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Health Law
Bulletin

Taser deployment and identifying venous thromboembolism examined in the mandatory coronial inquest into the death of Stephen Kline

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Abstract

In the course of this inquest, interesting recommendations were made about clinical software that was used in practice and the Coroner emphasised the importance of educating clinicians on its use. The inappropriate assessment of the taser guidelines by the New South Wales Police Force (NSW Police) was also scrutinised during the inquest.

Introduction

A mandatory inquest was held to investigate the death of a person who was arrested and taken into police custody. In the lead up to his arrest, there was an incident at the deceased's premises which led to the NSW Police deploying a taser that ignited nearby flammable liquid. The deceased sustained burns and was taken to hospital, where his treatment was subject to technological errors. The deceased suddenly died shortly after he was admitted. The autopsy revealed that the cause was pulmonary thromboemboli due to deep vein thrombosis on the background of a leg burn wound.

Deputy State Coroner Lee noted problems concerning the use of clinical software by clinicians and also investigated whether there were any issues with taser deployment by the NSW Police.[1] The adequacy of Concord Repatriation General Hospital's (Concord Hospital) practices in relation to deep vein thrombosis and pulmonary embolism was also investigated. This followed an incident between the deceased, Stephen Kline, and officers from NSW Police, which led to Kline being hospitalised after being tased. The inquest was mandatory as Kline's death occurred whilst he was in lawful custody.[2]

Circumstances leading up to Stephen Kline's death

Incident with NSW Police

On the morning of 8 March 2016, Kline was at his home and was told that his electricity would be disconnected due to not paying his bills. Kline responded aggressively to the two workers who were on site to perform the disconnection, which led to the police being called.[3] Upon the arrival of local police officers, Kline started up a chainsaw and threatened to cut down the power pole the workers were on. This prompted the police in attendance to call for backup assistance.[4] A short amount of time later, Kline went back inside his house and Sergeant Shaw, who responded to the call, returned to Quakers Hill police station after patrolling the area for about 15 minutes.[5]

A couple of hours later, a call was broadcasted over police radio, indicating that a male person at Kline's address was cutting down a power pole with a chainsaw.[6] Sergeant Shaw, Leading Senior Constable Hurst and Constable Diane Simkins attended to the call and entered Kline's front yard, which was surrounded by a metal fence that had a large dog contained within.[7] Kline was asked to place his dog away, which he eventually did. Leading Senior Constable Hurst then jumped over Kline's fence after seeing that Kline was holding a red plastic fuel container.[8] Believing that he was being approached by Kline, Leading Senior Constable Hurst sprayed Kline with oleoresin capsicum (OC) spray. This had no effect as Kline splashed fuel on parked cars and in the direction of Leading Senior Constable Hurst. He then sprayed Kline a second time with the OC spray while Kline splashed petrol on Leading Senior Constable Hurst's shirt and upper torso.[9] Leading Senior Constable Hurst tackled Kline to the ground, and petrol entered his eyes.[10]

Sergeant Shaw heard Leading Senior Constable Hurst shout out for help, so he jumped over the fence, withdrew his taser and struck Kline in the torso. Kline fell to the ground and his shin became engulfed in flames.[11] NSW paramedics arrived on the scene and Kline was taken to Westmead Hospital and was then transferred to the specialist Burns Unit at Concord Hospital.[12]

Treatment at Concord Hospital

When Kline had arrived on the afternoon of 8 March 2016, he was assessed by Dr Chris Ahn, the on-call plastic surgery registrar, who found that he had a partial

thickness burn injury to the anterior, lateral and posterior surfaces of his left leg and toe. Dr Ahn formulated a treatment plan for Kline's wounds and considered he would be discharged the next morning.[13]

During that same evening, Kline was visited by Inspector Skye Adams from the Royal Society for the Prevention of Cruelty to Animals (RSPCA). Inspector Adams informed Kline that two of his female dogs were suffering from prolapsed uteruses, which required veterinary attention. Kline expressly informed Inspector Adams that he did not wish to surrender his dogs to the RSPCA.[14]

