CORONERS COURT OF THE AUSTRALIAN CAPITAL TERRITORY

Case Title:	**AN INQUEST INTO THE DEATH OF ELFRIEDE ADELE TREMETHICK**
Citation:	**[2018] ACTCD 3**
Date of Findings:	27 February 2018
Before:	Coroner P.J. Morrison
Decision:	1. Elfriede Adele Tremethick died on 21 October 2016 at Calvary Hospital, Mary Potter Circuit, Bruce, in the Australian Capital Territory; 2. The manner and cause of death of Ms Tremethick are sufficiently disclosed and a hearing is unnecessary; 3. The manner and cause of Ms Tremethick's death is acute exacerbation of congestive heart failure, following injuries suffered in a fall; and 4. Pursuant to s 52(4)(a)(i) of the *Coroners Act 1997*, no matter of public safety is found to arise in connection with this inquest.
File Number:	CD 250 of 2016

1. Ms Tremethick was an 85 year old woman with a prior history of congestive heart failure. On the day she died, 21 October 2016, she reportedly fell down a short ramp at home after tripping on an exposed nail. She did not have a prior history of falls. She appeared to suffer a lacerated forearm with a possible fracture. The ACT Ambulance Service ("ACTAS") were called to provide assistance and attended at Ms Tremethick's residence.

2. Upon ACTAS initial attendance, Ms Tremethick was conscious, alert and responsive, and she was lying face down at the bottom of the ramp with her legs elevated. The paramedics initially provided Ms Tremethick with a methoxyflurane inhaler for pain relief, but she became non-compliant and said she had difficulty breathing. Ms Tremethick was sat upright on the stretcher but she developed fulminant pulmonary oedema and gastric regurgitation, and she was administered high flow oxygen. At the time Ms Tremethick aspirated, the paramedics held a discussion as to whether she should have been intubated,

and a decision appears to have been made not do to so given the circumstances.

3. Shortly after this Ms Tremethick lost consciousness and stopped breathing and became pulseless. The paramedics commenced cardio-pulmonary resuscitation and manual ventilation, but despite ongoing treatment and emergency transport to Calvary Hospital Ms Tremethick was unable to be revived in the ambulance and she was formally declared life extinct at Calvary Hospital.

4. The pathologist who conducted Ms Tremethick's post mortem examination at my direction found evidence of aspiration of gastric contents and left ventricular hypertrophy. The initial opinion attributed the cause of death to asphyxia caused by inhaled vomitus, with left ventricular hypertrophy being a condition which contributed to death without being directly related to the actual cause.

5. As a result of receiving that opinion I enquired into the appropriateness of the treatment provided to Ms Tremethick by ACT Ambulance Officers. I obtained copies of the ACTAS records relating to their attendance on Ms Tremethick on the day in question and asked Professor Johan Duflou, a consulting forensic pathologist, to conduct a review of the ACTAS records and the autopsy findings. Professor Duflou's key opinions were:

    a. Methoxyflurane is a generally well tolerated inhaled anaesthetic agent. A recent Australian study involving patients between the ages of 5 and 99 in an ambulance setting revealed no deleterious effects, although it was noted that there was a minor decrease in both blood pressure and pulse while the patients were being administered the drug.

    b. Ms Tremethick had a history of heart failure, and had been in a position after the fall which can be expected to aggravate congestive heart failure as a result of increased venous return. Additionally, such a position could be expected to hamper unaided breathing. Ms Tremethick's cardiac function probably deteriorated while in that position, arguably with the contributory effect of pain and stress as a result of the fall and injury sustained, and she had an acute exacerbation of congestive heart failure with the development of acute pulmonary oedema. Possibly the concurrent administration of methoxyflurane could have contributed to Ms Tremethick's deteriorating cardiorespiratory function at this time. On identification of Ms Tremethick's deterioration, she was appropriately sat upright, but likely by this time she was in extremis, and she regurgitated and aspirated gastric contents while having a cardiorespiratory arrest.

