IN THE CORONERS COURT
OF VICTORIA
AT MELBOURNE

COR 2020 005571

FINDING INTO DEATH WITHOUT INQUEST

Form 38 Rule 63(2)

*Section 67 of the **Coroners Act 2008***

Findings of:	AUDREY JAMIESON, Coroner
Deceased:	Md Fakrul Alam Sozon
Date of birth:	9 September 1987
Date of death:	10 October 2020
Cause of death:	1(a) Haemoperitoneum 1(b) Lacerated spleen as a result of peritoneal ascitic fluid tap procedure 2 Liver sinusoidal obstruction syndrome with veno-occlusive lesion (VOD), pericarditis and effusion
Place of death:	Western Health, Footscray Hospital, 160 Gordon Street, Footscray, Victoria, 3011

INTRODUCTION

1. On 10 October 2020, Md Fakrul Alam Sozon was 33 years old when he died at Footscray Hospital following a surgical procedure. At the time of his death, Mr Sozon lived in Footscray.

2. Mr Sozon was an asylum seeker from Bangladesh, whose family remained in Bangladesh.

3. His medical history included depression, alcohol dependence and alcoholic liver disease. Mr Sozon had previously attended Western Health having had a seizure, and with alcohol related problems. He was referred to the drug and alcohol addiction service in early 2020 but appears not to have attended his appointments.

THE CORONIAL INVESTIGATION

4. Mr Sozon's death was reported to the Coroner as it fell within the definition of a reportable death in the *Coroners Act 2008* (the Act). Reportable deaths include deaths that are unexpected, unnatural or violent or result from accident or injury.

5. The role of a coroner is to independently investigate reportable deaths to establish, if possible, identity, medical cause of death, and surrounding circumstances. Surrounding circumstances are limited to events which are sufficiently proximate and causally related to the death. The purpose of a coronial investigation is to establish the facts, not to cast blame or determine criminal or civil liability.

6. Under the Act, coroners also have the important functions of helping to prevent deaths and promoting public health and safety and the administration of justice through the making of comments or recommendations in appropriate cases about any matter connected to the death under investigation.

7. This finding draws on the totality of the coronial investigation into the death of Md Fakrul Alam Sozon including evidence contained in the coronial brief. Whilst I have reviewed all the material, I will only refer to that which is directly relevant to my findings or necessary for narrative clarity. In the coronial jurisdiction, facts must be established on the balance of probabilities.[1]

[1] Subject to the principles enunciated in *Briginshaw v Briginshaw* (1938) 60 CLR 336. The effect of this and similar authorities is that coroners should not make adverse findings against, or comments about, individuals unless the

MATTERS IN RELATION TO WHICH A FINDING MUST, IF POSSIBLE, BE MADE

Circumstances in which the death occurred

Presentation to Footscray Hospital

8. On the afternoon of 3 September 2020, Mr Sozon presented to Footscray Hospital with fever, jaundice and confusion, following a fall that occurred while intoxicated. He was subsequently admitted and treated for sepsis and decompensated alcoholic liver disease. His blood alcohol level on admission was 0.26g/mL.[2]

9. On 4 September 2020 Mr Sozon was admitted to the intensive care unit **(ICU**) as he required intubation for severe agitation and low blood oxygen levels. He remained intubated for 10 days and was treated for sepsis, pneumonia, anaemia, disordered blood coagulation, electrolyte derangement, colitis, liver failure and hepatic encephalopathy. No clear source of the sepsis was identified.

10. Further investigations indicated that Mr Sozon had 'Child Pugh C' liver disease.[3] This has a very high mortality rate.

11. After two weeks in the ICU he was transferred back to the ward due to his poor prognosis. During his time on the ward his liver function continued to deteriorate, and delirium, encephalopathy, and confusion were repeatedly documented in his progress notes by his treating practitioners.

Proximate circumstances

12. On 9 October 2020, clinicians noted that Mr Sozon had developed abdominal distension and tenderness and had an increased white blood cell count. As there was concern that he may have developed ascites or spontaneous bacterial peritonitis (**SBP**)[4], the Gastroenterology Registrar, Dr Hartley, determined to perform a bedside ultrasound and diagnostic ascitic tap.

evidence provides a comfortable level of satisfaction as to those matters taking into account the consequences of such findings or comments.

[2] Statement of Dr Zina Valaydon, undated.

