STATE CORONER'S COURT
OF NEW SOUTH WALES

Inquest:	Inquest into the death of Stephen Kline
Hearing dates:	4 to 8 February 2019
Date of findings:	1 March 2019
Place of findings:	NSW State Coroner's Court, Lidcombe
Findings of:	Magistrate Derek Lee, Deputy State Coroner
Catchwords:	CORONIAL LAW – taser deployment, critical incident, tactical options model, venous thromboembolism risk assessment, pharmacological prophylaxis, heparin, pulmonary emboli
File number:	2016/82254
Representation:	Ms M England, Counsel Assisting, instructed by Mr J Herrington (Crown Solicitor's Office) Ms K Edwards for Dr C Ahn & Dr D Vandenberg, instructed by Avant Law Ms A Horvath for Sydney Local Health District, instructed by McCabe Curwood Mr A Jobe for Corrective Services NSW, instructed by the Office of the General Counsel (NSW Justice) Mr M Spartalis for the NSW Commissioner of Police, instructed by the Office of the General Counsel (NSW Police Force)

Findings: I find that Stephen Kline died on 15 March 2016 at Concord Repatriation General Hospital, Concord NSW 2139. The cause of Stephen's death was pulmonary thromboemboli due to deep vein thrombosis on a background of a leg burn wound. Stephen died of natural causes during an extended period of hospitalisation after suffering the leg burn wound as a consequence of having a taser deployed at him by a NSW Police Force officer.

Recommendations: ***To the Chief Executive, Sydney Local Health District:***

1. I recommend that a copy of these findings be provided to the developer of the eMeds software system for consideration in relation to Recommendation 2.

2. I that, in consultation with the NSW Ministry of Health, consideration be given to requesting that the developer of the eMeds software system ensure that users of the system are readily able to distinguish between medication that is actively being administered to a patient and medication that has been cancelled, irrespective of the on-screen information chosen to be displayed by the user, and without detracting from the functionality and usability of the system.

3. I recommend that consideration be given to the circumstances of Stephen's death (with appropriate anonymization, and conditional upon consent being provided by Stephen's family and following appropriate consultation with them) being used as a case study as part of education packages provided to clinical staff regarding venous thromboelbolism risk assessment in the context of unexpected extension of a patient's admission duration.

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1. Introduction

1.1 On 8 March 2016 Stephen Kline at home when he was told that his electricity would be disconnected. He reacted in a way that resulted in the attendance and involvement of a number of police officers. The situation quickly escalated culminating in a taser being deployed at Stephen. The taser ignited some nearby flammable liquid causing an explosion and burns to Stephen's leg. He was taken to hospital for treatment.

1.2 Whilst there, and whilst under the guard of Corrective Services NSW officers, Stephen swallowed a set of keys in an apparent act of self-harm. This meant that Stephen's expected brief hospital admission became an admission of some seven days as the keys could not be surgically retrieved. On the morning of 15 March 2016 Stephen unexpectedly and suddenly collapsed, and went into cardiorespiratory arrest. An emergency response was mounted but Stephen could not be revived and was later pronounced deceased.

2. Why was an inquest held?

2.1 Under the *Coroners Act 2009* (**the Act**) a Coroner has the responsibility to investigate all reportable deaths. This investigation is conducted primarily so that a Coroner can answer questions that they are required to answer pursuant to the Act, namely: the identity of the person who died, when and where they died, and what was the cause and the manner of that person's death. All reportable deaths must be reported to a Coroner or to a police officer.

2.2 As a consequence of the incident involving the police officers on 8 March 2016 Stephen was arrested and taken into police custody. He was later refused bail and remanded into custody pending a future court appearance. As he could not be transferred to a correctional centre before the keys which he had swallowed had passed, he remained at hospital under the guard of Corrective Services NSW (**CSNSW**) officers.

2.3 This meant that at the time of Stephen's death he was being held in lawful custody. By depriving a person of their liberty, the State assumes responsibility for the care of that person. Section 23 of the Act makes an inquest mandatory in cases where a person dies whilst in lawful custody. In such cases the community has an expectation that the death will be properly and independently investigated. A coronial investigation and inquest seeks to examine the circumstances surrounding that person's death in order to ensure, via an independent and transparent inquiry, that the State discharges its responsibility appropriately and adequately.

2.4 Inquests have a forward-thinking, preventative focus. At the end of many inquests Coroners often exercise a power, provided for by section 82 of the Act, to make recommendations. These recommendations are made, usually, to government and non-government organisations, in order to seek to address systemic issues that are highlighted and examined during the course of an inquest. Recommendations in relation to any matter connected with a person's death may be made if a Coroner considers them to be necessary or desirable.

3. Stephen's life

3.1 Inquests and the coronial process are as much about life as they are about death. A coronial system exists because we, as a community, recognise the fragility of human life and value enormously the preciousness of it. Recognising the impact that a death of a person has, and continues to have, on the family and loved ones of that person can only serve to strengthen the resolve we share as a community to strive to reduce the risk of preventable deaths in the future.

3.2 Understanding the impact that the death of a person has had on their family only comes from knowing something of that person's life and how the loss of that life has affected those who loved that person the most. Therefore it is extremely important to recognise and acknowledge the life of that person in a brief, but hopefully meaningful, way.

3.3 Unfortunately very little is known about Stephen's life. He was born in 1964 and was 51 years old at the time of his death. Stephen grew up in the suburb of Tregear in Sydney's western suburbs. He and his three siblings attended primary school in Tregear and then high school in St Marys. Stephen left school in Year 10 and lived with a friend in Tregear. As Stephen had challenges with his literacy, he found it difficult to maintain employment. However Stephen was skilled in mechanical work, eventually finding casual work as a boiler maker, and he later worked in the concrete industry.

3.4 Due to his heritage Stephen identified as an Aboriginal man. Stephen married in 1989 after meeting his wife at a nursery where they both worked. They had a daughter together a year later. Between 1992 and 1993 Stephen encountered difficulties in his relationship, and he and his wife later separated. For reasons unknown Stephen became estranged from the members of his family over time and had little contact with them.

3.5 In around 2001 Stephen moved to his home in Riverstone. Stephen lived alone and reportedly kept mostly to himself. He enjoyed working on older model Holden cars which he would repair and then sell. Stephen was also devoted to the large number of dogs that he kept at his home in Riverstone. Many of the dogs had been rescued by Stephen, he loved them dearly and regarded them as his family. Stephen's admission to hospital following the events of 8 March 2016 distressed and upset him greatly because it meant that he was separated from his beloved dogs. The impact that this had on Stephen was painfully clear.

3.6 Although no member of Stephen's family was present during the inquest and able to provide more of a glimpse into the person that Stephen was, the importance of his life should not be diminished. From all that is known about him he was a man proud of his heritage and who cared deeply for his dogs who he regarded as family rather than pets.

4. Tuesday, 8 March 2016: background events

4.1 Stephen was at his home at 110 Regent Street, Riverstone on the morning of 8 March 2016. He had been told that his electricity would be disconnected as he had not paid his electricity bills. Two workers from Stephen's electricity provider were on site to perform the disconnection. However, because Stephen became upset at the prospect of losing his electricity he began to behave in an aggressive manner. This prompted a call being made to the police to provide assistance.

4.2 Local police officers arrived on the scene at about 8:30am. The workers from the electricity provider told police that they only needed to access a power pole located across the street from Stephen's house. As the workers climbed up the pole and began to disconnect the electricity to Stephen's house, Stephen appeared at the front gate of his house and began yelling and swearing. Stephen yelled out, "*I've got a fucken chain saw, when you guys leave I'm going to cut the pole down*".[1] The police officers attempted to reason with Stephen in an attempt to calm him down. However, Stephen remained angry, started up a chain saw and again threatened to cut the pole down. This behaviour prompted the police in attendance to call for assistance.

4.3 Sergeant Jason Shaw was one of the police officers who responded to the call for assistance. He arrived on scene at about 9:14am. Upon arrival Sergeant Shaw saw one of the electricity company workers place a piece of paper in Stephens' letterbox. Stephen emerged from his house a short time later, yelling and swearing into a mobile phone which he was holding, and making threats to cut down the power pole.

4.4 Sergeant Shaw told Stephen that he needed to talk to him, but that Stephen needed to first calm down and to stop making threats. Sergeant Shaw told Stephen to look at the piece of paper that was in his letterbox. Stephen retrieved the paper but told Sergeant Shaw that he could not read. Sergeant Shaw took the paper and saw that it was a disconnection notice with a telephone number on it. Sergeant Shaw told Stephen that if he called the number he could speak to someone about the disconnection. However Stephen showed no interest in calling anyone.

4.5 Sergeant Shaw informed Stephen that he could not threaten to cut down the power pole and that he would be arrested if he did so. Leading Senior Constable Michael Hurst, another one of the officers in attendance, heard Stephen tell the police officers, "*When you leave I'll just cut the power pole down*".[2] Sergeant Shaw informed Stephen that if he did that he would be charged with an offence and detained. Stephen was heard to respond by saying, "*I don't give a fuck*".[3] Stephen walked away and went back inside his house, whilst continuing to swear. A short time later, the sound of further swearing and threats, together with the sound of a motor revving, came from Stephen's carport area, and later stopped.

4.6 Sergeant Shaw left the scene a short time later and began to patrol the area, driving past Stephen's house on several occasions in order to maintain police visibility in the area. On one occasion whilst driving past, Sergeant Shaw saw that Stephen was standing in his front yard holding a chainsaw. However, on another occasion Stephen was no longer in the front yard. After patrolling the area for about 15 minutes Sergeant Shaw left and returned to Quakers Hill police station.

[1] Exhibit 1, Tab 14 at [5].
[2] Exhibit 1, page 78.
[3] Exhibit 1, page 78.

5. Tuesday, 8 March 2016: Police enter Stephen's front yard

5.1 At about 11:10am a job was broadcast over police radio indicating that a male person residing at 110 Regent Street Riverstone was using a chain saw to cut down a power pole. Initial attending police, including Sergeant Shaw and Leading Senior Constable Hurst, returned to Stephen's address and inspected the power pole opposite his house. They saw that there were two diagonal cuts in the pole, at a depth of about one centimetre. No person was sighted in the vicinity of the power pole.

5.2 Some of the attending police officers commenced patrolling the surrounding area. Meanwhile Leading Senior Constable Hurst canvassed the residents of the neighbouring properties to enquire whether they had seen any person in the vicinity of the power pole.