    c. Having regard to the ACTAS resuscitation protocols, it would have been prudent to provide optimal protection of Ms Tremethick's airway while she was being resuscitated, and in such circumstances insertion of a

laryngeal mask would have been best practice, assuming of course competence on the part of the paramedics and accepting that there may potentially have been specific circumstances which would have made this impractical or a lower priority.

d. The reason for Ms Tremethick's sudden deterioration was in the form of a sudden exacerbation of her congestive heart failure with development of acute pulmonary oedema, with regurgitation and aspiration occurring in the immediate perimortem period as an agonal phenomenon, and not as a primary event.

e. ACTAS's own investigation revealed a number of aspects of suboptimal emergency care of Ms Tremethick, but it is unlikely that this suboptimal care contributed to Ms Tremethick's death.

6. The aspects of suboptimal care described by Professor Duflou were contained in a number of the documents supplied to me by ACTAS which detailed the review it had voluntarily conducted of the attendance upon Ms Tremethick. These included:

   a. The case documentation did not meet the applicable standard.

   b. There was a limited initial assessment.

   c. Inappropriate comments were made between ACTAS staff members.

   d. The attending paramedics were not communicating effectively with each other at the scene.

   e. Advanced airway management of Ms Tremethick was indicated and should have been attempted.

   f. Once resuscitation had ceased in the ambulance it was no longer appropriate for urgent transport to Calvary Hospital to be continued.

7. While the aspects of suboptimal care identified by Professor Duflou and ACTAS are generally of concern, I accept the opinion of Professor Duflou that it is unlikely that these contributed to Ms Tremethick's death. In those circumstances, I make no comments adverse to ACTAS, or the paramedics who attended on Ms Tremethick on the day of her death.

8. I have considered whether the findings in relation to the treatment by ACTAS, and particularly the airway management matter, otherwise give rise to a matter of public safety.

9. ACTAS has advised me of the remedial action it had already undertaken in response to this case. Most directly, feedback was provided to the relevant staff members on the issues of concern. Specific steps taken to address the system and process issues arising from this incident were as follows:

a. Key topics arising from Ms Tremethick's death were covered during the Paramedic clinical in-service training program in 2017, including revision of cardiac arrest management, teamwork and communication processes when multiple officers are on scene, review of advanced airway management, and an advanced airway management simulation exercise.

b. ACTAS's policy around termination of resuscitation and management of deceased persons is being reviewed and is in the process of being updated. Relevant to Ms Tremethick's case, the policy will reinforce current practice as to the circumstances under which paramedics should cease resuscitation and that urgent transport to an Emergency Department is not warranted after a patient has died.

c. A systemic review of airway management practices is underway for consideration by the ACTAS Clinical Advisory Committee in March 2018. Relevant to Ms Tremethick's case, the draft document reiterates the importance of placing an advanced airway in patients in cardiac arrest.

10. ACTAS has acknowledged that it did not fully meet its usual standards in caring for Ms Tremethick and it deeply regretted any distress this has caused her family. ACTAS adopted a proactive approach in identifying issues and concerns and undertaking remedial action as a priority.

11. In light of the rectification actions already undertaken by ACTAS, I am not persuaded that the issues of concern found in this case either singularly or in combination amount to a matter of public safety within the meaning of that term in the *Coroners Act 1997*. I do however note that while on the facts of this case the decision not to intubate Ms Tremethick probably made no difference to her outcome, it is foreseeable that in other cases such a decision could directly affect the outcome for a patient.

12. In all the circumstances as detailed above in my view there is no necessity to hold a public hearing in relation to Ms Tremethick's death. I believe I have all the evidence which exists or is likely to exist which could possibly bear on the decisions I must make. There is no issue about which I would be empowered to hold a public hearing and which in and of itself warrants that course being taken.

13. I direct that a copy of my findings in this matter be sent to the Minister for Emergency Services and the Director-General of the ACT Justice and Community Services Directorate for their information. I acknowledge ACTAS's willingness to assist me in this matter.

14. I will publish my findings, recommendations and comments on the ACT Coroners Court website, together with any response I might receive from Ministers or Government.

15. I extend my condolences to Ms Tremethick's family.

P.J. MORRISON
Coroner