Overnight, Kline complained he was experiencing chronic pain in his right hip and a burning pain in his chest.[15] During the morning of 9 March 2016, Kline also complained of dizziness, pain and stiffness. A physiotherapist attempted to mobilise Kline, but he declined.[16] Later that day, Dr Paul Tyrrell, a psychiatry registrar, attended to Kline to perform a psychiatric review and suspected that Kline had a personality disorder.[17] Dr Tyrell subsequently spoke with Dr Danielle Vandenberg, the consultant psychiatrist, who formulated a plan for Kline, which included commencing an Alcohol Withdrawal Scale to monitor for alcohol withdrawal; a regimen of diazepam for his agitation; a prescription for thiamine; and daily psychiatric reviews to monitor his risk of possible self-harm.[18]

Following Dr Tyrrell's preliminary assessment, a bedside hearing was conducted in relation to Kline's offences. He was refused bail and remanded into custody and thereby placed under the guard of Corrective Services New South Wales (CSNSW) officers from the Court Escort Unit.[19]

On 10 March 2016, Inspector Adams returned to inform Kline that his friend was not able to look after his dogs for the long term. Kline still refused to surrender the dogs.[20] That same morning, a physiotherapist attended to Kline to help mobilise him, but Kline was reluctant to do so and complained of a pain his right hip and knee.[21] Dr Vandenberg then reviewed Kline. During the review, Kline said he was distressed about losing his dogs and told Dr Vandenberg he had swallowed a set of keys.[22] The Nursing Unit Manager, Chris Parker, advised Dr Arridh Shashank about Kline swallowing keys and Dr Shashank performed an x-ray to locate them. Unfortunately, the keys were moving around and Kline had to remain admitted at Concord Hospital for further x-rays before performing a gastroscopy to remove the keys.[23]

On 11 March 2016, Dr Vandenberg reviewed Kline. He began to cry and said his life was not worth living. Kline still refused attempts by the physiotherapist to mobilise him and complained of dizziness. However, his observations were noted as normal.[24] On 14 March, Dr Vandenberg reviewed Kline again and he appeared to be more settled. The physiotherapist also attended to Kline on this day. Kline complained of dizziness and pain in his abdomen and left leg. Complaints were also made by Kline to registered nurse, Alyce McNabb, saying that he was feeling dizzy and nauseous. His blood pressure was still detected as being normal.[25] During the day, a computed tomography (CT) scan was performed of Kline's abdomen and pelvis. No bowel perforation or other complications were detected.[26]

The sudden collapse and death Kline

During the morning of 15 March 2016, Dr Shashank and Dr Constant Van Schalkwyk noted Kline had an elevated heart rate, but all other signs were normal.[27] CSNSW officers, Jason Baptista and Vidaya Sharma, were on duty and they did not hear Kline make any complaints when he showered in the morning. Officer Baptista, knowing that Kline had swallowed keys, removed all metal cutlery from the room.[28]

Inspector Adams visited and explained that Kline's dogs may be seized by the RSPCA and detained until they could be euthanised, or they could be surrendered and sedated at Kline's home. He became visibly upset, cried loudly and required assistance back to his bed. Officer Sharma then heard something fall and saw Kline fall off his chair, landing face first. Urine and vomit were seen on the floor, Kline was non-responsive and the nursing staff was called immediately for emergency assistance. Cardiopulmonary resuscitation was initiated but Kline was not revived. Kline was pronounced deceased by Dr Shashank at 10.58 am.[29]

Around the time of Kline's death, Dr Kate Archer produced a final report on the CT scan. It noted "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."[30]

An autopsy was performed on 18 March 2016. It identified deep vein thrombosis in Kline's legs, as well as thromboemboli in both legs. Considering the autopsy report and sudden collapse of Kline, Coroner Lee concluded that the cause of death was pulmonary thromboemboli due to deep vein thrombosis where Kline had a leg burn wound.[31]

Coronial findings

The key issues for the inquest to consider concerned the following:[32]

- the appropriateness of the actions of members of the NSW Police on 8 March 2016 in relation to deployment of a taser
- whether NSW Police training and guidelines for firing tasers in the presence of flammable liquids are adequate

- whether NSW Police should have handled the investigation as a critical incident investigation
- the adequacy of CSNSW's actions, and whether their relevant practices and procedures are sufficient
- whether Concord Hospital's practices were adequate, specifically in relation to the assessment, management and monitoring of deep vein thrombosis and pulmonary embolism as well as the assessment and management of Kline's risk of self-harm

NSW Police handling of tasers

Coroner Lee's findings on NSW Police's handling of tasers can be divided into three main parts. First, that it was not appropriate for the NSW Police officers to enter Kline's front yard on 8 March 2016. Second, Sergeant Shaw should not have deployed his taser. Finally, despite the incident, NSW Police's Use of Conducted Electrical Weapons (Taser) Standard Operating Procedures (Taser SOP) adequately identifies risks associated with taser use in the presence of flammable liquids.[33]

Coroner Lee queried whether the officers had formulated a plan for arresting Kline when they had entered his front yard. Coroner Lee determined that there was conflicting evidence about whether there was an intent held by the officers to arrest Kline.