5.3 Sergeant Shaw, Leading Senior Constable Hurst and Constable Diane Simkins walked to the front of Stephen's house. Stephen was in the front yard of his property, which was surrounded by a metal fence. At the right hand side of Stephen's property was a driveway with a gate locked by a chain and padlock. The police officers saw that there was a large dog running around in the front yard. Sergeant Shaw asked Stephen to approach the front gate so that the police officers could speak with him. Leading Senior Constable Hurst noted that Stephen was pacing around the yard and mumbling something which the police officers could not hear. Sergeant Shaw repeated his requested several more times, and also told Stephen that the police officers had the right to approach his front door. He instructed Stephen to put the dog away, warning him that if the dog approached the police officers they would deploy their tasers. Stephen responded by saying, "*Fucken try it*".[4]

5.4 However, Stephen called the dog to him and put it inside his house. When he returned to the yard he walked behind two cars that were parked in the driveway. Having formed the view that Stephen was responsible for damaging the power pole across the street, Leading Senior Constable Hurst prepared to enter Stephen's front yard by jumping over the front gate in order to arrest him. Leading Senior Constable Hurst placed his hands on the fence and was about to jump over it when he heard Stephen say, "*If you come on my property I'll fucken burn…*".[5] Leading Senior Constable Hurst saw that as he said this, Stephen was holding a red plastic fuel container similar to a jerrycan.

5.5 Leading Senior Constable Hurst jumped over the fence and saw that Stephen was attempting to open a cap on top of the jerrycan. Believing that Stephen was approaching him with the jerrycan (and that it contained petrol), Leading Senior Constable Hurst withdrew his oleoresin capsicum (**OC**) spray and deployed a one second burst at Stephen. According to Leading Senior Constable Hurst this appeared to have no effect as Stephen took the cap off the jerrycan and began splashing fuel on the parked cars and in the direction of Leading Senior Constable Hurst. Leading Senior Constable Hurst smelled petrol fumes and deployed a second burst of OC spray at Stephen. At this time Stephen was approximately two metres from Leading Senior Constable Hurst and continued to splash the petrol from the jerrycan, some of which landed on Leading Senior Constable Hurst's shirt and upper torso.

5.6 Leading Senior Constable Hurst continued to deploy the OC spray whilst retreating backwards until he backed onto the front fence. Not wanting to turn his back on Stephen (in order to climb back over the fence) due to a fear that Stephen might produce a lighter and ignite the petrol, Leading Senior

[4] Exhibit 1, page 80.
[5] Exhibit 1, page 80.

Constable Hurst decided to instead advance and tackle Stephen to the ground. As he did so, Stephen splashed some further petrol which came into contact with Leading Senior Constable Hurst's eyes.

5.7 Leading Senior Constable Hurst felt a burning sensation in his eyes and was unable to see properly. He began to grab onto Stephen in an attempt to bring him to the ground. It appears that Leading Senior Constable Hurst tripped Stephen and he fell down, landing on top of Leading Senior Constable Hurst. Leading Senior Constable Hurst yelled out a number of times that he could not see and asked for help.

5.8 At this time Sergeant Shaw was still standing on the other side of the front fence. He ran to the right hand side of the fence and attempted to climb over it but found that it could not support his weight. Instead he ran back to the front fence, climbed over it and moved to where Leading Senior Constable Hurst was still on the ground, grappling with Stephen.

5.9 Sergeant Shaw withdrew his taser, pointed it at Stephen and pressed the trigger, causing the taser to deploy its probes which struck Stephen in the torso area. Stephen fell to the ground and stopped struggling, indicating that neural muscular incapacitation had occurred. Sergeant Shaw left the taser armed active and about three to four seconds into the five second cycle he saw that the lower portion of Stephen's left shin was surrounded by flames. Moments later there was a large explosion in the area surrounding where Stephen had splashed petrol onto the ground.

5.10 Sergeant Shaw grabbed Stephen under his armpits and dragged him away from the explosion area which by this time was alight. He attempted to put out the fire on Stephen's legs by smothering it with his hands but this had little effect. Instead, Sergeant Shaw filled up a bucket near a tap in Stephen's yard with water and poured it over Stephen's legs, extinguishing the flames. Sergeant Shaw repeated this process of retrieving water several times in order to pour it over the flames on the ground, over Leading Senior Constable Hurst's face, and over Stephen's legs again.

5.11 Sergeant Shaw returned to Leading Senior Constable Hurst to help him climb over the fence before going back to Stephen to help him stand up. Stephen started to walk towards his front door but Sergeant Shaw stopped him and told him that an ambulance was on its way and that he needed to be treated. Stephen was later charged with a number of offences relating to damaging the power pole and his interaction with the police officers in the front yard of his home.

5.12 NSW Ambulance paramedics arrived on the scene a short time later and Stephen was taken by ambulance to Westmead Hospital emergency department. An initial assessment was performed which indicated that Stephen had suffered a partial thickness burn of approximately 1.5% to his left lateral calf. It was later decided that Stephen should be transferred to a different hospital so that his burn could be treated by a specialist Burns Unit.

6. Admission to Concord Repatriation General Hospital

6.1 Accordingly, Stephen was subsequently taken to Concord Repatriation General Hospital (**Concord Hospital**), arriving at about 6:55pm. He was immediately transferred to the Burns Unit via the emergency department. Dr Chris Ahn was the on-call plastic surgery registrar who was on duty and covering the Burns Unit at the time. Dr Ahn assessed Stephen and found that he had a partial thickness burn injury to the anterior, lateral and posterior surfaces of his left leg to his left toe, comprising 5% of his total body surface area. Dr Ahn formulated a treatment plan which involved

Stephen's burn wounds being scrubbed and a Xenograft Biobrane dressing applied. Given the relatively minor nature of Stephen's burn injury Dr Ahn considered that Stephen would be discharged shortly. However, given the timing of Stephen's admission that evening, it was decided that he should remain admitted overnight with the expectation of being discharged sometime the next morning.

6.2 Sometime later that evening Stephen received a visit from Inspector Skye Adams from the Royal Society for the Prevention of Cruelty to Animals (**RSPCA**). She had attended Stephen's home earlier that afternoon and seized two of Stephen's dogs. Inspector Adams told Stephen that two of his female dogs were in the care of the RSPCA and suffering from prolapsed uteruses which required urgent veterinary intervention. Ms Adams told Stephen that whilst the dogs were in the care of the RSPCA that he was responsible for veterinary and boarding fees, but that he if was unable to pay he could surrender the dogs. Stephen belligerently told Ms Adams that he did not wish to do so.

6.3 Overnight, Stephen complained of chronic pain in his right hip as well as a burning pain in his chest. His vital signs were taken and a review was planned for the following morning.

7. Wednesday, 9 March 2016

7.1 Ms Adams returned the following day to speak with Stephen. She discussed the care of Stephen's dogs that remained at his house and he told her that he had a friend who could look after the dogs. Ms Adams later contacted Stephen's friend to make arrangements for him to provide short term care.

7.2 During the morning, Stephen complained of dizziness, together with pain and stiffness due to bed rest. At around 2:45pm a physiotherapist attempted to mobilise Stephen but he declined, stating that doing so made him feel uncomfortable and anxious.

7.3 At about 3:00pm Dr Paul Tyrrell, a psychiatry registrar, visited Stephen in his room. Due to the unusual circumstances surrounding Stephen's admission the Burns Unit had referred Stephen for a psychiatric review. It was intended to identify whether Stephen had a mental illness and, if so, how it was to be managed. As Stephen was sedated and uncooperative at the time Dr Tyrrell was only able to conduct a preliminary assessment in which he formed the view that Stephen showed no signs of psychosis or having any evidence of depression or suicidal thoughts, but suspected that Stephen may have a personality disorder.

7.4 Dr Tyrrell later spoke to Dr Danielle Vandenberg, the consultant psychiatrist, about Stephen's management. A plan was formulated for Stephen to be commenced on an Alcohol Withdrawal Scale to monitor for alcohol withdrawal and started on a regimen of diazepam for agitation if there was evidence of this. Further, Stephen was also prescribed thiamine and plans were made to obtain as much collateral information as possible about his past mental health history. Finally, plans were made for daily psychiatric review in order to monitor Stephen's risk for possible self-harm.

7.5 Shortly after Dr Tyrrell's preliminary assessment, a bedside hearing was conducted in relation to the offences that Stephen was charged with. He was refused bail and remanded into custody. Up until this time Stephen had been under the guard of police officers stationed at the hospital but following

the refusal of bail Stephen was placed under the guard of CSNSW officers from the Court Escort Unit. Stephen's next court appearance was scheduled for 15 April 2016 at Penrith Local Court.

8. Thursday, 10 March 2016

8.1 Inspector Adams returned to the hospital on the morning of 10 March 2016. She told Stephen that his friend would not be able to look after his dogs in the long term. However Stephen expressed confidence that his friend could look after the dogs and refused to surrender them.

8.2 Later in the morning a physiotherapist returned to see Stephen to help him to mobilise. Stephen was reluctant to do so and complained of pain in his right hip and knee.

8.3 Dr Vandenberg later reviewed Stephen at about 11:50am The review lasted about 60 minutes and Dr Vandenberg noted that Stephen was preoccupied with certain themes such as perceived harassment by others, and the potential loss of his dogs. She noted that Stephen became distressed when talking about the possible loss of his dogs and in this context admitted thoughts of self-harm and wanting to die. Towards the end of the interview Stephen told Dr Vandenberg that he had swallowed a set of keys he had taken out of the bedside locker.

8.4 Dr Vandenberg formed the view that Stephen's swallowing of the keys represented an act of intentional self-harm in the context of his distress at the possibility of losing his dogs, house and property. Accordingly, Dr Vandenberg informed the Burns Unit nursing staff of this and noted in Stephen's progress notes that he was at ongoing risk for self-harm and needed to be monitored.

8.5 Chris Parker, the Nursing Unit Manager (**NUM**) for the Burns Unit, learned that Stephen had swallowed the keys and in turn advised Dr Arridh Shashank, the Burns Unit Senior Medical Officer. An x-ray was performed and the location of the keys was identified. The hospital's gastroenterology team were contacted and, following an assessment, plans were made to perform a gastroscopy to remove the keys. However, shortly before the procedure a further x-ray was performed which revealed the keys had progressed meaning that the procedure could not be performed. A plan was formulated to wait for Stephen to pass the keys. Accordingly, he was placed on a clear fluid diet with his stools to be monitored. Given the possibility that the keys might cause an obstruction, necessitating surgical intervention, daily x-rays were required to monitor the progress of the keys. As these x-rays could not be performed at Long Bay Correctional Centre (where Stephen was to be transferred to), he needed to remain admitted at Concord Hospital.

8.6 Sometime during the day Janette Pittorino, a social worker, went to see Stephen to perform a psychosocial assessment. She found that he was unhappy, aggressive and verbally abusive. Stephen was reluctant to discuss anything with Ms Pittorino or pass on any information. Stephen continued to be monitored and it was noted that his vital signs were stable that evening and the following morning.

9. Friday, 11 March 2016 to Sunday, 13 March 2016

9.1 Dr Vandenberg reviewed Stephen again on the morning of 11 March 2016. At this time Stephen appeared very flat in his mood and started to cry. He told Dr Vandenberg again that his life was not worth living and that he wanted to die in the context of losing his dogs, house, and other property.

9.2 At some time during the day a physiotherapist visited Stephen and again attempted to mobilise him. Stephen refused to do so, complaining of dizziness. Throughout the day and night Stephen's observations were noted to be normal.

9.3 Ms Pittorino also returned to see Stephen. She found him to be in a calmer mood than the previous day, and he apologised to her for his earlier behaviour. Stephen spoke with Ms Pittorino for a short time about his dogs, expressing some concern about the security of his property. However, Stephen declined any other social work support.

