IN THE CORONERS COURT
OF VICTORIA
AT MELBOURNE

**COR 2022 006158**

# FINDING INTO DEATH WITHOUT INQUEST

*Form 38 Rule 63(2)*

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

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| Findings of: | Coroner Leveasque Peterson |
| Deceased: | Gwyn Pugh |
| Date of birth: | 9 September 1959 |
| Date of death: | 26 October 2022 |
| Cause of death: | 1(a) Incised injuries to the neck and upper limbs |
| Place of death: | 2 Bounty Court, Coronet Bay, Victoria, 3984 |
| Keywords: | Chronic Traumatic Encephalopathy (CTE) |

## INTRODUCTION

1. On 26 October 2022, Gwyn Pugh was 63 years old when he was located deceased as a result of self-inflicted injuries in the garage of his home.

2. At the time of his death, Mr Pugh lived with his de-facto partner, Joan Hoober, in Coronet Bay, Victoria. Mr Pugh was a carpenter by trade. However, in the period leading to his death, he worked in the heating and tile shop which was owned by his partner, Ms Hoober.

3. In his early life, Mr Pugh played Australian rules football. According to anecdotal information received by the Court, Mr Pugh played for Wonthaggi Blues and was nominated multiple times as the League Best and Fairest. Mr Pugh reportedly suffered a number of head knocks during his playing career.

4. Mr Pugh had a longstanding history of bipolar affective disorder. From as early as 2006 until his death, he experienced episodes of severe depression requiring inpatient treatment, including at Ramsay Clinic Albert Road in 2006 and Latrobe Regional Hospital Flynn Unit in 2014, 2015, 2021 and 2022.

5. Mr Pugh also had a history of self-harm and suicidal ideation, including at least one previous suicide attempt in 2021 in which Mr Pugh had attempted to walk in front of an oncoming car.

## THE CORONIAL INVESTIGATION

6. Gwyn'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.

7. 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.

8. 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.

9. Victoria Police assigned an officer, First Constable Stewart Sawers, to be the Coroner's Investigator for the investigation of Gwyn'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.

10. This finding draws on the totality of the coronial investigation into the death of Gwyn Pugh including evidence contained in the coronial brief.

11. 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.

12. In particular, I note that Mr Pugh's daughter has provided an extensive statement which sets out many details of his life, including observations regarding family relationships and possible stressors impacting his mental health. I am grateful for this statement which offers valuable context in understanding the myriad of factors which may have contributed to Mr Pugh's state of mind at the relevant time of his death.

13. However, noting the limits and objectives of the coronial jurisdiction, I have determined that my finding will focus more narrowly on the mental health care received by Mr Pugh in the period leading to his death and the immediate circumstances prior to his discovery.

14. 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

15. Mr Pugh was most recently admitted for inpatient treatment at Latrobe Regional Hospital from 19 April 2022 until 14 May 2022, in response to a bipolar affective disorder type 1 depressive episode. Mr Pugh received antidepressant treatment and a course of electroconvulsive treatment (**ECT**). He was discharged for community mental health follow up.

16. On 15 June 2022, Mr Pugh attended his treating psychiatrist, Dr Hugh Lowy, at Latrobe Community Mental Health Services, South West Gippsland. Mr Pugh stated that his

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[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.

depression remained unchanged and expressed concern about the future but denied thoughts of self-harm or suicide. Dr Lowy formed an impression that Mr Pugh remained "depressed, moderately severe". Mr Lowy discussed the possibility of a referral to a clinical psychologist, left his medication unchanged, and scheduled a review for 29 July 2022.

17. On 14 July 2022, Mr Pugh attended a General Practitioner at South Gippsland Family Medicine and sought repeat medication as prescribed by the hospital, namely mirtazapine, olanzapine, and Valium. Mr Pugh did not re-attend his General Practitioner after this date.

18. On 29 July 2022, Mr Pugh cancelled his scheduled appointment and all subsequent appointments with Dr Lowy, reporting they were "not helpful". After this time, he continued to engage with Recovery Clinician, Mr Gary D'Vaz, through phone conversations and meetings at Ms Hoober Wonthaggi business.

19. Mr D'Vaz stated that in August 2022, Mr Pugh reported that he had "weaned" off all medication. He reported using occasional diazepam for anxiety as prescribed by his General Practitioner. He also indicated he was seeing a General Practitioner in Cowes who had prescribed him with Cannabis Oil.