It was also concluded that the police in attendance had the opportunity to further negotiate with Kline before entering his front yard. While he was largely non-compliant, he also put away his dogs as instructed.[34] Coroner Lee concluded that Leading Senior Constable Hurst should not have entered the yard at the time he did, as such action would likely only have been the catalyst for a deterioration in negotiations.[35] From the evidence, it appeared that the petrol was being splashed while Leading Senior Constable Hurst was jumping over the fence, but at no point beforehand.[36]

Whether Sergeant Shaw appropriately considered the Taser SOP before deploying his taser was explored. Section 8 of the Taser SOP provides that a taser 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.
>
> ...
> ... "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".[37]

Sergeant Shaw was referred to the Taser SOP in evidence and explained the criteria that he had applied in deploying the taser were to protect human life and himself. He was also of the view that this was the only option available to him, based on "the exceptional circumstances".[38] While only 6 seconds had passed between Sergeant Shaw jumping over the fence and when the taser was deployed, he believed Leading Senior Constable Hurst could have been seriously, or even fatally injured.[39] The evidence demonstrated that Sergeant Shaw did not warn anyone before deploying the taser and used it before the illuminated targeting had even appeared. Further, Kline did not pose an immediate threat at the time of deployment.[40] Kline was "trying to stand upright" at the time the taser was deployed, supporting the conclusion that Sergeant Shaw deployed the taser without adequate consideration of other options.

Sergeant Shaw's appreciation of the hazard posed by the flammable liquid within the vicinity was found to be insufficient.[41] Coroner Lee concluded that Sergeant Shaw did not make an assessment pursuant to the Tactical Options Model, or if he did, that the assessment was incorrect, and it was inappropriate for him to deploy his taser.[42] This was substantiated by Constable Simkins's evidence that she had established that it was unsafe to deploy her taser, as the ground areas was "saturated" with petrol.[43] Moreover, the Taser SOP at s 8.2 provides guidelines on the inherent risk with deploying a taser in the presence of flammable liquids.[44] Coroner Lee held that these guidelines, along with the training provided to police officers regarding the deployment of tasers, was adequate.[45]

Whether the events should have been declared a critical incident

Upon review of the evidence, Coroner Lee concluded that it was appropriate for the events occurring on 8 March 2016 to have not been declared a critical incident.[46] Section 3.1 of the NSW Police Critical Incident Guidelines provide 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 … or the application of physical force by police[.][47]

Serious injury includes:[48]

- 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.

Detective Sergeant Andrew Tesoriero was the independent officer in charge of the investigation into Kline's death.[49] He explained in evidence that a critical incident investigation generally involves utilising more police resources as compared to other types of investigations.[50] Because Kline's injuries were relatively minor, and that there was no evidence to suggest the investigation was compromised by not declaring it a critical incident, Coroner Lee concluded that it was appropriate for the events to have not been declared a critical incident.[51]

Observation by CSNSW officers and management of self-harm risk

While it is uncertain as to when this precisely occurred, on 10 March 2016, Kline said he was distressed about losing his dogs and told Dr Vandenberg that he had swallowed a set of keys.[52] Kline was under guard and observation by CSNSW Officers Sharma and Baptista during this time, as he was remanded into custody the previous day based on his charges.[53] Coroner Lee considered the performance of their duties, and concluded that there was no evidence to suggest the officers had observed Kline in a manner that was not appropriate.[54] Specifically, there was no evidence denoting that Kline was able to swallow the keys based on a deficiency in observations.[55]

It was established in evidence that Kline was at risk of self-harming.[56] During this time, CSNSW and NSW Health were in the process of preparing a Memorandum of Understanding, which would provide an agreement on the exchange of information regarding custodial patients at risk of self-harm.[57] In light of this, Coroner Lee concluded that no recommendation was required on this.[58]