9.4 Stephen complained at times of dizziness and pain in his right hip and left leg. However, his vital signs were noted to be stable when routine observations were performed between 11 and 13 March 2016. On 13 March Stephen was able to shower independently and was noted to be ambulant with the assistance of two members of the nursing staff.

10. Monday, 14 March 2016

10.1 Dr Vandenberg returned to review Stephen briefly for a few minutes at 9:25am on 14 March 2016 but could not see him for longer as his burns dressings needed changing. Stephen was noted to be more settled and plans were made to return later in the day to review him.

10.2 At about 12:30pm, a physiotherapist returned to see Stephen again at which time he complained again of dizziness, together with pain in his abdomen and left leg. Stephen's vital signs were taken and found to be normal.

10.3 At about 12:50pm Stephen complained to Registered Nurse Alyce McNabb that he was feeling dizzy and nauseous, and was noted to be sweating heavily, after walking to the shower. Stephen's blood pressure was taken and found to be within normal limits.

10.4 Sometime during the day the Burns Unit contacted the hospital's surgical team to recommend that a computed tomography (**CT**) scan of Stephen's abdomen and pelvis be performed. The purpose of the CT scan was to locate where the keys were in the gut, whether there were any complications, and whether surgical intervention would be required. The CT scan was later performed at 4:47pm. A radiology registrar subsequently reported on the scan and generated a preliminary report at 5:10pm. In accordance with usual practice relating to the reporting of scans, this preliminary report was to be later be reviewed by a consultant radiologist and finalised.

10.5 At the time that the preliminary report was being written, members of the general surgical team came to the radiology department to view and discuss the CT scan. It was determined that the scan showed no bowel perforation or any other complications in the abdomen.

11. Tuesday, 15 March 2016: Stephen's sudden collapse and death

11.1 Dr Shashank and Dr Constant Van Schalkwyk conducted a daily ward round at about 7:15am on 15 March 2016. Stephen remained afebrile but it was noted that he had an elevated heartrate. Stephen's other vital signs remained below the levels for clinical review (there was no evidence of hypoxia or change in respiratory rate) and Stephen appeared to be sleeping comfortably. As

Stephen's burn had healed adequately, the plan was to transfer him to the medical unit at Long Bay gaol as soon as possible.

11.2 CSNSW First Class Correctional Officers Jason Baptista and Vidaya Sharma were on duty on 15 March 2016 having commenced their shift at 5:30am. At that time Stephen was sleeping on his back on his bed with one hand cuffed to the bed. Stephen woke up sometime between 8:30am and 8:45am. The correctional officers did not hear Stephen make any complaints and he was helped to the shower a short time later at around 9:00am.

11.3 Upon returning to his room Stephen remained uncuffed so that he could more easily eat his breakfast which was to be served shortly. Officer Baptista had received information from the previous shift that Stephen had swallowed a set of keys. Therefore, as a precaution, Officer Baptista removed all metal cutlery from Stephen so that he only had access to plastic cutlery during breakfast.

11.4 Dr Vandenberg and Dr Tyrrell returned to see Stephen again at about 9:30am. However Dr Vandenberg and Dr Tyrrell were unable to complete a review as Inspector Adams and Ms Pittorino arrived a short time later to speak with Stephen. Dr Vandenberg made plans to return to review Stephen later in the day.

11.5 During the meeting Ms Adams again raised with Stephen that his friend was unable to look after his dogs, particularly bearing in mind that Stephen's criminal proceedings had been adjourned until 15 April 2016 and that Stephen would remain in custody until then unless he was granted bail. Ms Adams sought to explain to Stephen that as the dogs were untrained and aggressive (because they had never been out of their yard) that they could not be placed with an organisation such as a security company. This meant, according to Ms Adams, that the dogs could either be seized by the RSPCA and detained until they could be legally euthanised, or Stephen voluntarily surrendered them so they could be sedated at Stephen's home.

11.6 Ms Adams and Ms Pittorino spoke with Stephen for about 40 minutes. Stephen was visibly upset following the meeting and was seen to be crying loudly. Stephen asked for assistance to be helped back to his bed and so Officer Baptista approached the nurses' station which was a short distance (approximately 10 metres) from Stephen's room. As he did so Officer Sharma left the room and remained at the doorway so that he could still see into the room. As Officer Baptista was making his way back to the room Officer Sharma heard the sound of something falling, and looked into the room to see Stephen fall off his chair and collapse face down on the floor. When Officer Baptista and a nurse returned to the room a short time later (about 30 seconds) Stephen was found lying face down on the floor and unresponsive. Urine and vomit were seen on the floor and Stephen was found to be cyanosed with no pulse.

11.7 Nursing staff immediately made a call at 10:15am for emergency assistance. Medical staff from the intensive care unit, anaesthetics and cardiology departments responded to the call and arrived a short time later. Cardiopulmonary resuscitation was commenced but Stephen could not be revived. He was pronounced deceased by Dr Shashank at 10:58am.

11.8 At about the time that emergency action was being taken to revive Stephen, Dr Kate Archer, consultant radiologist, produced the final report in relation to Stephen's earlier CT scan. The report was completed at 10:47am on 15 March 2016. It noted that, "*There are possible filling defects within*

pulmonary arteries in the right lower lobe, raising the possibility of pulmonary emboli. A CT pulmonary angiogram is suggested to further assess this. The admitting team has been notified".[6]

12. What was the cause of Stephen's death?

12.1 Stephen was later taken to the Department of Forensic Medicine at Glebe where Dr Rianie Janse Van Vuuren, forensic pathologist, performed a postmortem examination on 18 March 2016. The autopsy identified deep vein thrombosis in Stephen's legs and thromboemboli in both lungs. Dr Van Vuuren also noted that there were thrombi in some vascular spaces and that there was also evidence of marked coronary atherosclerosis.

12.2 Dr Van Vuuren later prepared an autopsy report dated 12 October 2016 in which she opined that the cause of Stephen's death was pulmonary thromboemboli due to deep vein thrombosis on a background of a leg burn wound.

12.3 **CONCLUSION:** The burn injury which Stephen suffered on 8 March 2016 required treatment at hospital and subsequent admission. Given the sudden and unexpected nature of Stephen's collapse on 15 March 2016, and the findings of the autopsy, the cause of Stephen's death was pulmonary thromboemboli due to deep vein thrombosis on a background of a leg burn wound.

13. Issues examined by the inquest

13.1 Prior to the inquest a list of issues that the inquest proposed to examine was circulated to the various parties of sufficient interest. That list set out the following issues:

1. The adequacy of Concord Hospital's care of Mr Kline, including:

    (a) In relation to deep vein thrombosis and pulmonary embolism:

        (i) Assessment of risk of deep vein thrombosis;

        (ii) Management of risk of deep vein thrombosis and embolism;

        (iii) Observations and any follow-up;

        (iv) Monitoring and any follow-up;

        (v) Whether the formation of deep vein thrombosis and pulmonary emboli might have been prevented and/or detected earlier.

    (b) Whether Mr Kline's risk of deliberate self-harm was appropriately assessed and managed at the time of his admission to Concord Hospital.

2. The adequacy of relevant practices and procedures of Concord Hospital.

3. The adequacy of Corrective Services' actions, including:

[6] Exhibit 1, Tab 102, pages 970-971.

(a) Guarding of Mr Kline (including appropriateness of restraint and observations);

(b) Whether Mr Kline's risk of deliberate self-harm was appropriately assessed and managed at the time of his entry into custody.

4. The adequacy of relevant practices and procedures of Corrective Services.

5. The appropriateness of the actions of members of the NSW Police Force on 8 March 2016 (including but not limited to compliance with any relevant protocols concerning negotiation, the use of force and Tasers).

6. The adequacy of NSW Police Force training and guidelines in relation to firing Tasers in the presence of flammable liquids.

7. Whether the investigation by the NSW Police Force ought to have been handled as a critical incident investigation.

13.2 To assist with the coronial investigation, expert opinion was sought from an independent vascular and general surgeon, Associate Professor Anthony Grabs. In response to a number of questions posed by the Assisting team, Associate Professor Grabs prepared a report in which he offered an opinion in relation to a number of matters relevant to points 1 and 2 above.

13.3 During the course of the coronial investigation, and the inquest itself, the evidence gathered brought some issues into sharper focus than others. The issues will be addressed below in chronological order.

14. Were the actions of members of the NSW Police Force on 8 March 2016 appropriate?

14.1 This issue can be conveniently separated into two discrete questions: whether it was appropriate for the police officers to enter Stephen's front yard, and whether it was appropriate for Sergeant Shaw to have deployed his taser.

(a) Was it appropriate for police to enter Stephen's front yard?

14.2 Two further matters relevant to this question are whether the police officers who approached Stephen's front gate (Sergeant Shaw, Leading Senior Constable Hurst and Constable Simkins) formulated a plan prior to Leading Senior Constable Hurst jumping over the fence, and whether Stephen had already produced the jerrycan containing petrol by this time.

14.3 As to the first matter, Leading Senior Constable Hurst explained in evidence that he did not discuss with Sergeant Shaw or Constable Simkins any plan of action regarding Stephen. Leading Senior Constable Hurst said that based on his discussions with one of Stephen's neighbours in relation to the damaged power pole, he had formed a reasonable suspicion that Stephen had committed an offence. On this basis, it was Leading Senior Constable Hurst's intention to arrest Stephen. Leading Senior Constable Hurst's version of events is in conflict with that of Sergeant Shaw and Constable Simkins, both of whom gave evidence that the three police officers discussed an intention to arrest Stephen.

14.4 As to the second matter, Leading Senior Constable Hurst said that he had almost finished jumping over the fence, and was in mid-air, when he first saw Stephen holding the fuel container. Similarly, Constable Simkins said that Leading Senior Constable Hurst was near the top of his jump when she saw Stephen splashing petrol from the jerrycan. In evidence Sergeant Shaw initially said that he saw Stephen walking with purpose towards where the police were at the front gate and that he splashed petrol towards where the police were standing as Leading Senior Constable Hurst was in the process of jumping over the fence. However, Sergeant Shaw later agreed in evidence that when he made his statement (on 10 March 2016) the events of 8 March 2016 were much clearer in his mind. On this basis Sergeant Shaw later conceded in evidence that his recollection of the sequence of events on 8 March 2016 was that Stephen first removed the cap of the jerrycan and had already splashed it towards the police officers from a distance of about two metres *before* Leading Senior Constable Hurst jumped over the fence.

14.5 In evidence Leading Senior Constable Hurst conceded that before he jumped the fence he knew that Stephen had:

(a) been behaving in an aggressive and threatening manner;

(b) refused to comply with police directions to approach the front gate and (at least initially) to put his dogs away;

(c) been verbally abusive towards police; and

(d) used a chainsaw to cut into the power pole.