20. According to Ms Hoober, Mr Pugh "believed that the medications were not working for him and stopped taking them as he had been prescribed cannabis oil which he had been taking for approximately 6 to 8 weeks" at the time of his death.

21. On 13 September 2022, Mr D'Vaz again visited their business and spoke with Ms Hoober, who indicated that Mr Pugh was not present as he was at home. Ms Hoober reported that Mr Pugh was continuing to do well and was seeing his General Practitioner at Cowes.

22. In a statement to the court, Mr D'Vaz explained that Mr Pugh was discharged after this visit: "Joan agreed to Gwyn's discharge from Wonthaggi Community Mental Health Service and would self-refer via GP if needed in the future. Discharge letters written to Mr Gwyn Pugh and a letter was sent to the General Practitioner."

23. Ms Hoober stated that in the period leading to his death, Mr Pugh's mood had been "quite good". They had recently returned from a 10 day trip to Brisbane and his mood had reportedly been positive until the night prior to his death.

24. However, on 26 October 2022, Mr Pugh woke up and said that he “wasn’t feeling mentally well” and was planning to stay in bed “a little longer”. According to Ms Hoober, this was not unusual and so she went downstairs and “went about [her] business”.

25. At approximately 11.30am that morning, Ms Hoober went back upstairs and noted that Mr Pugh was still in bed. She asked him what he was planning to do for the rest of the day, and he said that he was going to stay in bed a little longer. Ms Hoober then left the room to have a shower and wash her hair.

26. After Ms Hoober finished her shower, she saw that Mr Pugh was no longer in bed. She stated that she was pleased as she assumed that he had gotten up to start the day.

27. After going downstairs, Ms Hoober observed that Mr Pugh was not present and had not touched his medication that she had left for him on the kitchen bench. She called out for him and upon receiving no response, commenced a search of the house.

28. After checking a few rooms inside of the house, she went out the laundry door which opens into the backyard. At this stage, she observed that there was some blood on the ground.

29. She subsequently followed a trail of blood towards the garage/carport area, where she discovered Mr Pugh was lying face down in a pool a blood near the roller door.

30. Ms Hoober immediately went inside to collect her phone and a towel and call Triple Zero (000). At the instruction of the call operator, Ms Hoober rolled Mr Pugh onto his back and stated that at this point, she “immediately knew he was dead”.

31. At the call operator’s direction, she commenced compressions and continued for approximately 10 minutes. Ms Hooper subsequently ceased her efforts at CPR, stating this was “because [she] knew he was dead”.

32. Emergency services attended shortly afterwards. Upon arrival, Ambulance Victoria paramedics observed Mr Pugh’s body lying in a supine position on the concrete ground unmoving, with visible wounds to the inside of both elbows. A folded pink towel was placed over his neck. There was a large pool of wet blood and a trail of blood spots leading between the parked cars in the garage and into the backyard area. A large silver carving type knife lay on the ground on the left side of the body.

33. On examination, Ambulance Victoria paramedics identified a large and gaping laceration on the inside of each of his elbows (anti cubital fossa area), down to the bone. Upon removal of

the towel, paramedics also discovered a very large and deep cut to the throat area which was gaping open. At 12.38pm, Mr Pugh was confirmed deceased at the scene.

34. Victoria Police also attended the scene and commenced an investigation.

35. During this investigation, Victoria Police did not identify any evidence of suspicious circumstances or involvement of any third party.

**Identity of the deceased**

36. On 26 October 2022, Gwyn Pugh, born 9 September 1959, was visually identified by his de facto partner, Joan Hoober.

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

**Medical cause of death**

<u>Post mortem examination</u>

38. On 27 October 2022, Forensic Pathologist Dr Melanie Archer from the Victorian Institute of Forensic Medicine (**VIFM**) conducted an external examination and reviewed a post mortem CT scan and the Victoria Police Report of Death (Form 83). Dr Archer provided a written report of her findings dated 7 November 2022.

39. The post mortem CT scan showed subcutaneous air in the anterior neck, with an incised injury to the larynx, with appearance of damage to the laryngeal cartilage. There was a small amount of air in the arteries of the aorta, with air also in the common carotid and the vertebral arteries. The air was thought to be originating from severed small branches in the region of the neck wound. There was no breach of the common carotids or bifurcation.

