

# IN THE CORONERS COURT OF VICTORIA AT MELBOURNE

COR 2021 001123

# FINDING INTO DEATH WITHOUT INQUEST

Form 38 Rule 63(2)

Section 67 of the Coroners Act 2008

Findings of:	Coroner Simon McGregor
Deceased:	John Robert Gregg
Date of birth:	10 February 1969
Date of death:	2 March 2021
Cause of death:	1(a) Hypoxic ischaemic encephalopathy and multi-organ failure 1(b) Coronary artery atherosclerosis in the setting of a scuba dive
Place of death:	Alfred Health, the Alfred Hospital, 55 Commercial Road, Melbourne, Victoria, 3004
Keywords:	Scuba diving, cardiac arrest, dive equipment, resuscitation equipment, AED

## **INTRODUCTION**

- 1. On 2 March 2021, John Robert Gregg was 52 years old when died at the Alfred Hospital. At the time of his death, John lived at 1402/60 Lorimer Street, Docklands with his de facto partner, Bindi Millson.
- 2. John was born in Western Australia and was previously married, with two adult daughters from that relationship. Both daughters have resided in Europe since around 2011, and John enjoyed regular contact with them via WhatsApp and Skype.
- 3. John's medical history included a diagnosis of bipolar affective disorder, previous alcohol dependence and pneumonia in March 2020, which required an intensive care admission. At the time of his death, his prescribed medications included quetiapine, baclofen, celebrex and thiamine. He also took paracetamol and ibuprofen as needed for back pain. Bindi states at one stage John was taking up to 20 paracetamol tablets a day, but she had warned him this was 'far too much' and believed he had cut back. John's general practitioner (GP) stated he was in good mental and physical health at the time of their last consultation by telehealth on 2 February 2021.
- 4. John had travelled widely, largely in the context of his work in management consultancy, and enjoyed fitness and water sports, including surfing and swimming. John met his partner Bindi in 2018 and they began residing together in 2019.<sup>5</sup>
- 5. On 19 January of 2021, John completed his recreational Open Water certification with 'BayPlay', a company offering dive experiences based in Portsea, Victoria. John received his Professional Association of Diving Instructors (**PADI**) certification and was looking forward to continuing diving.

<sup>&</sup>lt;sup>1</sup> Coronial Brief, statement of Bindi Millson dated 20 August 2021; Patient Health Record of John Gregg, Victoria Harbour Medical Centre, printed 18 March 2021.

<sup>&</sup>lt;sup>2</sup> Coronial Brief, Patient Health Record of John Gregg, Victoria Harbour Medical Centre, printed 18 March 2021.

<sup>&</sup>lt;sup>3</sup> Coronial Brief, statement of Bindi Millson dated 20 August 2021.

<sup>&</sup>lt;sup>4</sup> Coronial Brief, statement of Dr Marc Herington dated 27 July 2021.

<sup>&</sup>lt;sup>5</sup> Coronial Brief, statement of Bindi Millson dated 20 August 2021.

<sup>&</sup>lt;sup>6</sup> Ibid.

<sup>&</sup>lt;sup>7</sup> Coronial Brief, Attachment 2, PADI Open Water certification of John Gregg.

## THE CORONIAL INVESTIGATION

- 6. John'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 to be the Coroner's Investigator for the investigation of John'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. Section 7 of the Act provides that a coroner should liaise with other investigative authorities, official bodies or statutory officers to avoid unnecessary duplication of inquiries and investigations and to expedite the investigation of deaths. WorkSafe Victoria (WorkSafe) also conducted an investigation and provided a copy of the WorkSafe hand-up brief prepared in contemplation of proceedings in the Magistrates' Court of Victoria against Academy of Scuba Pty Ltd and Redboats.com.au Pty Ltd. I note that no such proceedings eventuated.
- 11. This finding draws on the totality of the coronial investigation into the death of John Robert Gregg including evidence contained in the WorkSafe brief and the coronial brief. While 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.<sup>8</sup>

3

<sup>&</sup>lt;sup>8</sup> 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

12. In considering the issues associated with this finding, I have been mindful of John's human rights to dignity and wellbeing, as espoused in the *Charter of Human Rights and Responsibilities Act 2006*, in particular sections 8, 9 and 10.

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

# Circumstances in which the death occurred, pursuant to section 67(1)(c) of the Act

- 13. John booked to complete his recreational Advanced Open Water course with the Academy of Scuba based in Rye, Victoria, on 13 and 14 February 2021. Due to COVID-19 restrictions, this was re-scheduled for 27 and 28 February 2021. John attended on Saturday the 27th, with Bindi observing for the day. He picked up two cylinders of air from the Academy of Scuba for use throughout the day. 10
- 14. Prior to any diving, John was required to complete a medical statement. John answered 'no' to all questions on the questionnaire, before signing and dating it.<sup>11</sup> Although John had medical history to declare, he did not declare this as part of the questionnaire.
- 15. On 27 February 2021, John was diving with eleven students and four instructors, split into two groups. John was grouped with instructor Alan Braithwaite and dive master Chuan Leng Lim.
- 16. The first dive, at approximately 11:00am, was a shallow shore dive conducted at the Rye pier. The aim of this dive was to allow instructors to assess the students' buoyancy and overall dive abilities. There is some suggestion from Lim and other students that during the first dive, John was not controlling his buoyancy well, with one student stating he 'got worse as the day went on'. Conversely, instructor Braithwaite states he was satisfied at the conclusion of this dive that each diver had good control of their buoyancy. The PADI incident report describes John as being able to hold trim in the water and hover without sculling or kicking.