14.6 It was suggested to Leading Senior Constable Hurst that having regard to the above factors there would have been a better chance of successfully negotiating with Stephen if the police officers did not enter the front yard. Leading Senior Constable Hurst said that he was unable to comment on this suggestion but agreed that it would have, at least, been safer if he did not enter the front yard. Further, Leading Senior Constable Hurst agreed that if the fence was between Stephen and himself, Stephen was better contained because he was not armed with anything which caused Leading Senior Constable Hurst any fear. Ultimately Leading Senior Constable Hurst agreed that in hindsight it would have better if he had not jumped over the fence. However, Leading Senior Constable Hurst sought to qualify this comment by offering the view that he did not think negotiating would have been fruitful give that Stephen had refused to comply, listen to, or follow directions. Leading Senior Constable Hurst expressed doubt that any type of negotiation with Stephen would be effective.

14.7 Sergeant Shaw said that in speaking with Stephen his intention was to calm Stephen down to a level so that the police officers could gain access to the front yard in order to place Stephen under arrest. However, Sergeant Shaw explained that Stephen remained aggressive, appeared irrational and dismissive, and did not want to listen to reason, or to what Sergeant Shaw had to say.

14.8 **CONCLUSION:** There is conflicting evidence about whether an intention to arrest Stephen was discussed at any time between Sergeant Shaw, Leading Senior Constable Hurst and Constable Simkins. On the corroborated accounts of Sergeant Shaw and Constable Simkins it appears that this intention was discussed. However the evidence is silent as to whether there was any further discussion as to how this intention was to be effected. There is also conflicting evidence about when in the sequence of events Stephen began splashing petrol from the jerrycan, relative to Leading Senior Constable Hurst jumping over the fence. Again, the corroborated accounts of Leading Senior Constable Hurst and Constable Simkins suggests that Stephen began splashing petrol as Leading Senior Constable Hurst was in the midst of jumping over the fence, and not before.

14.9 What this means is that there was an opportunity for the attending police officers to at least persist with negotiating with Stephen before taking more overt action. It is true that Stephen had largely been non-compliant with police directions up to that point. However it should be remembered that despite an initial reluctance to do so, Stephen eventually complied with the direction to put away his dog, which occurred almost immediately prior to Leading Senior Constable Hurst jumping over the fence. Although this demonstration of compliance by Stephen could not guarantee that the prospect of further negotiation might be fruitful, it at least demonstrated that an opportunity existed to explore this possibility further.

14.10 Given the concessions made by Leading Senior Constable Hurst, it can be concluded that a police officer entering Stephen's front yard was likely only going to serve as a catalyst for the interaction between Stephen and the police officers deteriorating further. At the very least, as Leading Senior Constable Hurst acknowledged, it would have been safer if he had not entered the front yard. On this basis the evidence establishes that it was not appropriate for Leading Senior Constable Hurst to enter the front yard at the time that he did. The opportunity for further negotiation had not been exhausted and it should have been recognised that direct action by the police would only serve to exacerbate an already volatile situation.

(b) Was it appropriate for Sergeant Shaw to deploy the taser?

14.11 There are two important matters to consider in answering this question: whether Sergeant Shaw gave appropriate consideration to other options that might have been available to him, and whether Sergeant Shaw gave appropriate consideration to the fact that Stephen had splashed flammable liquid in the vicinity of where the taser was deployed.

14.12 The NSW Police Force *Use of Conducted Electrical Weapons (Taser) Standard Operating Procedures* (**the Taser SOP**) governs the use of tasers by NSW police officers, and includes the applicable criteria by which an officer may draw and discharge a taser. Section 8 of the Taser SOP sets out the criteria to discharge a taser noting that it may be discharged, "*after proper assessment of the situation and environment, to:*

- *Protect human life;*
- *Protect [the taser user] or others where violent confrontation or violent resistance is occurring or imminent;*
- *Protect an officer(s) in danger of being overpowered or to protect [the taser user] or another person from the risk of actual bodily harm; or*
- *Protection from animals*".[7]

14.13 In a statement made on 10 March 2016, Sergeant Shaw described his actions in this way:

> "*At that time I believed that the tactical option of OC spray was not effective to control [Stephen]. [Stephen] was displaying violence and this violent confrontation was occurring and not stopping. To protect myself and Constable [sic] Hurst who continued to scream, 'I can't see', and to protect myself and Constable Hurst from being overpowered, I drew my police issued X26 Conducted Electrical Weapon (Taser) from its holster and activated it by moving the safety to the 'on' position*".[8]

14.14 Sergeant Shaw was taken to the Taser SOP in evidence and explained that the criteria that he applied in deploying his taser were to protect human life and to protect himself. He said that be believed that it was the only option he had left available to him and expressed his belief that it was appropriate to deploy the taser because of the "*exceptional circumstances*" that existed.

14.15 Section 8 of the Taser SOP provides that "*officers should consider all tactical options available to them in the Tactical Options Model*" when considering the discharge of a taser and that they "*should only use force that is reasonable, necessary, proportionate and appropriate to the circumstances*".[9] The NSW Police Tactical Options Model (contained in Annexure A to the Taser SOP[10]) identifies the following options available to a police officer: Officer Presence, OC Spray, Baton, Communication, Tactical Disengagement, Weaponless Control, Conducted Electrical Weapon (Taser), Firearm, and Contain & Negotiate.

[7] Exhibit 1, Tab 92, page 736.
[8] Exhibit 1, Tab 11 at [17].
[9] Exhibit 1, Tab 92, page 736.
[10] Exhibit 1, Tab 92, page 754.

14.16 In evidence Sergeant Shaw explained that his intention was to control Stephen and to take him into custody. In carrying out this intention Sergeant Shaw further explained that the OC spray deployed by Leading Senior Constable Hurst had no impact, that communication with Stephen had failed, that weaponless control had been ineffective due to Stephen's size[11], and that he believed that a baton strike would be ineffective due to the difficulty in extending the baton in a closed area, and because he did not believe that a baton strike would have assisted the situation. Having considered that it was inappropriate in the circumstances to use lethal force by drawing his firearm, Sergeant Shaw explained that use of his taser was the only option left available to him under the Tactical Options Model. Sergeant Shaw further explained that he considered taser deployment to be the most appropriate option to exercise due to his belief that Leading Senior Constable Hurst could have been seriously or fatally injured, and because he wanted to cease the immediate violence and threat that Stephen posed.

14.17 In evidence Sergeant Shaw said that it took five or six seconds from the point at which he jumped over the front gate to the point where he deployed his taser. Although this short period of time suggested that it might limit any decision-making process which Sergeant Shaw might apply to the situation, he explained that consideration of the Tactical Options Model is a process which he continuously undertakes in the performance of his policing duties. He described the process as "*microsecond thinking*" and explained that it involved a continual process of assessment; it was this process that led him to believe that use of his baton would not be effective.

14.18 However, in evidence Sergeant Shaw agreed that he did not warn Stephen before he deployed the taser because he had no time to do so. He further variously described Stephen as being "*half-up*", "*not bolt upright*", "*trying to stand upright*", and on his two feet with his hands off the ground but off balance at the time that the taser was fired. Sergeant Shaw also agreed that usually when a taser is drawn a red light will be illuminated on a target. However, in this instance Sergeant Shaw said that he saw no red light because he deployed the taser almost immediately. In this sense, he agreed that it was fair to characterise his actions as "*drawing and firing*".

14.19 It should be noted that other evidence supports this characterisation. Leading Senior Constable Hurst was asked to estimate the time between when he tackled Stephen to when he heard the sound of the taser being deployed. Leading Senior Constable Hurst described the timeframe as "*not long at all*" and said that the two events happened reasonably quickly in succession. Similarly, Constable Simkins described the two events happening quickly and soon after one another.

14.20 The second matter which warrants consideration is whether it was appropriate for Sergeant Shaw to deploy his taser in circumstances where Stephen had splashed petrol on the ground and on Leading Senior Constable Hurst immediately prior to deployment. The Taser SOP provides that "*when considering the use of a taser an assessment of the surrounding environment should be made with consideration given to crowded situations and secondary hazards*".[12] Section 8.2 of the Taser SOP specifically provides that "*a taser **should not** be used in any mode…near explosive materials, flammable liquids or gases due to the possibility of ignition*" (original emphasis).[13]

[11] Stephen had a BMI of 34.5 and weighed approximately 120 kilograms.
[12] Exhibit 1, Tab 92, page 737.
[13] Exhibit 1, Tab 92, page 737.

14.21 Sergeant Shaw agreed in evidence that he was aware of this aspect of the Taser SOP prior to 8 March 2106. He said that before deploying the taser he saw Stephen splash petrol on Leading Senior Constable Hurst and in the area around where Leading Senior Constable Hurst landed after jumping over the fence. Sergeant Shaw said that he was therefore aware that there were splashes of petrol on the ground (although he was unsure how much) and that he assumed that Leading Senior Constable Hurst had petrol on his clothes. Ultimately, Sergeant Shaw accepted that Stephen was positioned near petrol which had been variously splashed in the vicinity of his driveway area, but expressed the belief that Stephen was sufficiently distant from the petrol to allow the taser to be deployed.

14.22 In contrast Constable Simkins described Stephen as splashing the petrol around in a rapid manner and said that "*a lot*" of petrol was splashed, resulting in the concrete of Stephen's driveway area appearing to be "*saturated*" and "*quite wet*". It should be noted in this regard that Constable Simkins also drew her taser but then decided to holster it. In evidence she explained that she believed that it could not be safely deployed without placing Leading Senior Constable Hurst at risk due to the fact that he was covered in petrol.

14.23 Initially in evidence Sergeant Shaw said that after jumping over the fence he pushed and "*manhandled*" Stephen away from where he and Leading Senior Constable Hurst were grappling, and pushed Stephen down the driveway. Later in his evidence, Sergeant Shaw said that after jumping over the fence he separated Stephen and Leading Senior Constable Hurst by pushing them away from each other.

14.14 Following the events at Stephen's house on 8 March 2016 Sergeant Shaw took part in a debriefing conducted by a police review panel. A review form was later prepared in relation to that review (**the Taser Review Form**). Further, Sergeant Shaw also provided a version of events on 8 March 2016 to allow a taser situation report (**the Taser Sitrep**) to be completed. Within the Taser Review Form, under the heading "*Comment of Deploying Officer*" the following is recorded:

> "*I then jumped the fence and went to Leading Senior Constable Hurst's aid. [Stephen] was still being violent and resisting. As a result of the OC spray having no effect and due to [Stephen's] large build and violence I deployed my taser striking [Stephen] in the upper torso area. I was about one metre from [Stephen] at the time of deployment and Leading Senior Constable Hurst was to the right… When I deployed the taser [Stephen] had moved approximately 2 metres from where he threw the petrol. I did not think that the fuel would be an issue and believed that the taser was an appropriate response under the circumstances*".[14]

14.15 A similar narrative to that set out above was also included in the Taser Sitrep under the heading "*Brief Outline of Incident*".

14.16 During the debriefing, Sergeant Shaw was asked what Stephen was doing prior to the taser being deployed. Sergeant Shaw responded in this way: "*Leading Senior Constable Hurst and [Stephen] were half on the ground. As [Stephen] began hopping up, that's when I tasered him*".[15]

[14] Exhibit 1, Tab 93, page 938.
[15] Exhibit 1, Tab 93, page 938.