Adequacy of care at Concord Hospital

In assessing the care at Concord Hospital, Coroner Lee made three findings:

- there was an appropriate management plan and regular review system in place for the risk of Kline self-harming[59]
- recommendations for the assessment and management for the risk of venous thromboembolism (VTE) are required[60]
- it was not possible to determine whether a timelier completion of the CT report would have made any material difference to the outcome[61]

For the first finding, Coroner Lee considered Dr Vandenberg's lengthy assessment of Kline on 10 March 2016. She formulated a plan for Kline which involved alcohol withdrawal, a regimen of medications and daily psychiatric reviews.[62] Coroner Lee's review of this evidence led to the conclusion that Dr Vandenberg forged a therapeutic alliance with Kline in challenging circumstances and provided an appropriate management plan and review system.[63]

Regarding the risk of VTE, Coroner Lee observed the NSW Health Policy Directive, *Prevention of Venous Thromboembolism*[64] (Policy Directive), which was in force during March 2016.[65] The Policy Directive sets out numerous mandatory requirements, which include the following:[66]

> (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 (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.

The Policy Directive also recommends the use of a VTE Risk Assessment Tool (VTERA tool), which was not used on Kline during his care at Concord Hospital.[67] In evidence, Dr Ahn agreed that the mandatory requirements applied to Kline and that the VTE risk assessment should have been performed within 24 hours. Despite this, the VTE risk assessment was not performed and the VTERA tool was not used.[68] Dr Ahn had also not prescribed any other form of VTE prophylaxis because he considered Kline's burns to be minor, which could be treated quickly, and the Coroner agreed that it could not be said that this was inappropriate.[69]

It was also agreed in evidence by Dr Shashank that it is standard practice to chart pharmacological prophylaxis in the form of heparin, which is part of a standard set of medications.[70] However, standard practice was not followed in Kline's case. Dr Shashank mistakenly believed that heparin had already been charted for Kline, as his electronic medical record (eMR), which used the Electronic Medical Management (eMeds) software, noted that it had already been prescribed to him.[71] It was established in evidence that heparin had been charted in error, which meant Kline was never administered heparin.[72] The record of heparin remained on Kline's eMeds, but had been cancelled. Dr Shashank did not see that it had been cancelled, as the monitor was not big enough to display the column that contained this information.[73]

Coroner Lee concluded that, because of this technological impairment, Kline's care was adversely impacted as there was a failure to chart heparin or prescribe VTE prophylaxis.[74] Although this was deemed an isolated incident,[75] the Coroner noted that "the fact that such a simple technological impediment can adversely impact patient care is a cause for concern."[76] As a result,

Coroner Lee recommended to the Chief Executive of the Sydney Local Health District that a copy of these findings be given to the developer of eMeds software, to ensure that users of the system can readily distinguish between medications that are being administered or are cancelled.[77]

Evidence was given by Dr Kashmira De Silva and Professor Maitz to help guide the inquest in determining whether clinical practice ought to be mandated, specifically in relation to the VTERA tool.[78] Coroner Lee considered that clinical practice requires a degree of agility and flexibility, meaning that mandated practice ought not replace the exercise of clinical skill and judgment.[79] Rather, the importance of educating clinicians about the importance of VTE assessments was highlighted.[80] It was therefore recommended to the Chief Executive of the Sydney Local Health District that Kline's circumstances, after being anonymised, be used as a case study to educate clinical staff regarding risk assessment of VTE.[81]

Regarding Kline's upward trending heart rate, despite this not being symptomatic of VTE, it was just below the level of being clinically significant. This suggested that it would have been appropriate to escalate Kline for further review. Coroner Lee concluded that the failure to do so represented a missed opportunity and non-compliance with optimal clinical practice. Although, it was not possible to conclude that the outcome may have changed had this occurred.[82]

Finally, it was identified that the CT scan performed on 14 March 2016 raised the possible prevalence of pulmonary embolism.[83] The primary purpose of the scan, however, was to monitor the passage of the set of keys Kline had ingested around 10 March 2016.[84] While preparation of the CT report may have been completed sooner to identify the possibility of pulmonary embolism, Coroner Lee concluded that it was not possible to determine whether a more timely completion would have amounted to any material difference to Kline's circumstances.[85]

Conclusion

Coroner Lee determined that, during the incident at Kline's premises, NSW Police had made an incorrect assessment to fire a taser upon Kline. This was based upon the hastiness of the deployment, the absence of any immediate threat and the prevalence of flammable liquids nearby.[86] Furthermore, Kline's care at Concord Hospital was subject to technological errors relating to the charting of heparin. A series of recommendations was made to the Chief Executive of the Sydney Local Health District to mitigate any further technological errors to the eMR and eMeds software that could occur in the future.[87] This incident serves as a timely reminder of the importance of clinicians being properly and thoroughly educated on the software used in clinical practice.

