IN THE CORONERS COURT
OF VICTORIA
AT MELBOURNE

**COR 2023 001072**

**FINDING INTO DEATH WITHOUT INQUEST**

*Form 38 Rule 63(2)*

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

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| Findings of: | AUDREY JAMIESON, CORONER |
| Deceased: | Chloe Amy Abigail Moore |
| Date of birth: | 19 October 2021 |
| Date of death: | 25 February 2023 |
| Cause of death: | 1(a) Head injuries sustained in a motor vehicle incident |
| Place of death: | Northeast Health Wangaratta Hospital, 35-47 Green Street, Wangaratta, Victoria, 3677 |
| Keywords: | Child death, driveway, low speed vehicle runover |

## INTRODUCTION

1. On 25 February 2023, Chloe Amy Abigail Moore (**Chloe**) was 16 months old when she died from head injuries that she sustained when she was struck by a car at a low speed in the driveway at her home. At the time of her death, Chloe lived on a 400-acre property in Springhurst with her parents, Jason Moore (**Mr Moore**) and Joanne Moore (**Ms Moore**), and elder brother.

Background

2. The Springhurst property was under construction by the Moore family. At the time, there were two large buildings on the property, caravans and sheds. By all accounts the property was in disarray, with *'piles of stuff inside and outside the sheds'.* According to her grandmother, Chloe used to *'play between the sheds'*, however, Mr Moore stated she had never hidden amongst the scattered items.

3. Various family members recounted that Chloe loved Mr Moore – when she saw him, she would *'run at him'.* She is fondly remembered as a *'wonderful little girl who loved her father and she was what made him happiest'.*

## THE CORONIAL INVESTIGATION

4. Chloe'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. Victoria Police assigned an officer to be the Coroner's Investigator for the investigation of Chloe's death. The Coroner's Investigator conducted inquiries on my behalf, including taking

statements from witnesses – such as family, the forensic pathologist, treating clinicians and investigating officers – and submitted a coronial brief of evidence.

8. This finding draws on the totality of the coronial investigation into the death of Chloe Amy Abigail Moore 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]

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

### Circumstances in which the death occurred

9. On 5 February 2023, at approximately 9:30am, Mr Moore was unloading materials from the tray of his utility vehicle (**the vehicle**). He believed that Chloe was playing about ten to twenty metres away, near to where Ms Moore was hanging laundry on the clothesline.

10. Mr Moore checked for toys and other items nearby, re-entered his vehicle and commenced reversing down the driveway. When reversing, he felt a thump and exited the vehicle.

11. Mr Moore discovered Chloe underneath the vehicle and observed her to be unresponsive.

12. Mr Moore alerted Ms Moore. The couple carried Chloe to Ms Moore's vehicle and drove to Wangaratta Base Hospital. Mr and Ms Moore did not have their mobile phones with them at the time and were unable to contact emergency services, or to alert the hospital of their imminent arrival. The couple believed they would arrive at the hospital quicker than if they waited for an ambulance to arrive at their rural property. During the drive, Mr Moore believed he saw Chloe breathing at one stage, however, blood began exuding from her nose and mouth.

13. At 10:00am, the Moores arrived at Wangaratta Base Hospital. Medical practitioners immediately assessed Chloe and commenced cardiopulmonary resuscitation (**CPR**), which was maintained for approximately 35 minutes. Unfortunately, Chloe was unable to be revived and was declared deceased at 10:35am.

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

**Identity of the deceased**

14. On 25 February 2023, Chloe Amy Abigail Moore, born 19 October 2021, was visually identified by her mother, Joanne Moore, who completed a Statement of Identification to this effect.

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

**Medical cause of death**

16. Forensic Pathologist Dr Chong Zhou (**Dr Zhou**) from the Victorian Institute of Forensic Medicine (**VIFM**), conducted an examination on the body of Chloe Moore on 27 February 2023. Dr Zhou considered the Victoria Police Report of Death for the Coroner (**Form 83**), post-mortem radiology including a skeletal scan and computed tomography (**CT**) scan, and medical records and provided a written report of her findings dated 12 April 2023.

17. The post-mortem examination revealed multiple indicators of medical intervention consistent with treatment administered at Wangaratta Base Hospital. The post-mortem CT scan was sent to the Royal Children's Hospital for review, and who provided a report identifying multiple skull fractures and rib fractures. Also identified was intracranial haemorrhage, pneumocephalus and oedema of the brain.

18. Toxicological analysis of post-mortem samples did not identify the presence of any alcohol or any commons drugs or poisons.

19. Dr Zhou provided an opinion that the medical cause of death was 1 (a) HEAD INJURIES SUSTAINED IN A MOTOR VEHICLE INCIDENT.