14.17 In a statement made on 8 March 2016 Leading Senior Constable Hurst said that after calling out for help he heard Sergeant Shaw say, "*Get up, get back*".[16] In response, Leading Senior Constable Hurst said that he "*moved back towards the gate and the corner of the fence*" when he heard the sound of the taser deploying. In evidence during the inquest Leading Senior Constable Hurst gave a similar account regarding his actions, and added that Stephen was still on the ground at the time. Constable Simkins was also asked about this point in time during her evidence. She said that she was unable to recall seeing Sergeant Shaw doing anything in relation to Stephen before he deployed his taser. However, in a statement (also made on 8 March 2016) Constable Simkins said the following: "*Sergeant Shaw jumped over the fence and the next thing I remember was the sound of the taser being activated and deployed*".[17]

14.18 **CONCLUSION:** The available evidence establishes that a very short period of up to six seconds passed between Sergeant Shaw jumping over the fence and when the taser was deployed. On Sergeant Shaw's evidence this brief period of time allowed him to make an assessment, pursuant to the Tactical Options Model, that taser use was the most appropriate option in the circumstances. However, the evidence does not support a conclusion that Sergeant Shaw embarked on such an assessment or, that if he did, that his assessment was correct.

14.19 Firstly, on Sergeant Shaw's account he drew and immediately fired the taser, without warning Stephen of its imminent use and without visualising the illuminated targeting sight. The evidence from both Leading Senior Constable Hurst and Constable Simkins supports the conclusion that Sergeant Shaw's actions in jumping over the fence and deploying the taser occurred instantaneously. Secondly, Stephen was rising to his feet and off balance at the time that the taser was deployed. This suggests that he did not pose an immediate threat at the time of deployment and that an opportunity most likely existed for other tactical options to be considered. Thirdly, Sergeant Shaw's oral evidence that he "*manhandled*" Stephen down the driveway away from Leading Senior Constable Hurst, or that he pushed the two men apart before deploying his taser is not supported by other evidence. In the three contemporaneous accounts given by Sergeant Shaw (in his statement, the Taser Review Form, and the Taser Sitrep) there is no reference to these actions occurring. Instead, the accounts are consistent with the evidence offered by Leading Senior Constable Hurst and Constable Simkins that Sergeant Shaw jumped over the fence and immediately deployed his taser, without any intervening action in between. It should be noted that on Leading Senior Constable Hurst's own account he responded to Sergeant Shaw's instruction to "*get up, get back*" by moving himself away from Stephen and to the fence. Leading Senior Constable Hurst makes no mention of being separated or pushed away by Sergeant Shaw. Finally, the immediacy with which Sergeant Shaw deployed his taser suggests that insufficient consideration was given to the secondary hazard posed by flammable liquid being present in the vicinity of deployment. Whilst Sergeant Shaw expressed the belief that Stephen had moved sufficiently far away from where the petrol had been splashed, it should be noted that Constable Simkins formed the belief that the ground area was "*saturated*" with petrol and that it was unsafe to deploy her taser.

[16] Exhibit 1, Tab 9 at [15].
[17] Exhibit 1, Tab 10 at [13].

14.20 It is accepted that the situation that confronted Sergeant Shaw on 8 March 2016 was a dynamic and volatile one which did not allow for a careful and measured analysis of the influencing factors such as that undertaken during the course of the inquest and subsequently. The evidence established that Sergeant Shaw is an experienced police officer generally, is experienced in the use of taser specifically, and that he brought this experience to bear on 8 March 2016. However the analysis of the documentary and oral evidence that has been conducted establishes that it was inappropriate for Sergeant Shaw to deploy his taser at the time that he did, having regard to Stephen's position and the absence of any immediate threat, and Stephen's proximity to a secondary hazard in the form of flammable liquid.

15. Has adequate training and guidelines been provided to police officers regarding the deployment of tasers in the presence of flammable liquids?

15.1 As noted above, Section 8.2 of the Taser SOP specifically provides for tasers to not be used near flammable liquids due to the risk of ignition. The evidence established that both Sergeant Shaw and Constable Simkins were aware of this restriction regarding use as at 8 March 2016.

15.2 Sergeant Shaw explained in evidence that he received annual training regarding the Taser SOP and estimated that he had last received training about six to eight months prior to March 2016. He further explained that both theoretical and practical training was provided and that it occupied about three hours out of a day of training. Constable Simkins gave similar evidence in relation to training which she had received.

15.3 **CONCLUSION:** The Taser SOP appropriately identifies the inherent risk associated with taser use in the presence of flammable liquids and mandates against its use in such circumstances. The evidence establishes that appropriate training is provided to police officers regarding the provisions of the Taser SOP and that both Sergeant Shaw and Constable Simkins were aware of the restrictions on taser use which applied to the particular circumstances of 8 March 2016.

16. Should the events of 8 March 2016 been declared a Critical Incident?

16.1 Section 3.1 of the NSW Police Force Critical Incident Guidelines provides that a critical incident "*is one involving a member of the NSW Police Force which has resulted in the death or serious injury to a person:*

- *arising from the discharge of a firearm by police;*
- *arising from the use of appointments or the application of physical force by police;*
- *arising from a police vehicle pursuit or from a collision involving a NSW Police Force vehicle;*
- *who was in police custody at the time;*
- *arising from a police operation*".[18]

16.2 Section 3.1 also provides that a critical incident may also be "*any other incident that a region commander considers could attract significant attention, interest or criticism, such that the public interest will be best served by investigating the matter under the Critical Incident Guidelines*".[19]

16.3 Section 3.6 of the Critical Incident Guidelines provides that "*the type of injuries that are 'serious' enough to invoke an investigation under these guidelines include:*

- *Life threatening injuries;*
- *An injury that would normally require emergency admission to a hospital and significant medical attention;*
- *An injury likely to result in permanent physical impairment or require long term rehabilitation*".[20]

[18] Exhibit 1, page 844.
[19] Exhibit 1, page 844.
[20] Exhibit 1, page 845.

16.4 A consequence of a matter being declared a critical incident is the formation of a Critical Incident Investigation Team comprised of police officers not involved in the incident (Section 4.1.2), with a Senior Critical Incident Investigator appointed to lead the CIIT.

16.5 The officer-in-charge of the investigation into Stephen's death, Detective Sergeant Andrew Tesoriero, was attached to the Corrective Services Investigations Unit (**the CSIU**) as at 8 March 2016. As Stephen was in lawful custody at the time of his death, the responsibility for investigating his death was assigned to the CSIU. This had the practical consequence that Stephen's death was investigated by an independent investigator separate from the Police Local Area Command (as it was then known) where Stephen's death had occurred.

16.6 In evidence Detective Sergeant Tesoriero explained that a critical incident investigation typically involves the deployment of more police resources than might ordinarily be deployed for an investigation of a different kind. Further, if Stephen's death had been declared a critical incident, then Detective Sergeant Tesoriero would have been offered a CIIT. Having regard to the particular features of Stephen's case it should also be noted that the Critical Incident Guidelines provide for local Aboriginal protocols to be considered (Section 4.2.3) and for notifications to be made to the Aboriginal Legal Service, Aboriginal Regional Coordinator, and Aboriginal Community Liaison Officer in circumstances where an Aboriginal person dies during a critical incident. Notwithstanding, Detective Sergeant Tesoriero gave evidence that in Stephen's case the Aboriginal Legal Service were notified of his death and attempts were made to notify an Aboriginal Community Liaison Officer.

16.7 **CONCLUSION:** For reasons set out in greater detail below, the burn injury that Stephen sustained was regarded as relatively minor. Although Stephen required admission to a hospital emergency department it was expected that the severity of his injury would have only necessitated an admission of several hours, or overnight admission. On this basis it could not be said that Stephen's injury met the definition of "serious" injury so as to trigger the operation of the Critical Incident Guidelines. Further, Stephen's collapse seven days following his admission was sudden and unexpected. It could not be said that Stephen's death was foreseeable having regard to the events of 8 March 2016, and the circumstances leading up to his hospital admission, alone. This leads to a conclusion that it was appropriate for the events of 8 March 2016 to have not been declared a critical incident.

16.8 There is no evidence that the absence of such a declaration compromised the investigation into Stephen's death in any way. For example, if the matter had been declared a critical incident then directly involved officers (such as Sergeant Shaw, Leading Senior Constable Hurst and Constable Simkins) would have been separated to ensure the integrity of their evidence. However, in this case there is nothing to suggest that their evidence was compromised in any way by the absence of any such separation.

16.9 Further, a number of witnesses who gave evidence during the inquest agreed that their recollection of events would have been better preserved if their statements had been taken, and interviews conducted, more proximate to the events in question. The deployment of additional resources associated with the formation of a CIIT would likely have allowed for this to occur. However, as many of these witnesses relied upon their own, and other, contemporaneous records there is no indication that the quality and accuracy of their evidence was adversely affected.

16.10 Finally, the allocation of responsibility for the investigation of Stephen's death to the CSIU had the unintended, but fortuitous, consequence of an officer-in-charge being appointed who was separate and independent of the police Command which the directly involved officers were attached to. It should also be noted that certain steps were taken to provide notifications that would ordinarily have occurred in a critical incident investigation.

17. Was Stephen adequately observed by CSNSW officers?

17.1 It is not known precisely when Stephen swallowed the set of keys. However the available evidence suggests that this most likely occurred sometime during the morning of 10 March 2016, prior to 11:50am when Stephen was reviewed by Dr Vandenberg. However, what is known is that Stephen was under guard and observation by CSNSW officers at the time as a consequence of having been remanded into custody the previous day. This, then, raises the question of whether Stephen's swallowing of the keys was reflective of some deficiency in the observations made by CSNSW officers.

17.2 The guarding of Stephen was assigned to pairs of CSNSW officers who performed their duties in rotating shifts. In evidence, Officer Sharma explained that it was a requirement for one officer to remain in the room with Stephen at all times with the other officer placed just outside the door to the room. Officer Baptista explained that whilst the officer outside the room would not maintain direct and constant line of sight with Stephen, the officer would ensure that Stephen remained in his/her field of view.

17.3 This evidence was corroborated principally by Christine Parker the Nurse Unit Manager (**NUM**) for the Burns unit, but also by other hospital staff witnesses who gave evidence during the inquest. NUM Parker explained that it was not uncommon to have custodial patients in the Burns Unit and that observation of these patients occurred, as it did in Stephen's case, by a CSNSW officer being in the patient's room or keeping the patient in their field of view.

17.4 Both Officers Baptista and Sharma explained that their primary role was to ensure the security of the hospital and to ensure that Stephen did not abscond from custody. In evidence Officer Sharma demonstrated that even though Stephen may have remained in sight of a CSNSW officer this would not preclude Stephen swallowing a foreign object, such as a set of keys, if he did so quickly and subtly and/or whilst his back was turned to the officer.