[3] Child-Pugh is a classification of the severity of liver disease based upon a number of parameters, and was designed to predict the prognosis of chronic liver disease and cirrhosis. 'C' is the worst classification and has a predicted life expectancy of 1-3 years.

[4] 3 Spontaneous bacterial peritonitis (SBP) an infection of abdominal fluid (ascites) that does not come from an obvious place within the abdomen, such as a hole in the intestines or a collection of pus. The condition typically affects people with liver disease and has a high risk of mortality if untreated.

The diagnostic tap was to collect a small sample of fluid for analysis to potentially diagnose SBP. The collection of fluid is done via a small, narrow-gauge needle.

13. At 11:30am medical residents Dr Fan and Dr Yee attempted to perform the procedure using a mobile ultrasound machine for guidance.[5] At 7:37pm progress notes made by Dr Fan recorded the following:

Attempted bedside diagnostic tap by myself and co-resident Dr Yee

Ultrasound used for guidance: Initially looked in RIF and LIF[6] – no significant ascites, area of fluid higher on left side

Area cleaned with chlorhexidine

First attempt by Dr. Yee with 21g[7] – blood 0.5ml

2nd attempt by myself with 23g and lignocaine – blood again 2ml

Procedure abandoned

Call to registrar Dr Hartley, immediately review concerned was spleen rather than ascitic fluid

?perhaps gain low on US

Patient remained haemodynamically stable

14. Mr Sozon was immediately reviewed by Dr Hartley. Her notes recorded the following:

Site of previous diagnostic tap RUQ ?over spleen.

Bedside ultrasound repeated – no evidence of ascites, tap site appeared to be over spleen

15. Vitamin K was administered to improved Mr Sozon's blood coagulation and a computed tomography (**CT**) scan of his abdomen was performed shortly thereafter. The CT scan showed:

[5] Retrospective notes made by Dr Hartley, Gastroenterology Registrar indicate that she requested the 'residents' perform the procedure.
[6] RIF and LIF refer to the right and left iliac fossae.
[7] 21g and 23g refer to the gauge of the needle used.

Evidence of traumatic splenic laceration with adjacent splenic artery pseudoaneurysm formation with active contrast extravasion (AAST grade V[8] splenic laceration). Moderate volume haeomoperitoneum.

16. Open disclosure was held with Mr Sozon and his next of kin, Ahmed, and consent for the recommended embolisation procedure was obtained.

17. At 8:20pm Mr Sozon underwent a splenic artery embolisation procedure in radiology which was noted to have been successful. He was subsequently managed on the ward. He was not considered appropriate for either the High Dependency Unit or admission to the Intensive Care Unit as his poor prognosis rendered ICU care futile.[9]

18. Mr Sozon was provided with a further blood and clotting factor infusion. He was reviewed on the ward at 10:48pm and appeared to have slightly low blood pressure and an elevated heart rate. His condition was discussed with the Gastroenterology Registrar and further blood and intravenous fluids were ordered.

19. Sadly, Mr Sozon died at 12:10am on 10 October 2020.[10]

Identity of the deceased

20. On 10 October 2020, Md Fakrul Alam Sozon, born 09 September 1987, was visually identified by his cousin, Mubashir Ahmed, who completed a Statement of Identification.

21. Identity is not in dispute and requires no further investigation.

Medical cause of death

22. Forensic Pathologist Dr Brian David Beer from the Victorian Institute of Forensic Medicine (**VIFM**) conducted an autopsy on the body of Md Fakrul Alam Sozon on 14 October 2020. Dr Beer reviewed the Victoria Police Report of Death (Form 83), post mortem computed tomography (**CT**) scan and angiogram, E-Medical Deposition Form and medical records and provided a written report of his findings dated 24 February 2021.

[8] AAST (American Association for the Surgery of Trauma) spleen injury scale grades splenic injury as 1-5. A grade 5 injury is any injury in the presence of splenic vascular injury with active bleeding extending beyond the spleen into the peritoneum.
[9] Statement of Dr Zina Valaydon, undated.
[10] E-Medical Deposition Form dated 10 October 2020.

23. The post-mortem examination revealed haeomoperitoneum with ascites (1.5 litres and blood clot), laceration of the spleen, bilateral pleural effusions, marked "bread and butter" fibrinous pericarditis and 550 ml of markedly proteinaceous pericardial effusion.