**INVESTIGATION BY VICTORIA POLICE**

20. Victoria Police were alerted to Chloe's death by medical practitioners at the Wangaratta Base Hospital. Responding members attended the hospital and spoke to Mr and Ms Moore who were *'visibly distressed'.* Mr Moore provided a blood sample which did not detect the presence of alcohol or other common drugs.

21. Responding members attended the Moore residence and undertook a brief inspection of Mr Moore's vehicle. Upon their arrival, the vehicle's engine was still running, and the transmission had been put in 'neutral'. There was loud music playing from within the vehicle's

cabin, and a nearby generator which was also creating noise. It is believed these noises were present at the time of the incident.

22. Victoria Police members inspected the vehicle and found it to be functioning as expected, including that the brake pedal operated correctly on multiple occasions. The vehicle did not feature a reversing camera or reversing sensors. According to the members, in the cabin was a rear-view mirror, visibility in the mirror is somewhat poor and *'does not show the ground in close proximity to the vehicle'.*

23. Following their investigation, Victoria Police did not charge Mr Moore with any offences in relation to Chloe's death.

## THE PREVALENCE OF LOW SPEED RUNOVER INCIDENTS

24. The circumstances of Chloe's death are unfortunately not uncommon. To better understand the frequency, and to identify corresponding prevention opportunities, I sought the assistance of the Coroners Prevention Unit (**CPU**)[2] to provide me with data on fatalities of children aged 0 to 14 years who died as a result of being struck by vehicles in low speed runovers, such as in driveways.[3]

Coroners Prevention Unit

25. The CPU identified 25 fatalities between the years of 2012 and 2023, including Chloe. The highest number of deaths occurred in children aged between 1 and 5 years, with the majority of these being children aged 1. The CPU identified a range of vehicles including sedans, utilities, SUVs and vans were involved, with larger vehicles (e.g. SUV's and large utility vehicles) being overrepresented. Unfortunately, in 2023 there was a spike in low speed runover deaths in Victoria, with 6 children tragically losing their lives, including Chloe.

26. The CPU further advised that from 1 November 2025, a new standard, entitled *'Australian Design Rule 108/00'*, will mandate at least two reversing sensors[4] on all varieties of light,

[2] 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.

[3] Low speed runovers that occurred in other areas such as carparks and caravan parks were included in this analysis as these spaces present the same safety risks as driveways, and therefore were considered relevant for prevention purposes.

[4] Reversing sensors are to include motion sensors, reversing cameras or a vibration alerting system.

medium and heavy vehicles, whether they be for domestic or commercial use.[5] While I acknowledge this to be a promising initiative, the standard will apply only to new vehicles and will not require for pre-existing vehicles to be retrofitted with such technologies. Current estimates demonstrate that the average age of registered passenger vehicles within Victoria is 10.98 years, and that this number is increasing.[6] Whilst this is slightly lower than the national average of 11.2 years, it indicates that it may be some time before all Victorian vehicles have such safety measures.

27. Given that the majority of identified fatalities of this kind occurred in individuals of 1 years of age, their short stature must be considered. It remains uncertain whether the technologies required under the new standard would be able to detect a small child's presence in all positions around a vehicle.

The work of Kidsafe Victoria

28. The CPU also alerted me to the work of Kidsafe Victoria, who have produced a multitude of resources on driveway safety including *'A Parent's Guide to Kidsafe Roads'* (**the Guide**). The Guide recommends that parents or caregivers always supervise children around cars, driveways and carparks, treat the driveway like a road and create a safe play area for children away from garages and driveways. It recognises that while reversing sensors and cameras can assist, they should never be relied upon on their own. Parents or caregivers should always walk around the vehicle before getting into the vehicle to check there are no children around and wave goodbye from a safe place away from the driveway.

29. In late 2023, Kidsafe Victoria received additional funding from the Transport Accident Commission to continue their statewide driveway safety community awareness campaign. As part of the campaign, Kidsafe Victoria relayed to the public, messages directly from the parents of children killed in driveway incidents and means to mitigate risks of the same. The Kidsafe Victoria annual report of 2023/24 estimated that their public safety messages had reached over 1,000,000 people through radio advertising and exposure to over 16,000,000 through advertising in public spaces and many more through television program appearances.

[5] Assistant Minister for Infrastructure and Transport, "Mandating reversing vehicle aids to save lives on and around Australian roads", https://minister.infrastructure.gov.au/brown/media-release/mandating-reversing-vehicle-aids-save-lives-and-around-australian-roads#:~:text=The%20new%20standard%2C%20called%20Australian,models%20from%201%20November%202025.

[6] Bureau of Infrastructure, Transport, Regional Development, Communication of the Arts, "Road Vehicles, Australia, January 2024", https://www.bitre.gov.au/publications/2024/road-vehicles-australia-january-2024.