17.5 **CONCLUSION:** There is no evidence to suggest that the CSNSW officers tasked with guarding Stephen did not observe him in an appropriate manner. Given that their primary role was to maintain security and ensure that Stephen did not abscond, it could not be said that there was any deficiency in their observations. Evidence from hospital staff provides corroboration that the CSNSW officers maintained observations as required, by being in Stephen's room with him and keeping Stephen in their field of vision. There is no evidence to suggest that Stephen's ability to swallow the keys resulted from a deficiency in observations.

18. Was Stephen's risk of self-harm appropriately managed by CSNSW?

18.1 Dr Vandenberg considered Stephen's swallowing of the keys to be an intentional act of self-harm. In evidence she was asked whether there were any protective factors in place to mitigate Stephen's risk of further self-harm. Dr Vandenberg said that during each of her attendances on Stephen she raised with the relevant CSNSW officers on duty at the time that Stephen was at risk, and requested that this risk be conveyed to other officers on incoming shifts.

18.2 Despite this, it became evident that the risk that Stephen faced was not always made known to the CSNSW officers responsible for guarding him. On 28 March 2016 First Class Correctional Officer Michael Karauria, from the Court Escort Security Unit, wrote a report to the General Manager in which he recorded the following: "*Whilst on a hospital escort with [Stephen] a nurse mentioned something about a key. She spoke in a manner I ascertained to be unimportant. I thought it was maybe a house or car key. I was informed at a later date that [Stephen] had swallowed a key and was required to have an x-ray. I thought nothing more of the incident as he was in a hospital*".[21]

18.3 Officer Sharma said that he was not told that Stephen had attempted self-harm by swallowing the keys. He also said he was never told that there was a risk that Stephen might harm himself. Officer Baptista said that at handover at 5:30am on 15 March 2016 he was briefed with the fact that Stephen had swallowed a set of keys. However, Officer Baptista said that it was not explained to him that Stephen's actions meant that he was at risk of self-harm. Notwithstanding, Officer Baptista explained further in evidence that the knowledge of Stephen swallowing the keys remained in the back of his mind, and played a direct role in causing him to remove metal cutlery from Stephen during breakfast on the morning of 15 March 2016.

18.4 Dr Vandenberg explained in evidence that the fact that Stephen was in custody meant that he was subjected to a higher level of observation compared to a patient who was not in custody. In this regard, Dr Vandenberg noted the following:

> "*The risk of [Stephen] engaging in further episodes of self-harm after 10 March 2016 was mitigated by the presence of two Corrective Services officers who were involved in supervising him and who would have been aware that he had self-harmed. He was also handcuffed. Nursing staff on the Burns Unit were also aware that [Stephen] had swallowed the set of keys and were also aware of the need to monitor him for possible self-harm and to ensure that further episodes were to be prevented, for example by the removal of all potentially dangerous objects*".[22]

18.5 During the course of the inquest the legal representative for CSNSW indicated that a Memorandum of Understanding (**MOU**) between CSNSW and NSW Health was in the process of being prepared. It was indicated that the MOU would provide for the mechanism by which information regarding custodial patients assessed as being at risk of self-harm could be exchanged between CSNSW officers and hospital staff.

[21] Exhibit 1, Tab 69.
[22] Exhibit 1, Tab 107, page 1001.

18.6 **CONCLUSION:** Despite Dr Vandenberg's expressed intentions, it appears that not all of the CSNSW officers responsible for guarding Stephen were informed that he had swallowed the keys. Those officers that were informed were not provided with further information that Stephen's actions represented intentional self-harm and that he remained at risk of self-harm.

18.7 Notwithstanding, by virtue of his custodial status Stephen was subjected to a higher level of frequency that might be afforded to a non-custodial patient who might be at risk of self-harm. Further, it was evident that Officer Baptista, having been told that Stephen had swallowed the keys, used his own initiative in removing objects with which Stephen might harm himself.

18.8 In light of the indication given by CSNSW during the course of the inquest regarding an MOU between CSNSW and NSW Health to facilitate the exchange of critical information regarding whether a custodial patient is regarded at risk of self-harm, it is neither necessary nor desirable to make any recommendation in this regard.

19. Was Stephen provided with an appropriate level of care whilst at Concord Hospital?

19.1 Consideration of this issue can be conveniently separated into three questions: whether Stephen was appropriately assessed and managed for the risk of self-harm; whether Stephen was appropriately assessed and managed for the risk of venous thromboembolism; and whether the imaging scans performed on 14 March 2016 were appropriately reviewed.

(a) Was Stephen appropriately assessed and managed for the risk of self-harm?

19.2 Dr Vandenberg conducted a lengthy assessment of Stephen on 10 March 2016. Although Dr Vandenberg described Stephen as being "*superficially cooperative*" she found him difficult to engage and found it difficult to obtain direct answers from him. However Dr Vandenberg explained that she was able to recognise that Stephen was quite a traumatised person and had an irritable manner to most of the hospital staff and so the best way to manage him was to be patient and listen, rather than probe him for information. It was in this context, that Stephen told Dr Vandenberg that he had swallowed the keys.

19.3 Dr Vandenberg subsequently formulated a plan for Stephen to be commenced on an Alcohol Withdrawal Scale to monitor him for alcohol withdrawal and to be commenced on a regimen of diazepam for agitation, if there was evidence of this. Further, Stephen was also prescribed thiamine and plans were made to obtain as much collateral information as possible about Stephen's past mental health history. Finally, plans were made for daily psychiatric review in order to monitor his risk for self-harm.

19.4 In this regard Dr Vandenberg subsequently reviewed Stephen on:

(a) 11 March 2016 with Dr Tyrrell for at least 15 minutes;

(b) briefly for a few minutes at 9:25am on 14 March 2016, but was unable to see him for longer as his burns dressings needed changing; and

(c) finally again on 15 March 2016, although the review was cut short as Inspector Adams and Ms Pittorino had arrived to see Stephen, although plans were made for Dr Vandenberg to review Stephen at a later point in time.

19.5 **CONCLUSION:** Dr Vandenberg was able to forge a therapeutic alliance with Stephen in challenging circumstances on 10 March 2016. This provided the basis for Stephen's disclosure of swallowing the keys. Having formed the view that this represented an act of intentional self-harm, and that Stephen remained at risk of further self-harm, Dr Vandenberg formulated a management plan consisting of daily psychiatric review and communication to CSNSW officers of Stephen's degree of risk. It has already been noted above that Dr Vandenberg's concerns were not always disseminated in full to the relevant CSNSW officers on duty at the time. However, it is evident that an appropriate management plan and regular review system was in place.

(b) Was Stephen appropriately assessed and managed for the risk of venous thromboembolism?

19.6 The NSW Health Policy Directive, *Prevention of Venous Thromboembolism* (PD2014_032) (**the Policy Directive**), published on 22 September 2014, was in force as at March 2016. The Policy Directive notes the following in relation to venous thromboembolism (**VTE**)[23]:

(a) It involves the formation of a blood clot within the deep veins, most commonly of the legs and pelvis, known as deep venous thrombosis (**DVT**);

(b) These blood clots may became dislodged and then obstruct the pulmonary artery or one of its branches, known as a pulmonary embolism (**PE**);

(c) VTE is a significant preventable adverse event for hospitalised patients;

(d) The incident of developing a VTE has been shown to be 100 times greater among hospitalised patients than those in the community;

(e) Serious adverse outcomes resulting from VTE may occur, including death;

(f) Effective prevention of VTE is achieved through assessment of risk factors and the provision of appropriate prophylaxis, which can be provided in two forms: pharmacological prophylaxis and mechanical prophylaxis;

(g) Pharmacological prophylaxis is achieved through the use of anticoagulant agents such as heparin;

(h) Mechanical prophylaxis is achieved through the use of physical aids such as graduated compression stockings and intermittent pneumatic compression or foot impulse devices.

19.7 The Policy Directive also sets out a number of mandatory requirements which include the following:

(a) All adult patients admitted to NSW public hospitals must be assessed for the risk of VTE within 24 hours and regularly as indicated/appropriate; and

(b) Patients identified at risk of VTE are to receive the pharmacological and/or mechanical prophylaxis most appropriate to that risk and their clinical condition.

(c) Attending Medical Officers[24] (or their Delegate) are to ensure regular review of VTE risk is performed during the patient care episode, particularly as clinical condition changes, and that prophylaxis is monitored and adjusted accordingly.

19.8 Finally, the Policy Directive provides for the use of the VTE Risk Assessment Tool[25] (**the VTERA Tool**), a two-page document which, when completed, requires a clinician to assess a patient's risk of VTE and allocate a patient into a risk category (Low, Medium, High). The front page of the VTERA Tool directs a clinician to consider a list of 21 VTE risk factors. It also provides for appropriate prophylaxis

[23] Exhibit 1, page 657, 658, 662, 668, 670.
[24] The senior medical practitioner who has primary responsibility for the patient during admission.
[25] Exhibit 1, page 680.

to be prescribed. Finally, section 7 of the VTERA Tool relevantly provides that "*Patients should be reassessed when clinical condition changes or regularly (every 7 days as a minimum)*".

19.9 Dr Ahn reviewed Stephen upon his admission to Concord Hospital on the evening of 8 March 2016. In evidence Dr Ahn agreed that the mandatory provisions of the Policy Directive applied to Stephen and that a VTE risk assessment was required to be performed within 24 hours. However Dr Ahn did not perform this and did not use the VTERA Tool. Dr Ahn explained that he did not do so because he considered Stephen to be what he described as an "*in and out*" patient. In other words, the relative severity of his burn injury meant that he would likely remain an inpatient for only four hours. Further, Dr Ahn explained that if Stephen had arrived at Concord Hospital during the day he would have been seen and treated in the outpatient clinic. It was only by virtue of his arrival in the evening that he was treated in the ward. It should be noted that the discharge summary from Westmead Hospital prepared by Dr Joanna Koryzna, the registrar who assessed Stephen, records the following: "*I have spoken to Burns Reg Dr Ahn. He has advised for the patient to be transferred to concord [sic] ED for dressings tonight. Following these, he is to be discharged in police custody*".[26]

19.10 Dr Ahn explained that although an overnight admission was not usually necessary for the type of injury that Stephen had suffered, given the lateness of the evening, a plan was formulated to keep Stephen at hospital overnight and discharge him the following morning. Dr Ahn explained that it would not be his practice "*to prescribe anticoagulation in such circumstances as patients undergoing this procedure are usually discharged home from hospital on the same day*".[27] Further, Dr Ahn noted that Stephen's admission was "*never planned to be extended or prolonged*" and that "*there was no indication that [Stephen] would have ongoing issues with mobilisation after his initial admission*".[28]

19.11 Professor Peter Maitz, the medical director of the Burns Unit and the consultant under whose care Stephen had been admitted, expressed a similar view to that of Dr Ahn. Although he did not personally assess Stephen for any risk of VTE, Professor Maitz explained said that he did not consider that there was a need to commence Stephen on any kind of VTE prophylaxis. This was due to the fact that it was anticipated that Stephen would be discharged within 24 hours, and because Professor Maitz did not consider that Stephen's mobility would be limited to the extent that VTE prophylaxis measures would be required.