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Footnotes

1. Coroner's Court (NSW) *Inquest into the death of Stephen Kline* (1 March 2019) www.coroners.justice.nsw.gov.au/Documents/KLINE%20Stephen%20-%20Findings%20-%20Final.pdf.
2. Above, para 2.3.
3. Above n 1, para 4.1.
4. Above n 1, para 4.2.
5. Above n 1, para 4.6.
6. Above n 1, para 5.1.
7. Above n 1, para 5.3.
8. Above n 1, para 5.5.
9. Above n 1, para 5.5.
10. Above n 1, para 5.6.
11. Above n 1, paras 5.8 and 5.9.
12. Above n 1, para 5.12.
13. Above n 1, para 6.1.
14. Above n 1, para 6.2.
15. Above n 1, para 6.3.
16. Above n 1, para 7.2.
17. Above n 1, para 7.3.
18. Above n 1, para 7.4.
19. Above n 1, para 7.5.
20. Above n 1, para 8.1.
21. Above n 1, para 8.2.
22. Above n 1, para 8.3.
23. Above n 1, para 8.5.
24. Above n 1, paras 9.1 and 9.2.
25. Above n 1, paras 10.1 to 10.3.
26. Above n 1, paras 10.4 and 10.5.
27. Above n 1, para 11.1.
28. Above n 1, para 11.3.
29. Above n 1, paras 11.5 to 11.7.
30. Above n 1, para 11.8.
31. Above n 1, paras 12.1 to 12.3.
32. Above n 1, para 13.1.
33. Above n 1, para 15.3.
34. Above n 1, para 14.9.
35. Above n 1, para 14.10.
36. Above n 1, para 14.8.
37. Above n 1, paras 14.12 to 14.15.
38. Above n 1, para 14.14.

39. Above n 1, para 14.16.
40. Above n 1, para 14.19.
41. Above n 1, para 14.20.
42. Above n 1, para 14.18.
43. Above n 1, para 14.19.
44. Above n 1, para 15.1.
45. Above n 1, para 15.3.
46. Above n 1, para 16.7.
47. Above n 1, para 16.1.
48. Above n 1, para 16.3.
49. Above n 1, para 16.5.
50. Above n 1, para 16.6.
51. Above n 1, paras 16.7 to 16.9.
52. Above n 1, paras 8.3 and 17.1.
53. Above n 1, paras 7.5 and 17.1.
54. Above n 1, para 17.5.
55. Above n 1, para 17.5.
56. Above n 1, para 18.6.
57. Above n 1, para 18.5.
58. Above n 1, para 18.8.
59. Above n 1, para 19.5.
60. Above n 1, paras 19.23, 19.24 and 19.38.
61. Above n 1, para 19.49
62. Above n 1, para 19.3.
63. Above n 1, para 19.5.
64. NSW Health *Prevention of Venous Thromboembolism* (22 September 2014) www1.health.nsw.gov.au/pds/ActivePDSDocuments/PD2014_032.pdf.
65. Above n 1, para 19.6.
66. Above n 1, para 19.7.
67. Above n 1, para 19.8.
68. Above n 1, para 19.9.
69. Above n 1, para 19.19.
70. Above n 1, para 19.14.
71. Above n 1, para 19.15.
72. Above n 1, para 19.15.
73. Above n 1, para 19.16.
74. Above n 1, paras 19.18 to 19.21.
75. Above n 1, para 19.21.
76. Above n 1, para 19.21
77. Above n 1, paras 19.23 and 19.24.
78. Above n 1, paras 19.28 to 19.31.
79. Above n 1, para 19.33.
80. Above n 1, para 19.37.
81. Above n 1, para 19.38.
82. Above n 1, para 19.45
83. Above n 1, para 19.46.
84. Above n 1, para 19.48.
85. Above n 1, para 19.49.
86. Above n 1, para 14.20.
87. Above n 1, paras 19.23, 19.24 and 19.38.