Hospital, gave evidence that there was not a system for inductions of senior staff in locum positions. Doctors were expected to be aware of the specialist treatment procedures held in the ward and to participate in ward meetings. On speaking with the family following the procedure, Dr Holland accepted responsibility for the outcome and expressed his regret. Following this incident, the Medical Board set limitations on Dr Holland's practice which he has complied with.

14. Dr David Gutierrez-Bernays had viewed this procedure being performed a number of times but had not performed the procedure himself before. The procedure he had viewed in Rockhampton was performed by a consultant and junior doctor assisting. Dr Holland was the senior clinician in the ward on that day and was responsible for the decisions on the care for Mrs Davidson. Dr Bernays gave evidence that he considered that the decision to perform the procedure was reasonable and appropriate but he did not consider that there was an urgent reason to perform the procedure that day and that a 24 - 48 hour delay would not have compromised Mrs Davidson's health in any way. The tracheostomy was required for the long term management of Mrs Davidson's ventilation needs. He did not call for a second opinion and there was not a qualified clinician in the hospital on that day from which

to obtain one in any event. He was present when Dr Holland reviewed the protocol relating to the procedure with the nursing staff. He could not recall the precise conversation but did recall Dr Holland indicating to the nurse that he was used to conducting the procedure on his own with the aid of a nurse. On that basis the procedure continued despite the terms of the protocol. Dr Bernays stated that there was an expectation that the protocol would be adhered to subject to the circumstances including the availability of staff and consultants and the condition of the patient. The protocol was a guide rather than a prescription.

15. Dr Bernays was aware that he did not have the qualifications required by the protocol but did not have any concern in continuing with the procedure under the guidance of Dr Holland. He had informed Dr Holland that he had not performed the procedure before and a discussion was held regarding the particulars of the procedure. The bronchoscope (whose use was called for in the protocol) was operational but not able to be attached to the viewing screen so only the person operating it was able to view the affected area. Dr Bernays had not used a bronchoscope before. During the procedure, the doctor was unable to verify the placement of the tracheostomy tube and there was some bleeding so the decision was taken to remove the tube and patch the surgical wound. Mrs Davidson's condition did not deteriorate in this time. There were further attempts to place the tube by Dr Holland who had taken over the procedure by this time and something happened to her ventilation which led to catastrophic events. The MET team was then called as Mrs Davidson needed urgent intensive management.

16. Dr Bernays stated that he had received no orientation on arrival at Rockhampton Hospital and went straight onto night duty and was the only doctor on the ward with a consultant available by phone. All of the consultants had different ways of doing things and needed to be accommodated as to their preferences. Dr Bernays was familiar with Dr Holland having worked with him many times on his monthly week-long rotations. He trusted Dr Holland's expertise and felt confident under his guidance and supervision.

17. After arriving at the unit in February 2007 as Director, Dr Austin reviewed all protocols and they were kept in hard copy in a folder in the ward, on the desktop of the computer as well as in the hard drive. The protocols were discussed at Intensive Care ward meetings monthly. Nurse Shearer commented in evidence that Dr Austin directed the Unit with efficiency and was working to (in effect) improve the standard of the Unit. The protocols developed detailed how the core business of the Unit was conducted and covered a whole range of areas. The protocols were based on up to date evidence and research and were a tool to ensure efficient practice.

18. Dr Austin gave evidence that the protocol was implemented in May 2007. it was discussed at Unit meetings for resident staff and emailed to locums for their information. He conceded that it was possible that Dr Holland had not received the email. Minutes are taken of those meetings and circulated and held in hard copy in the Unit and on the computer. The system of dissemination did not require acknowledgment of receipt

(this is not a usual practice in ICUs in Dr Austin's experience). All staff were kept abreast of the development of the protocols.