19.12 In evidence Dr Ahn explained that in forming the view that Stephen's discharge was contingent upon mobilisation, he gave consideration to the overall picture of Stephen as a patient. In this sense, whilst Dr Ahn regarded the burn injury as minor, and unlikely to affect Stephen's mobility, he explained that his intention was to ensure that no risk factors were missed prior to Stephen's discharge. In this context, Dr Ahn explained that VTE was a part of his thinking, and overall assessment of Stephen.

19.13 Dr Arridh Shashank, a Senior Resident in the Burns Unit, reviewed Stephen on the morning of 9 March 2016 and noted that his burn had already been debrided[29] and the Biobrane[30] xenograft[31] applied. Dr Shashank noted that there was no sign of infection and that the burn dressing was intact,

[26] Exhibit 1, Tab 34.
[27] Exhibit 1, Tab 106, page 994.
[28] Exhibit 1, Tab 106, page 994.
[29] The medical removal of dead, damaged, or infected tissue to improve the healing potential of the remaining healthy tissue.
[30] A stretchable dressing (also called artificial skin) that allows a burn wound to heal.
[31] A surgical graft of tissue.

suggesting that Stephen would be suitable for discharge that day in accordance with the overnight plan to discharge Stephen with outpatient management of his burn injury.

19.14 In evidence, Dr Shashank said that he understood burns patients warranting admission typically had associated clinical factors which increased their risk of VTE and because these patients were likely to be less mobile within the unit compared to their home environment. Accordingly he explained that it was his standard practice to chart pharmacological prophylaxis in the form of heparin as part of a standard set of medications. Dr Shashank further explained that he did so because he did not know whether a patient he reviewed would remain an inpatient or subsequently be discharged. In this way, the patient would continue to be administered heparin up until they were discharged.

19.15 However, Dr Shashank did not follow his standard practice on 9 March 2016. This is because he mistakenly believed that heparin had already been charted for Stephen. The basis for Dr Shashank's mistaken belief was Stephen's electronic medical record (**eMR**) which contained a list of the medication that he had been prescribed. The eMR utilised a software package known as Electronic Medical Management (**eMeds**) which contains all information relating to medication charted for a patient. Stephen's eMeds listed heparin as one of the medications that had been charted for him. However, this had actually been charted in error by an after-hours resident who had intended to chart the heparin for another patient. When the error was subsequently detected, the heparin charted for Stephen was cancelled and Steven was never administered heparin.

19.16 However, the record of heparin being charted remained on Stephen's eMeds. Dr Shashank saw this but did not see the entry in the eMeds indicating that the heparin had in fact been cancelled. This is because the cancellation entry was located in a column of information headed "*Status*" which could not be seen on the computer monitor that Dr Shashank was using at the time. In other words, the monitor was not sufficiently wide enough to display all of the columns of information contained on the eMR. In order to locate the "*Status*" column, Dr Shashank was required to scroll to information contained on the right hand side of the eMeds. Dr Shashank explained that upon his (erroneous) reading of Stephen's eMeds he formed the view that heparin had already been charted, that therefore there was no need to re-chart it, and that Stephen was on appropriate pharmacological prophylaxis for VTE.

19.17 Dr Shashank further explained that prior to 8 March 2016 the Burns Unit (like the rest of Concord Hospital) had used a hardcopy version of the VTERA Tool. However, with the hospital's transition to an eMR, Dr Shashank explained that there was no electronic equivalent of the VTERA Tool. In any event Dr Shashank did not make use of the VTERA Tool, hardcopy or electronic, when he reviewed Stephen on 9 March 2016.

19.18 **CONCLUSION:** Although he did not employ the VTERA Tool, Dr Shashank correctly recognised on 9 March 2016 that Stephen, by virtue of his clinical status and medical history was at risk of VTE. Dr Ahn, in considering that Stephen's limited mobility represented a risk factor for VTE and making Stephen's discharge contingent on mobilisation, reached a similar conclusion the previous evening when he reviewed Stephen on admission.

19.19 However, Dr Ahn did not chart heparin or prescribe any other form of VTE prophylaxis because he considered that the nature of Stephen's minor burns injury meant that he would be discharged within a short period of time. Indeed, there is no evidence to suggest that Dr Ahn's consideration in this regard was incorrect. The evidence established that Stephen's burn injury was relatively minor and that a patient with an injury of a similar kind would either be treated in an outpatient clinic or discharged within 24 hours. Therefore, it could not be said that it was inappropriate for Dr Ahn to not have prescribed any VTE prophylaxis for Stephen.

19.20 Dr Shashank similarly did not chart heparin for Stephen although, unlike Dr Ahn, it was his intention to do so. Dr Shashank did not carry out his intention because he mistakenly believed that heparin had already been charted. Dr Shashank's mistaken belief was attributable to a technological impediment and not any deficiency in clinical practice.

19.21 The fact that such a simple technological impediment can adversely impact patient care is a cause for concern. Although the evidence established that Dr Shashank's mistaken interpretation of Stephen's eMeds was an isolated incident, it is not difficult to envisage situations where other mistaken assumptions might be made about whether a particular medication has been prescribed to a patient or not, if such information is not displayed in a clear and accessible form. Therefore, it is necessary that the recommendations below be made.

19.22 In making these recommendations, consideration has been given to the submissions advanced by counsel for the Sydney Local Health District (**SLHD**). It was submitted that the eMeds software system is a state-wide system employed across Local Health Districts in NSW. Therefore, consideration needs to be given to the fact that altering one aspect of the system may adversely impact on another part of the system. Further, any alteration to the system may potentially decrease usability and detract from the flexibility that is required due to the multitude of users of the system.

19.23 **RECOMMENDATION 1:** I recommend to the Chief Executive, Sydney Local Health District that a copy of these findings be provided to the developer of the eMeds software system for consideration in relation to Recommendation 2.

19.24 **RECOMMENDATION 2:** I recommend to the Chief Executive, Sydney Local Health District that, in consultation with the NSW Ministry of Health, consideration be given to requesting that the developer of the eMeds software system ensure that users of the system are readily able to distinguish between medication that is actively being administered to a patient and medication that has been cancelled, irrespective of the on-screen information chosen to be displayed by the user, and without detracting from the functionality and usability of the system.

19.25 Dr Ahn's next contact with Stephen was on the evening of 11 March when he was given a handover from the Burns Unit in preparation for a morning ward round the next day. Up to that point, Dr Ahn was unaware that Stephen had not been discharged as planned and was surprised that he remained admitted. On handover, Dr Constant Van Schalkwyk, a Burns Unit registrar, and Dr Shashank explained that Stephen had swallowed a key and had been kept at hospital to wait for the key to pass. They asked Dr Ahn to review Stephen to see if there had been any progression with the passage of the key.

19.26 Dr Ahn subsequently reviewed Stephen twice on 12 March 2016. At the second review, an x-ray had been performed which revealed no movement of the key. Dr Ahn reviewed Stephen again on 13 March 2016. At this time the key had still not passed and there was no progress on x-ray. Each time that Dr Ahn saw Stephen on 12 and 13 March 2016 he was noted to be stable, with no deterioration in his symptoms or vital signs. Further, Dr Ahn noted that that "*there was no concern raised by his care team regarding thromboembolic risk and no planned changes for his medication over the weekend*".[32]

19.27 In evidence Dr Ahn said that consideration of VTE prophylaxis never entered his mind on either 12 or 13 March 2016, even though he was aware that Stephen's circumstances had changed by virtue of him swallowing the keys. The reason for this was two-fold. Firstly, Dr Ahn said that the only request made of him was to review Stephen in relation to passage of the swallowed keys; the possibility of DVT or PE was never raised at any point. Secondly, Dr Ahn explained that he had a caseload of almost 40 patients and was also conducting emergency surgical cases. Therefore it would not have been possible or practical for him to conduct a full review of every Burns Unit patient, particularly those patients, like Stephen, who had stable vital signs. In this regard Dr Ahn said that in his experience he knew that the Burns Unit team were typically diligent, that he trusted their care of patients, and that he did not think to double check that patients were being managed appropriately.

19.28 In evidence Professor Maitz was asked whether, given that Stephen had been admitted under his care, he considered that it would have been appropriate to perform a VTE assessment after it was discovered that Stephen had swallowed the keys. Professor Maitz indicated that it was possible that this was appropriate, but difficult to say. Professor Maitz cited two reasons in coming to this view: firstly, he was of the belief that Stephen had been prescribed pharmacological prophylaxis as part of standard medication prescribed to all Burns Unit inpatients; and secondly he was aware that Stephen's burns injury had almost healed by the time he swallowed the keys and that Stephen was receiving regular physiotherapy and mobilising well. Professor Maitz explained on this basis that he did not consider that VTE prophylaxis measures were required for Stephen, even after his admission was extended. However, Professor Maitz eventually agreed in evidence that once Stephen's anticipated short admission became a more prolonged one it would have been appropriate to perform a DVT assessment.

19.29 Having regard to the evidence given by Dr Ahn and Dr Maitz, the question of whether mandating the use of the VTERA Tool came into sharp focus during the course of the inquest. In this regard, the inquest received evidence from Dr Kashmira De Silva, the Director of Medical Services at Concord Hospital. Dr De Silva highlighted a number of measures available to mitigate the risk of VTE for patients:

(a) The hospital has developed a VTE Power Plan, which went live in August 2016 and which forms part of the eMR, an electronic risk assessment tool to assist clinical staff in the assessing the risk of VTE;

(b) Training provided to new junior medical staff in relation to the eMR and VTE Power Plan;

(c) The creation of VTE risk assessment forms for medical and surgical patients, with the latter completed by medical officers for each elective surgery patient prior to surgery;

[32] Exhibit 1, Tab 106, page 995.

(d) Annual and ongoing education sessions provided to Junior Medical Officers and Basic Physician Trainees on VTE risk assessment; and

(e) The use of an updated VTERA Tool, including an electronic version for use in eMR, with the update accompanied by an e-learning module.

19.30 In evidence Dr De Silva agreed that it was not mandatory for clinicians to use the VTE Power Plan or the VTERA Tool. Dr De Silva explained that this was because there were different means to assess risks without being entirely reliant on completing a mandatory assessment document. Dr De Silva explained that clinician-to-clinician discussion, taking a patient's history, and pre-surgery timeout procedures all constituted examples of VTE risk assessment. Therefore, Dr De Silva explained, clinicians have a responsibility to consider the overall patient management and in this context are engaged in a constant risk assessment process. However, Dr De Silva also acknowledged that in the perhaps rare instances where VTE risk assessment was not being performed by a clinician, the use of a mandatory assessment tool would prompt such thinking.

19.31 Balanced against this, Dr De Silva explained that if a patient were assessed on admission as being a low VTE risk, the use of a mandatory assessment tool would not assist in ensuring that a re-assessment was performed when appropriate. In contrast Dr De Silva offered the view that education about the need for VTE assessment and re-assessment would likely lead to an increased uptake in VTE prophylaxis being prescribed by clinicians. Dr De Silva was also asked about the possible use of an alert to remind clinicians to perform a mandatory VTE assessment for patients admitted for 24 hours. Dr De Silva considered that there were potential benefits and deficiencies with such a system: on the one hand, such alerts might prompt a clinician to think in a different direction when their focus might be elsewhere; on the other hand, the use of repeated alerts might create a degree of "*alert fatigue*" causing a clinician to simply ignore repeated alerts.