40. The external examination showed significant injuries to the upper limbs and the beck which also identified visible vascular injury (both median cubital veins) and the left external jugular vein. There was injury to the larynx but no demonstration of direct airways penetration (although airways instability might be expected from this injury).

41. Toxicological analysis identified diazepam, nordiazepam and temazepam. No ethanol (alcohol) was detected.

42. Dr Archer commented that the injuries identified were “sufficient to cause death”.

43. She also noted that the injuries were located “in sites of election” that were “anatomically accessible to the deceased”, meaning they may be chosen for self-inflicted injury due to the proximity of major blood vessels.

44. Dr Archer stated that the mechanism of death was exsanguination, meaning bleeding of an excessive amount of the circulating blood volume.

45. Taking into account all available information, she provided an opinion that a reasonable formulation for the cause of death was *‘1(a) Incised injuries to the neck and upper limbs.’*

46. I accept and adopt Dr Archer’s opinion in this regard.

47. With family consent, Mr Pugh’s brain was donated to the Australian Sports Brain Bank in response to information that during his early life, he had sustained head injuries resulting in concussion while playing Australian Rules Football.

<u>Neuropathology Report of the Australian Sports Brain Bank</u>

48. Associate Professor Michael Buckland of the Neuropathology Laboratory at the Royal Prince Alfred Hospital conducted an examination of Mr Pugh’s brain and provided a report of his findings dated 9 February 2023.

49. In summary, the report detailed the following findings:

    a) High-stage (severe) Chronic Traumatic Encephalopathy (**CTE**) pathology was present, as defined by current consensus diagnostic criteria. This equates to stage 3 (of 4) pathology in the McKee staging system.

    b) An old infarct (stroke) was seen in left occipital cortex. It was noted that this may, or may not, have impacted on Mr Pugh’s vision.

    c) Ageing-related tau astrogliopathy (**ARTAG**) was present. It was noted that this tauastrogliopathy is typically seen in the elderly and its finding in someone of this age is unusual. Currently, the relationship between ARTAG and CTE is poorly understood and is the subject of active investigation.

    d) Low level changes of Alzheimer’s disease was present (A1, B1, C1). It was commented that this level of Alzheimer’s disease neuropathologic change (**ADNC**) is unlikely have significant contributed to Mr Pugh’s clinical symptoms.

50. In context, Associate Professor Buckland noted that following a study of the outcomes emerging from 21 brain examinations conducted during the first three years of the Australian Sports Brain Bank, 12 of 21 brains examined had CTE pathology. This included eight of 11 brains donated by professional rugby and Australian Rules football players. Of the 12 donors with CTE, six (50%) died by suicide.

## SPORTS RELATED CONCUSSION, REPETITIVE HEAD TRAUMA AND CTE

51. In the 2023 inquest into the death of Shane Tuck (COR 2020 3895), Judge John Cain conducted extensive investigations regarding the connection between head injuries sustained during sport and the diagnosis of CTE. Judge Cain also considered prevention opportunities to both limit the exposure to, and impacts of, head injuries sustained in sport.

52. In summarising key research regarding sports related concussion, repetitive head trauma and CTE, Judge Cain provided as follows:

> *92. Broadly speaking, CTE refers to progressive neurodegeneration triggered by repeated experiences of head trauma, culminating in chronic cognitive and neuropsychiatric symptoms.*[2]
>
> *93. The current neurological diagnosis of CTE is characterised by evidence of patchy distributions of hyperphosphorylated tau deposits in neurons and glia. Tau deposits are commonly found in perivascular locations and distributed towards cortical sulci.*[3] *The neurofibrillary tangles commonly associated with CTE and are often found to be a hallmark of Alzheimer's disease and related to neurodegenerative disorders.*
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> *94. CTE cannot be diagnosed during life and can only be diagnosed with certainty by a post-mortem neuropathological examination of the brain using special immunohistochemical stains for the protein tau. There are, however, clinical features that predict with a very significant degree of sensitivity the presence of CTE in the living and are used by clinicians to manage suspected CTE patients.*[4] *These include:*
>
> > *i. Substantial exposure to repetitive head trauma;*

[2] Bennett Omalu et al, 'Chronic traumatic encephalopathy, suicides and parasuicides in professional American athletes: the role of the forensic pathologist' (2010) 31(2) Am J Forensic Med Pathology 130.

[3] John D Arena et al, 'Astroglial tau pathology alone preferentially concentrates at sulcal depths in chronic traumatic encephalopathy neuropathologic change' (2020) 2(2) Brain Communications 1, 6.