19. Dr Austin accepted that medical staff could deviate from the protocols. The protocol sets out the preferred and safest method but doctors have different ways of doing things according to their training and experience and there is merit in staff being exposed to various methods. Dr Austin stated that it is now generally accepted that a bronchoscope be used in the procedure and if a doctor had a concern with that he would expect there to be discussion with him regarding those concerns.

20. Dr Austin confirmed that Dr Holland was the senior clinician when Dr Austin was not working in the Unit and all staff were subject to his direction. It was up to Dr Holland to determine whether he thought this procedure was an appropriate teaching opportunity for Dr Bernays. Rockhampton Hospital is a teaching hospital and the ICU along with other wards would provide teaching opportunities for junior staff.

21. The bronchoscope which was attempted to be used in this procedure was shared between theatre and ICU as ICU's was broken and awaiting replacement according to asset management staff. The replacement was in the hospital but had not yet reached the Unit. Dr Austin confirmed that subsequent to this incident, ICU acquired its own bronchoscope.

22. Dr Austin gave evidence that it was very uncommon to perform a procedure such as this on the weekend and an off duty consultant would only be called in on weekends if the procedure was an emergency one. In Dr Austin's view, there were a number of errors made regarding the procedure. There were not two consultants used in the procedure, there had not been proper action to ensure that the required equipment was present for the procedure and the procedure should have been ceased when difficulty was encountered. If the protocol had been followed, the risk of complications from the procedure would have been reduced significantly. Dr Austin had made it clear to the nurses that if they ever had concerns about any matter that they should raise it with the consultant in the first instance. There was also a chain of command outside of the Unit which could be used in case of complaint.

23. Mrs Davidson was showing signs of improvement before Dr Austin went on days off. She had co-morbidities but Dr Austin expected that she would have eventually gone home. Dr Holland would not have considered the procedure for Mrs Davidson if he thought the outcome was medically futile. Dr Austin considered that if the procedure was successful, Mrs Davidson would have lived. Mrs Davidson died from septicaemia as a result of lobar pneumonia. She also had congestive heart failure. The septicaemia dated back probably to the earlier admission in Emerald. The evidence from the post mortem examination was that the procedure undertaken by Dr Holland may have shortened Mrs Davidson's life by a few days. She did not recover from the procedure and there was evidence of hypoxic brain damage. With ideal treatment and conditions, taking into account the medical conditions she was suffering from and her critical illness, but for the procedure Mrs Davidson may have lived a further 2-3 months at most according to the

Forensic pathologist, Dr Buxton. The procedure however, did not bring about a direct cause of death.

24. Dr Morley, Senior Specialist Intensive Care at Melbourne Health, provided expert opinion to the Qld Health investigation of this incident and gave evidence at the Inquest. Dr Morley considered that it was appropriate to perform the procedure but questioned the need to do it on the weekend. He could see no substantive reason to delay the procedure by 24 hours. He stated that in the last decade there has been an increasing use of the bronchoscope to perform this procedure and its use is now common practice. In his opinion, a serious outcome was less likely to have occurred had the protocol been followed, particularly taking into account that the second consultant would have been able to properly monitor the airway during the procedure.

25. A Root Cause Analysis was conducted by Qld Health in relation to the event and Dr Morley agreed with and commented upon many of the recommendations made by that investigation team. Those recommendations included:

    (a) Formal orientation for locum doctors be conducted prior to their commencing duty, including procedures and policies for the Unit and an understanding that there is an expectation that those be adhered to;

    (b) The Percutaneous Tracheostomy protocol mandate the use of a fibre-optic bronchoscope (with video screen) – Dr Morley indicated this would be desirable but not all doctors use the same method for the procedure;

    (c) Ensure a working End-tidal Carbon Dioxide monitor be available in the Unit;

    (d) Procedure to be performed in normal working hours (to enable sufficient staff to be available to perform the procedure as safely as possible);

    (e) Availability of skilled personnel to manage airway (surgical and/or ENT expertise);

    (f) Provision of training for Dr Holland in the procedure;

    (g) Develop an escalation process for all staff in ICU to access including graded assertiveness training.