24. Further, Dr Beer identified veno-occlusive liver disease probably due to a toxin aetiology with liver failure. He noted that the toxin aetiology was likely attributable to alcohol, but he could not exclude other drugs or toxins.

25. Sections of the liver were referred to Dr Kashayar Asadi at the Austin Hospital Department of Anatomical Pathology. Dr Asadi identified advanced fibrosis with veno-occlusive lesions and sinusoidal scarring in keeping with chronic sinusoidal obstruction syndrome. He suggested this may be due to chronic toxic sinusoidal injury and favoured this being due to alcohol but a contribution from other drugs or toxins could not be excluded.[11]

26. Toxicology was not performed.

27. Dr Beer provided an opinion that the medical cause of death was 1 (a) HAEMOPERITONEUM; 1 (b) LACERATED SPLEEN AS A RESULT OF PERTONIAL ASCITIC FLUID TAP PROCEDURE; 2 LIVER SINUSOIDAL OBSTRUCTION SYNDROME WITH VENO-OCCLUSIVE LESION (VOD), PERICARDITIS AND EFFUSION.

CORONERS PREVENTION UNIT REVIEW

28. Having reviewed the medical examiner's report of Dr Beer and noting the circumstances, specifically that Mr Sozon died following a medical procedure performed by junior medical staff, I referred the matter to the Coroners Prevention Unit for review.[12]

29. As part of their review, the CPU requested and subsequently received a statement from Dr Zina Valaydon, Gastroenterologist at Western Health.

[11] Histopathology Report of Dr Kashayar Asadi, Austin Pathology, dated 19 February 2021.

[12] The Coroners Prevention Unit (CPU) was established in 2008 to strengthen the prevention role of the coroner. The unit assists the Coroner with research in matters related to public health and safety and in relation to the formulation of prevention recommendations. The CPU also reviews medical care and treatment in cases referred by the coroner. The CPU is comprised of health professionals with training in a range of areas including medicine, nursing, public health and mental health.

Review of care

30. At the outset, the CPU noted that Mr Sozon's liver disease was severe, his prognosis was poor and it was considered unlikely that he would survive his admission. However, the CPU noted that the ascitic tap procedure being performed by junior medical staff had potential prevention implications and thus focussed their review on this aspect of Mr Sozon's care.

31. Dr Valaydon advised the Court that Dr Fan and Dr Yee were Hospital Medical Officers (**HMOs**) and were both Basic Physician Trainees. They had each successfully performed at least five supervised diagnostic taps with no complications, however there was no formal documentation of competency required by Western Health at the time of Mr Sozon's death.[13]

32. Dr Valaydon noted that the original plan was for the Gastroenterology Registrar, Dr Hartley, to supervise the procedure in a different ward. However, it was 'a very busy day' and Dr Hartley was called to deal with another issue. She instructed the HMOs to complete the procedure independently and unsupervised. Dr Valaydon further noted that this was in keeping with the Western Health Gastroenterology Unit's ascitic tap protocol[14] in place at the time of Mr Sozon's death.[15]

33. Regarding the use of the bedside ultrasound, Dr Valaydon reported that the use of ultrasound to assist with diagnostic taps was not common at Western Health and as such there was no formal training or accreditation. At the most, clinicians who had trained at other hospitals may have informally trained junior staff. The Root Cause Analysis findings confirmed that *the staff involved did not have formal ultrasonography qualifications.*

34. When the HMOs did not identify free fluid in either the right of left iliac fossae, they utilised the ultrasound to look elsewhere in the abdomen. In doing so, *they have mistaken the spleen for a 'pocket of fluid' and it is likely that the ultrasound provided false reassurance that they had located fluid.* Dr Valaydon commented that in retrospect, the absence of obvious large volume ascites should have alerted the HMOs to consider another cause of Mr Sozon's abdominal distention.[16]

[13] Statement of Dr Zina Valaydon, undated.
[14] Statement of Dr Zina Valaydon, Annexure 1: Western Health Ascitic Tap Protocol as at October 2020. The protocol included details instructions on how to perform both diagnostic and therapeutic ascitic taps.
[15] Statement of Dr Zina Valaydon, undated.
[16] Ibid.

35. The CPU advised that use of ultrasound to locate fluid was not mentioned in the ascitic tap protocol. Rather, it described the use of the 'percussion' technique[17] to localise areas of fluid. There is no evidence to suggest that the HMOs utilised this technique in line with the protocol.