[4] John D Arena et al, 'Astroglial tau pathology alone preferentially concentrates at sulcal depths in chronic traumatic encephalopathy neuropathologic change' (2020) 2(2) Brain Communications 1, 6.

ii. *The presence of core features of progressive Cognitive Impairment, especially executive function and/or episodic memory impairment;*

iii. *Delayed onset symptoms;*

iv. *Motor signs of Parkinsonism;*

v. *Psychiatric features of depression, anxiety, apathy, or paranoia; and*

vi. *Neurobehavioural Dysregulation.*

*95. The presence of three or more supportive features notably increases the likelihood of CTE and when combined with extensive exposure and dementia reaches probably CTE status.*

*96. A 2017 US study of over 1300 brains, including 600 former American footballers, demonstrated a very strong correlation between years of football played and risk of CTE. Those who had played fifteen seasons or more had ten times the risk of CTE than those who played for less than five years. The current literature supports the conclusion that CTE is not associated with the number of concussions but rather repetitive head trauma, including concussions and sub-concussive hits.*

53. In considering prevention opportunities, Judge Cain had regard to the Concussion in Sport Australia Position Statement 2019 (**2019 Position Statement**),[5] and the Concussion and Brain Health Position Statement 2023 (**2023 Position Statement**).[6] These documents provide guidance to sporting organisations in Australia about the potential long-term consequences of concussions or an accumulation of sub-concussive head impacts and emphasise the importance of risk reduction, prevention and education.

54. While it is not possible to entirely eliminate the risk of head injuries from contact sports, the 2023 Position Statement recognises that risks can be mitigated through:

a) changes to rules and regulations within sport and modification to training methods to decrease the likelihood of head trauma;

[5] Australian Institute of Sport, *Concussion in Sport Australia Position Statement* (February 2019).
[6] Australian Institute of Sport, *Concussion and Brain Health Position Statement* (February 2023).

b) personal protection equipment such as helmets, soft-shell headgear and mouthguards that influences risk of concussion; and

c) procedures intended to ensure that every concussion is treated seriously and that concussed athletes are removed from the field of play and are not returned to sport prematurely.

55. Judge Cain also considered the 2023 Consensus Statement on Concussion in Sport (6$^{th}$ edition) developed by the Concussion in Sport Group (**CISG**). The 2023 Consensus Statement recognises that implementing primary prevention of sport-related concussion across all levels of sport is a priority that can have significant public health impact and will mitigate the burden of injury, risk of recurrent injury and potential for persisting symptoms.

56. At the conclusion of the inquest regarding the death of Shane Tuck, Judge Cain made 21 recommendations pursuant to section 72(2) of the Act.

57. While I have limited information regarding the details of Mr Pugh's sporting career, I consider that it is likely there is a connection between his participation in Australian rules football and his post mortem diagnosis of CTE.

58. In this regard, I reiterate the recommendations of Judge Cain which relate to mitigating the risks of head injuries sustained in the playing of Australian rules football.

59. I have also determined to publish this finding and to provide a copy to the Wonthaggi Blues Football Club, the Australian Football League, and the Australian Football League Player's Association for information and consideration.

60. I am hopeful this may contribute to ongoing efforts to improve understandings of CTE and its diagnosis, as well as initiatives intended to mitigate and manage the occurrence of repetitive head injuries sustained while playing Australian rules football.

## FINDINGS AND CONCLUSION

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

a) the identity of the deceased was Gwyn Pugh, born 9 September 1959;

b) the death occurred on 26 October 2022 at 2 Bounty Court, Coronet Bay, Victoria, 3984, from incised injuries to the neck and upper limbs; and

c) the death occurred in the circumstances described above.

62. Having considered all of the circumstances, I am satisfied that Mr Pugh intentionally took his own life in the context of longstanding mental health difficulties, physical comorbidities and a post mortem diagnosis of CTE.

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

I order that this finding be published pursuant to section 73(1A) of the Act.

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

Joan Hoober, Senior Next of Kin

Ashley Schellekens (Pugh), Daughter

Wonthaggi Blues Football Club

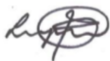
The Australian Football League

The Australian Football League Player's Association

Australian Sports Brain Bank

First Constable Stewart Sawers, Coroner's Investigator

Signature:



Coroner Leveasque Peterson

Date : 20 May 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.