30. Additionally, following a coronial recommendation,[7] Kidsafe Victoria is preparing to release Victoria's first ever *'Low Speed Vehicle Runover Prevention Strategy'* (**the Strategy**).[8] The Strategy provides a background into low speed incidents, identifies key risk factors, and establishes a framework for the development and implementation of vehicle safety initiatives including advocacy, awareness raising and education. The development of the strategy was supported by the Transport Accident Commission Road Safety Grant Program.

31. The Strategy, which the Court understands is to be released on 5 December 2024, emphasises key data points including the alarming statistic that there are 41 children killed or injured in Victoria annually from low speed runover incidents. The majority of these incidents occur while the driver is returning home, repositioning their vehicle, or leaving the home.

32. The Strategy adopts a three-pronged approach and identifies vehicle design, property design and human factors as *'focus areas'* to curtail low speed runover incidents. With respect to vehicle safety, Kidsafe Victoria seeks to develop a 'safe family car' category with the Australasian New Car Assessment Program (**ANCAP**) and Used Care Safety Ratings (**USCR**). This category would assist families when evaluating the safety features of a family vehicles and considers factors including Autonomous Emergency Braking (**AEB**), forward and reversing technologies and 360° visibility.

33. Kidsafe Victoria seeks to develop guidelines to improve the safety of driveway design. Referencing interstate and international precedents, the Strategy identifies that *'improving driveway safety as a design level is a longer-term initiative'* and can be achieved through small changes such as sightlines in the driveway and distance from childrens' play areas.

34. I commend Kidsafe Victoria and the Transport Accident Commission for the development of the Strategy, and for their continued efforts to reduce low speed runover incidents. I sincerely hope that the Strategy is fruitful, and that Victoria will see a reduction in these tragic deaths.

## COMMENTS

Pursuant to section 67(3) of the Act, I make the following comments connected with the death.

[7] See the recommendation made by then-Coroner Bracken contained in the Finding without Inquest into the Death of Set Haddow (COR 2019 000504) signed 28 January 2021. Accessible at: https://www.coronerscourt.vic.gov.au/sites/default/files/2021-04/SethJamesHaddow_050419.pdf.

[8] Kidsafe Victoria, '*Low Speed Runover Prevention Strategy'* accessible at: Low-Speed-Vehicle-Runover-Prevention-Strategy-2024_FINAL-1.pdf

1. The circumstances of Chloe's tragic death, brings into focus the importance of driveway safety particularly in families with young children. The risks of children in driveways, and on roadways in general, is not unknown to parents, however, their small size can often prevent drivers from knowing of their presence until it is too late.

2. The forthcoming requirement for new vehicles to be fitted with reversing sensors and/or cameras will hopefully aid to reduce the frequency of these deaths. However, I also acknowledge the risk that drivers may become blasé and become excessively reliant on these technologies. It is therefore imperative that these standards are combined, so as to magnify their effect, with public education on the danger of low speed runovers, particularly in domestic settings.

3. It is encouraging that public awareness is being piqued by the joint and concerted efforts of multiple organisations including the Transport Accident Commission and Kidsafe Victoria. I sincerely hope that Kidsafe Victoria's new campaign, *'Low Speed Runover Prevention Strategy'* and their continued efforts to educate on and mitigate these incidents will contribute towards a reduction of these tragic deaths.

**FINDINGS AND CONCLUSION**

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

   a) the identity of the deceased was Chloe Amy Abigail Moore, born 19 October 2021;

   b) the death occurred on 25 February 2023 at Northeast Health Wangaratta Hospital, 35-47 Green Street, Wangaratta, Victoria, 3677; and,

   c) I accept and adopt the medical cause of death as ascribed by Dr Chong Zhou and find that Chloe Amy Abigail Moore died due to head injuries that she sustained when struck by a motor vehicle.

2. AND I find that Chloe Amy Abigail Moore's death occurred due to a tragic accident. It remains unclear how she came to be behind the vehicle, however, there were many factors including obstructed vision and loud noises which prevented Mr Moore from being aware of her presence.

3. AND I have considered that emergency services were not contacted prior to the Moore family arriving at Wangaratta Base Hospital. While emergency responders may have been able to

provide over-the-phone advise to Mr and Ms Moore at this time, I do not find that such contact would have prevented Chloe Amy Abigail Moore's death.

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

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

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

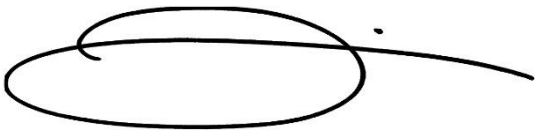
Joanne and Jason Moore, Senior Next of Kin

Transport Accident Commission

Kidsafe Victoria

Senior Constable Russell Iliff, Coroner's Investigator

Signature:




AUDREY JAMIESON

CORONER

Date: 4 December 2024

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.