36. The CPU considered that there were a number of missed opportunities in providing Mr Sozon with the appropriate medical care.

    a) Poor clinical governance that failed to ensure that there was a system of training and credentialling in place to guarantee that only appropriately trained clinicians were able to utilise bedside ultrasound for invasive procedural purposes;

    b) Absence of senior supervision due to competing clinical demands;

    c) Inexperienced junior medical staff utilising equipment they were not trained to operate, resulting in the misinterpretation of images of the spleen as a pocket of free fluid. It is possible that the ultrasound machine settings were incorrectly set; and

    d) Inexperienced junior medical staff who did not appreciate that the significance of a lack of ascites on ultrasound should have led them to consider other causes for the patient's symptom of abdominal distension.

Root cause analysis

37. Mr Sozon's death was reported to Safer Care Victoria (**SCV**) as a sentinel event[18] and a Root Cause Analysis (**RCA**) was conducted. The RCA identified the following issues:

    a) Staffing: The Gastroenterology Registrar would usually have supervised the junior staff but was busy with competing demands. The previous experience of the HMO's in performing ascitic taps influenced the decision to allow them to do so unsupervised.

[17] Tapping on the abdomen to locate areas of fluid, which have a dull 'percussion note' compared to areas of gas or bowel which are 'resonant'. Percussion is a clinical skill that requires a degree of practice and experience to master, and in the hands of junior staff might be anticipated to be less sensitive, especially with the detection of small amounts of fluid.

[18] The sentinel event program is a state-wide adverse incident reporting and investigation program run by SCV in both public and private health services. Incidents deemed sentinel events are investigated by way of a formal process (Root Cause Analysis) with a panel member external to the health service recommended by SCV. The report is then submitted to the SCA for feedback.

b) Procedure competency: There was no clear guideline relating to this. The staff involved did not have any formal ultrasonography qualifications. The patient would have benefitted from the involvement of radiologist.

c) The use of ultrasound guidance is not routine for bedside procedures and highlighted the inability to store and retrospectively review images obtained at the bedside.

d) Clinical care: This was a complex relatively young patient with a terminal prognosis, in a complex social situation in the midst of pandemic lockdown. The RCA found that *additional support during this period may have more proactively supported modification of clinical care in line with the patient's poor prognosis*.

e) Altered MET criteria for days at a time meant that Mr Sozon did not have prompts for specific limitations to care in the setting of ongoing deterioration.

38. In response to issue (c), the CPU commented that ultrasound equipment typically used for bedside examinations has a standard capacity to label and store images for review. This is a simple process that would be taught when familiarising staff with the ultrasound machine and should not represent an impediment to the safe use of ultrasound for these procedures.

39. The CPU interpreted the finding regarding the issue of clinical care to mean an earlier palliative approach, where the diagnosis of SBP would not have been sought and the procedure not performed.

Restorative measures

40. The recommendations made by the RCA were as follows:[19]

a) Development of an organisational procedure to guide the safe performance of Ascitic Tap procedures.

b) Development of an Ascitic Tap competency framework.

c) Promote referral to specialist teams (such as palliative care services) to ensure appropriate patient management.

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41. Dr Valaydon advised that Western Health had either implemented or were in the process of implementing all three recommendations.

42. Dr Valaydon further advised that since Mr Sozon's death, Western Health have implemented a policy for logbook recording of therapeutic and diagnostic taps, and the number of supervised therapeutic taps required to be performed to be considered competent has been increased to 10.

43. In addition to this, Western Health guidelines have been changed so that ascitic taps above the level of the umbilicus should not be attempted by HMOs, but rather by the advanced trainee in gastroenterology or by a radiologist. Further, Western Health guidelines have been clarified to confirm that bedside ultrasounds should not be used for diagnostic ascitic taps and should only be used by trained radiology staff in the radiology department.

44. However, the CPU noted that HMOs and other clinicians are still permitted to attempt diagnostic taps utilising the 'percussion' technique to localise fluid. The CPU suggests that instead, competent use of ultrasound is likely to improve safety by ensuring that any dullness (that is, fluid) localised by percussion is confirmed to be fluid by ultrasound. A spleen would also be dull to percussion and without ultrasound confirmation, the same situation as has occurred in the case of Mr Sozon may occur again. Thus, the decision of Western Health that that ultrasound should not be used in diagnostic taps may be too severe of a preventative measure and have the opposite effect than intended.