19.32 NUM Parker was taken to the VTERA Tool in evidence and explained that medical officers within the Burns Unit were reminded by nursing staff the complete it, but in practice this did not always occur. However, NUM Parker acknowledged that whilst the VTERA Tool is useful the VTE risk factors listed are not ordinarily applicable to burns patients; indeed other than obesity none of the 20 other risk factors related to Stephen.

19.33 **CONCLUSION:** The question of whether aspects of clinical practice ought to be mandated is a complex one and multifactorial. One argument that is commonly advanced is that clinical practice requires a degree of agility and flexibility and that prescriptive practice should not be a replacement for the exercise of clinical skill and judgment.

19.34 In the particular circumstances of Stephen's case the evidence establishes that at least two VTE assessments were performed; the first by Dr Ahn on 8 March 2016 and the second by Dr Shashank on 9 March 2016. Although neither used the VTERA Tool, or any other documentary checklist, an assessment was performed nonetheless as part of the overall management of Stephen. The only reasons why the assessments did not result in the prescription of VTE prophylaxis was because of the anticipated duration of Stephen's admission and a mistaken belief that pharmacological prophylaxis had already been prescribed.

19.35 Dr Ahn had reviewed Stephen on 12 and 13 March 2016. Even if it had been mandatory for Dr Ahn to compete the VTERA Tool during either review, it is impossible to know whether it would have resulted in DVT prophylaxis being prescribed to Stephen, and whether it might have materially altered the outcome. However, given that Stephen's vital signs were stable at the time and that only one of the 21 risk factors on the VTERA Tool applied to Stephen, it is most likely that any assessment would not have led to any VTE prophylaxis being prescribed. On the evidence available in Stephen's case this tends to mitigate against the mandated use of the VTERA Tool.

19.36 Dr De Silva introduced into evidence a copy of the Grand Rounds session at Concord Hospital from August 2018 which included a presentation on VTE assessment. Statistics contained within the presentation demonstrated that between September 2017 and June 2018 there was no correlation between documented evidence of VTE risk assessment and whether VTE prophylaxis prescribed was appropriate to the level of risk assessed. Whilst there was a variation of up to 24% in relation the former, the latter remained largely unchanged, with a variation of only 9%.

19.37 Having regard to the above, it would appear that educating clinicians about the importance of VTE assessment represents the best prospect of increasing uptake in clinical practice. In this regard, it is desirable to make the following recommendation.

19.38 **RECOMMENDATION 3:** I recommend to the Chief Executive, Sydney Local Health District that consideration be given to the circumstances of Stephen's death (with appropriate anonymization, and conditional upon consent being provided by Stephen's family and following appropriate consultation with them) being used as a case study as part of education packages provided to clinical staff regarding venous thromboembolism risk assessment in the context of unexpected extension of a patient's admission duration.

19.39 Associate Professor Grabs considered that it was likely that Stephen developed his DVT in the first few days of his admission. However Associate Professor Grabs noted that it was difficult to provide an accurate estimate of when this occurred as the condition is frequently asymptomatic in the initial stages. Further, although Stephen demonstrated some symptoms consistent with DVT in the period between 8 March 2016 and 13 March 2016 (dizziness, reduction in oxygen saturation) they might also have been symptomatic of a differential diagnosis.

19.40 In evidence Associate Professor Grabs indicated that the other symptoms which Stephen was displaying, such as dizziness and nausea, were non-specific. In his view the only symptom which required explanation was Stephen's elevated heart rate. In this regard Stephen's Standard Adult General Observation Chart indicated that between 4:45pm on 13 March 2016 to about 9:00pm on 14 March 2016, Stephen's heart rate was noted to be trending upwards from about 75 beats per minute (**bpm**) to just below 120 bpm. It should be noted that a heart rate of over 120 bpm would fall within the Yellow Zone which required consideration whether a clinical review was warranted.

19.41 Shortly before 1:00pm on 14 March 2016 Stephen complained of dizziness and nausea after walking to the shower and was noted to be sweating heavily. Stephen complained of similar feelings following his shower around 10:00am on 15 March 2016. The evidence given generally by Dr Shashank, Professor Maitz, Registered Nurse Alyce McNabb (who took Stephen's observations on 14 March 2016) and NUM Parker was that Stephen's symptoms were non-specific and not unusual for a patient in the Burns Unit. NUM Parker explained that whilst the upwards trend in Stephen's heart

rate on 13 and 14 March 2016 would cause concern, on its own it would not be sufficient to raise concerns of VTE risk. NUM Parker explained that consideration would be given to other possible symptoms, such as tightness and deep pain it the calf, which would tend to suggest the risk of VTE. NUM Parker also explained that nausea and dizziness were also non-specific symptoms and could be caused by a number of factors such as a high dose of analgesic, showering, wound dressing changes, the body's natural response to the wound healing process, and a patient visualising their burn wound.

19.42 In evidence Dr Shashank said that he did not consider Stephen's elevated heart rate to be clinically significant. This was because Stephen had a baseline heart rate of 85 on admission and so the relative difference did not cause concern. Further, he indicated that consideration would need to be given to Stephen's observations as a whole. Professor Maitz similarly considered Stephen's elevated heart rate to be non-specific but agreed in evidence that he considered that it was clinically significant and not escalated to him for review. Whilst agreeing that it could be symptomatic of VTE, he noted that it could also be symptomatic of a number of different clinical conditions.

19.43 Associate Professor Grabs said in evidence that he considered that Stephen's condition changed between the afternoon of 14 March 2016 and the morning of 15 March 2016 due to his increased heart rate, drop in blood pressure, sweating, dizziness, nausea, abdominal pain, and increase in blood sugar levels. It was put to Associate Professor Grabs in cross-examination by counsel for the SLHD that Stephen's elevated heart could be accounted for by a number of factors: pain experienced as part of the healing process five days post-burn, abdominal pain, and a disinterested patient being forced to engage with medical staff and participate in a number of investigations. However, Associate Professor Grabs explained that he would not expect these factors to elevate Stephen's heart rate if he was asleep (for some of the 16 hour period after his heart rate first began to increase from about 5:00pm on 13 March 2016).

19.44 Notwithstanding, Associate Professor Grabs agreed that shortness of breath, an increase in respiratory rate and a decrease in oxygen saturations would all be indicative signs of a PE. However, none of these features were present when Stephen was reviewed by a member of the surgical team (prior to a planned abdominal procedure on 15 March 2016) at 3:00pm on 14 March 2016. Although Associate Professor Grabs did not consider the surgical review to amount to a medical review such as might be undertaken by a Burns Unit registrar, he agreed that it would be unlikely that a registrar conducting a review at that time would consider the possibility of DVT as a differential diagnosis.

19.45 **CONCLUSION:** Stephen's upwardly trending heart rate over a period of about 16 hours between 13 and 14 March 2016 was not, on its own, symptomatic of VTE. His other symptoms, often associated with periods of showering, were also non-specific and not uncommon for a patient in the Burns Unit. However, given that Professor Maitz regarded the elevated heart rate at a level just below the Yellow Zone as being clinically significant suggests that it would have been appropriate to escalate Stephen for further review. The failure to do so represented a missed opportunity to, as many of the hospital staff witnesses described, perform an overall assessment of Stephen having regard to his other vital signs and symptoms. Given that Stephen was not at the time displaying other symptoms that were classical for VTE, it is not possible to conclude that the eventual outcome might have been altered. However, escalation for medical review would have been in accordance with optimal clinical practice.

(c) Were the imaging scans on 14 March 2016 appropriately reviewed?

19.46 Dr Archer explained that the primary purpose of the CT scan on 14 March 2016 was to locate the keys that Stephen had swallowed and that the possible appearance of PE was an unexpected finding. Dr Archer noted that it is typically uncommon to visualise enough of the pulmonary arteries on a CT abdomen to raise the possibility of PE. Dr Archer further explained that in her view the appearance of a potential PE was very subtle, that she was uncertain whether emboli were actually present, and that it was reasonable for the potential PE not to have been referred to in the preliminary report.

19.47 Dr Archer further explained that, due to her caseload, it was not uncommon for her to complete her final report the morning after the CT scan had been performed and after the preliminary report had been prepared. A more timely final report would only have been prepared if it had been communicated to Dr Archer that it was urgently required.

19.48 **CONCLUSION:** The CT scan performed on the afternoon of 14 March 2016 raised the possibility of PE being present. However, given that the primary purpose of the scan was to monitor the passage of the keys it was reasonable for the possible findings not to have been detected by the registrar who prepared the preliminary report. The evidence from Dr Archer establishes that the findings were subtle, attended by an element of uncertainty, and not usually identifiable on a CT scan. The possible presence of PE was therefore a qualitative, subjective finding.

19.49 Further, it was not communicated to Dr Archer or anyone else that the final CT report needed to be completed with any degree of urgency. Had this occurred, it is most likely that the final report would have been completed in a more timely manner. However, again it is not possible to reach any conclusion about whether more timely completion would have made any material difference to the eventual outcome.

20. Acknowledgments

20.1 Before turning to the findings that I am required to make, I would like to acknowledge, and express my gratitude to, Ms Michelle England, Counsel Assisting, and her instructing solicitor, Mr James Herrington of the Crown Solicitor's Office. Their assistance during both the preparation for inquest, and during the inquest itself, has been invaluable. I would also like to thank them both for the sensitivity and empathy that they have shown in what has been a particularly distressing matter.

20.2 I also thank Detective Sergeant Andrew Tesoriero for his diligent efforts during the investigation into Stephen's death and for compiling the initial brief of evidence. I also acknowledge and thank the legal representatives for the various interested parties for their assistance during the course of the inquest.

21. Findings pursuant to section 81 of the *Coroners Act 2009*

21.1 The findings I make under section 81(1) of the Act are:

Identity
The person who died was Stephen Kline.

Date of death
Stephen died on 15 March 2016.

Place of death
Stephen died at Concord Repatriation General Hospital, Concord NSW 2139.

Cause of death
The cause of Stephen's death was pulmonary thromboemboli due to deep vein thrombosis on a background of a leg burn wound.

Manner of death
Stephen died of natural causes during an extended period of hospitalisation after suffering the leg burn wound as a consequence of having a taser deployed at him by a NSW Police Force officer.

22. Epilogue

22.1 The last eight days of Stephen's life were comprised of a series of tragic and unfortunate events. It is upsetting to know that Stephen felt alone and isolated during this period of time. However, even throughout this distressing period, Stephen demonstrated a sense of resilience and a determination to ensure that those who he cared for were looked after in his absence.

22.2 On behalf of the NSW State Coroner's Court and the Assisting team, I offer my most respectful condolences to Stephen's family for their very sad loss.

22.3 I close this inquest.

Magistrate Derek Lee
Deputy State Coroner
1 March 2019
Coroner's Court of NSW