26. In addition, Dr Morley added further recommendations:

    (h) The professional standards published by the relevant medical colleges are adhered to;

    (i) Dr Holland attend a crisis management course and not perform Percutaneous Tracheostomies unsupervised until after he was satisfactorily completed the training specified above.

27. In relation to the recommendations, Dr Holland gave evidence that he had completed the required courses and complied with the recommendations that related to him.

ISSUES

Failure to comply with Protocol

The protocol for the procedure performed on Mrs Davidson was developed by Dr Austin, the Director of the ICU, some time before the day in question. Dr Holland was a Visiting Medical Officer and worked one week per month at the Rockhampton ICU. He was the only consultant working on the weekend of this incident. He was not aware of the protocol's existence prior to this day and in general is not aware of similar protocols in other hospitals. The protocol was readily available in the Unit and there was evidence of discussion of it with permanent staff at Unit meetings. Nursing staff showed the protocol document to Dr Holland and gave evidence of specific discussions regarding the terms of the protocol with Dr Holland. Dr Holland did not recall these discussions. He assumed that the document was an equipment list for the use of the nurses only. He failed to properly inform himself of the terms of the protocol. Dr Bernays relied on Dr Holland's decision making regarding the procedure and followed his instructions. He was, at the time, a junior doctor, keen to taking learning opportunities and reasonably trusted Dr Holland's experience and instruction.

Consistency of Procedures between Hospitals

Submissions have been made that all Qld hospitals should have the same procedures in place to avoid lack of information when doctors move between hospitals. The evidence is clear that there are various methods to perform this procedure, depending on the doctor's training and experience. Patient safety may well call for variations in approach from time to time. It seems clear that the use of bronchoscopes is now preferred in the procedure but practice in that regard varies too. Dr Austin developed the protocol according to best practice. The best way to draft such documents is a matter for the doctors developing the protocols to determine but it is obvious that consultation with the doctors involved in using the protocol would enhance the process. Where such policies are developed, their adoption across hospitals would tend to suggest a broader adoption of best practice guidelines. The critical issue is making doctors and staff aware of the existence of the protocols and their intended use.

Faulty Equipment

The bronchoscope which was provided for use on the day of the procedure had a faulty or missing power lead. Another was available to use with the scope. The missing lead had been reported for replacement. The scope was unable to be connected to the screen for persons other than the operator to view the airway. A decision was taken by Dr Holland not to use it. He did not call for another to be located. Three bronchoscopes were available in the hospital at that time (this one was shared between ICU and Theatre). The ICU has, since the incident, been provided with its own bronchoscope.

Poor Communication Between Team Members

Dr Holland did not properly listen to the nursing staff who were bringing the terms of the protocol to his attention. He also failed to take into account the difficulties nurses were encountering in properly setting up the CO^2 monitor. He failed to pick up on the suggestions by the nurse assisting to bring the procedure to an end. He failed to call for the MET team and the evidence is clear that a nurse made the decision to make that call. The nursing staff were not assertive with Dr Holland in relation to their concerns regarding the procedure and failed to escalate those concerns beyond the Unit at the time despite a process being in place for that purpose.

Was Dr Holland working under a valid contract with Rockhampton Hospital

Dr Holland was employed as a locum at Rockhampton Hospital on 12/3/07 for 12 months. He was provided with a Job Acceptance Form which he completed after this incident but between 12/3/07 and this incident, he had been undertaking locum work at the Hospital and being paid, indicating an acceptance of the terms of employment. It would have been preferable that the required paperwork be complete before commencing duty.

Further Action

There is insufficient evidence upon which any criminal action could be taken against Dr Holland. The Medical Board have already considered the disciplinary matters and made their determination. Dr Holland has complied with their directions. I do not propose to comment further on those decisions.