45. It is the view of the CPU that internal training and credentialling would be generally sufficient to undertake specific and focussed procedures, such as confirming and localising the presence of free fluid in the abdomen. Similar focussed training and credentialling exists for tasks such as ultrasound assisted IV insertion and could be applied for ascitic taps. Implementing such training at Western Health would be in line with the recommendation of SCV *that the use of ultrasound guidance should be restricted to those <u>credentialed</u> in its use* (emphasis added).

RECOMMENDATIONS

Pursuant to section 72(2) of the Coroners Act 2008, I make the following recommendation connected with the death:

1. With the aim of preventing like deaths and promoting public health and safety, I recommend that Western Health develop a formal internal training and credentialling system regarding

the use of bedside ultrasound for ascitic taps so that the technology can be used by clinicians other than trained radiology staff where necessary and appropriate.

FINDINGS AND CONCLUSION

The standard of proof for coronial findings of fact is the civil standard of proof on the balance of probabilities, with the *Briginshaw* gloss or explications.[20] Adverse findings or comments against individuals in their professional capacity, or against institutions, are not to be made with the benefit of hindsight but only on the basis of what was known or should reasonably have been known or done at the time, and only where the evidence supports a finding that they departed materially from the standards of their profession and, in so doing, caused or contributed to the death under investigation.

1. Pursuant to section 67(1) of the *Coroners Act 2008* I make the following findings:

    a) the identity of the deceased was Md Fakrul Alam Sozon, born 09 September 1987;

    b) the death occurred on 10 October 2020 at Western Health, Footscray Hospital, 160 Gordon Street, Footscray, Victoria, 3011;

    c) I accept and adopt the medical cause of death as ascribed by Dr Brian Beer and find that Md Fakrul Alam Sozon died from haemoperitoneum secondary to a lacerated spleen as a result of peritoneal fluid tap procedure on a background of liver failure with veno-occlusive liver disease.

2. Having considered the evidence before me, I find that the death of Md Fakrul Alam Sozon represents a significant failure of clinical governance on the part of Western Health, both in allowing two junior doctors to perform a procedure unsupervised without any accreditation procedures in place, and by allowing staff to utilise ultrasound to make clinical decisions without ensuring staff had basic competency in its use.

3. AND, given Md Fakrul Alam Sozon's natural disease progression and extremely poor prognosis, whilst I find that opportunities were missed to afford him appropriate care, I am unable to find that his death was preventable.

[20] *Briginshaw v Briginshaw* (1938) 60 CLR 336 at 362-363: 'The seriousness of an allegation made, the inherent unlikelihood of an occurrence of a given description, or the gravity of the consequences flowing from a particular finding, are considerations which must affect the answer to the question whether the issues had been proved to the reasonable satisfaction of the tribunal. In such matters "reasonable satisfaction" should not be produced by inexact proofs, indefinite testimony, or indirect inferences…'.

4. AND FURTHER, I make no adverse finding with regard to the actions of Dr Fan and Dr Yee and find that they acted under instruction from a senior medical officer and took appropriate action upon identifying the failure of the procedure.

5. Pursuant to section 73(1) of the Act, I order that this finding be published on the Coroners Court of Victoria website in accordance with the rules.

I convey my sincere condolences to Mr Sozon's family for their loss.

I direct that a copy of this finding be provided to the following:

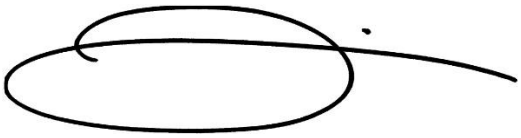
Akrite Latif, Senior Next of Kin

Western Health

Safer Care Victoria

Senior Constable Brendan Hellyer, Coroner's Investigator

Signature:



AUDREY JAMIESON

CORONER

Date: 14 August 2023

NOTE: Under section 83 of the ***Coroners Act 2008*** ('the Act'), a person with sufficient interest in an investigation may appeal to the Trial Division of the Supreme Court against the findings of a coroner in respect of a death after an investigation. An appeal must be made within 6 months after the day on which the determination is made, unless the Supreme Court grants leave to appeal out of time under section 86 of the Act.