I acknowledge that the family of Mrs Davidson still have some concerns and questions regarding aspects of Mrs Davidson's care. I am satisfied, however, that those matters are not related to the death of Mrs Davidson in a formal sense and are better addressed in another forum. Assistance has been provided to Mrs Davidson's family in that regard.

FORMAL FINDINGS

I am required to find, so far as has been proved on the evidence, who the deceased person was and when, where and how he came by her death. After consideration of all of the evidence and exhibited material, I make the following findings:

Identity of the deceased person– The deceased person was Yvonne DAVIDSON born on the 7th March 1932.

Place of death – Mrs Davidson died at the Rockhampton Hospital, Queensland.

Date of death – Mrs Davidson died on the 11th September 2007.

Cause of death – Mrs Davidson died from septicaemia as a result of lobar pneumonia. She also had congestive heart failure. Mrs Davidson was being ventilated and two attempts at extubation failed. It was considered that tracheostomy would improve Mrs Davidson's chance of recovery from pneumonia. A decision was taken to perform the procedure on the 9th despite it being a Sunday. There was no urgent reason to perform the procedure on that day (as opposed to the following day when the Director of the ICU would be on duty). A percutaneous tracheostomy was performed on Mrs Davidson on the day of her death by Dr Robin Holland, the locum consultant. The procedure was not performed in accordance with the protocol in place in the Rockhampton ICU (particularly as to the requirement for two consultants to perform the procedure with a bronchoscope) but Dr Holland was qualified and experienced to perform the procedure. There were some issues with equipment which was not fully operational, including the bronchoscope. Dr Holland used the opportunity to train Dr Bernays in the procedure and Dr Bernays conducted the procedure at Dr Holland's direction and under his instruction. Complications developed during the procedure, particularly in relation to management of Mrs Davidson's airway and Dr Holland took over. He eventually abandoned the procedure and the MET team was called for urgent assistance to Mrs Davidson. She failed to recover and died. Whilst the procedure did not directly cause Mrs Davidson's death, autopsy indications were that death was hastened by the procedure.

RECOMMENDATIONS

I thank the witnesses and parties for the evidence and submissions made regarding recommendations which was of assistance. I have adopted some of the recommendations proposed in those submissions.

I make the following comments by way of recommendations pursuant to section 46 of the Coroners' Act to prevent a similar occurrence in the future and in the interests of public safety. I acknowledge that there has been some progress on the recommendations made in the Root Cause Analysis and proposed by Dr Morley since the incident. To the extent that the parties have already taken remedial action, the court expects that those actions are bona fide and implemented long term.

IT IS RECOMMENDED:

Recommendation 1

That Rockhampton Hospital (and where appropriate, all other hospitals under the management of Queensland Health) ensure that:

(a) Formal orientation for locum doctors be conducted prior to their commencing duty, including procedures and policies for the Unit/s in which they are working and that those doctors be given an understanding that there is an expectation that those policies and procedures be adhered to;

(b) The Percutaneous Tracheostomy protocol require the use of a fibre-optic bronchoscope (with video screen) as highly desirable for patient safety;

(c) Ensure a working End-tidal Carbon Dioxide monitor and Bronchoscope are available in the Intensive Care Unit;

(d) Percutaneous Tracheostomies be performed in normal working hours, unless urgent, to enable sufficient staff including skilled personnel to manage airway (surgical and/or ENT expertise) to be available to perform the procedure in accordance with the protocol and as safely as possible;

(e) Develop an escalation process regarding treatment concerns for all staff in ICU to access including graded assertiveness training;

(f) The professional standards published by the relevant medical colleges are adhered to in performance of Percutaneous Tracheostomies;

Recommendation 2

That where protocols or policies have been developed in Queensland Hospitals to ensure best practice and the highest level of patient safety, Queensland Health ensure that those policies are shared and communicated to doctors in all Queensland Hospitals for consideration and adoption in order to promote consistent safe practice in the performance of medical procedures across Queensland.

I close the Inquest

A M Hennessy
Coroner
16 December 2009