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

<sup>&</sup>lt;sup>9</sup> Coronial Brief, statement of Bindi Millson dated 20 August 2021.

<sup>&</sup>lt;sup>10</sup> Ibid.

<sup>&</sup>lt;sup>11</sup> Coronial Brief, PADI Medical Statement, Participant Record, dated 27 February 2021.

<sup>&</sup>lt;sup>12</sup> Coronial Brief, statement of Alan Braithwaite dated 20 August 2021.

<sup>&</sup>lt;sup>13</sup> Coronial Brief, statement of Chuan Leng Lim dated 3 March 2021; statement of Bryan Russo dated 10 March 2021; statement of Timothy Ewing dated 20 August 2021.

<sup>&</sup>lt;sup>14</sup> Coronial Brief, statement of Alan Braithwaite dated 20 August 2021.

<sup>&</sup>lt;sup>15</sup> Coronial Brief, Exhibit 10, PADI Incident Report Form completed by Alan Braithwaite, dated 1 March 2021.

- 17. A diver's buoyancy is controlled using a buoyancy control device (**BCD**). The BCD is configured to allow the diver to add or remove air from their air cylinder to this device as required, to enable them to maintain neutral buoyancy whilst in the water. There is no means to inflate a BCD at depth if there is no air remaining in the diver's cylinder, meaning a diver cannot ascend without kicking very hard and/or conducting an emergency drill whereby the diver removes his weight belt or pockets, dropping these to the sea floor, to enable an ascent.
- 18. At about 2:15 pm, the instructors and students reconvened at Portsea pier and boarded the vessel 'Red Rover', owned by a charter boat company Redboats.com.au Pty Ltd (**Redboats**). The group travelled to the Ex-HMAS Canberra Wreck, arriving at around 2:50 pm. <sup>16</sup>
- 19. The second dive was unremarkable. When John returned to the boat he seemed well, and did not appear to Bindi to be tired or out of breath.<sup>17</sup>
- 20. The third dive took place at the J4 submarine. Instructor Braithwaite gave the group a briefing detailing the profile of the dive, the skills that would be used underwater, and how long the group would be underwater. He also reinforced the need for the divers to keep an eye on their pressure gauges, as they would be consuming air more quickly because they were going deeper than before, and to maintain their buddy pairs and let instructors know when they reached 100 bar. Braithwaite ensured all students had checked their equipment and Lim completed a buddy check with John, checking his BCD, weights, regulator, air and fins, and noting the submersible pressure gauge (**SPG**) on John's air cylinder showed 200 bar, with all equipment operating correctly.<sup>18</sup>
- 21. About 17 minutes into the dive, Lim saw John in an upright position appearing to 'run' underwater. 19 Braithwaite states John was fully vertical in the water, exerting himself and struggling to maintain buoyancy. 20 John was the deepest of the group, at about 20 metres, with all students and instructors above him. 21
- 22. Instructor Lim indicated for John to inflate his BCD and observed him to be kicking, but not ascending. Lim pushed John from underneath, but he sank down again. Lim alerted

<sup>&</sup>lt;sup>16</sup> Coronial Brief, statement of Chuan Leng Lim dated 3 March 2021; statement of Alan Braithwaite dated 20 August 2021.

<sup>&</sup>lt;sup>17</sup> Coronial Brief, statement of Bindi Millson dated 20 August 2021.

<sup>&</sup>lt;sup>18</sup> Coronial Brief, statement of Alan Braithwaite dated 20 August 2021; statement of Chuan Leng Lim dated 3 March 2021

<sup>&</sup>lt;sup>19</sup> Coronial Brief, statement of Chuan Leng Lim dated 3 March 2021.

<sup>&</sup>lt;sup>20</sup> Coronial Brief, statement of Alan Braithwaite dated 20 August 2021.

<sup>&</sup>lt;sup>21</sup> Coronial Brief, statement of Chuan Leng Lim dated 3 March 2021.

Braithwaite and held John's BCD.<sup>22</sup> Braithwaite noted that John's SPG showed 40 bar remaining in his air cylinder and attempted to inflate the BCD.<sup>23</sup> It was not clear to Lim or Braithwaite that the BCD was inflating successfully from the inflator hose, and it appeared that any air that entered the BCD was not sufficient to produce positive buoyancy.<sup>24</sup>

- 23. Braithwaite describes attempting to place his own alternate air source into John's mouth, as John had spat out his own regulator, but found him unresponsive. Braithwaite immediately conducted an emergency ascent to the surface.<sup>25</sup> During ascent, Lim noticed John's regulator was not in his mouth and he appeared to have passed out.<sup>26</sup> There is no evidence that John attempted to remove his own weight belt at any stage, which would have assisted in an emergency ascent.<sup>27</sup> Divers are trained to remove their weights if an emergency ascent is required.
- 24. The BCD John wore had to be inflated orally by Braithwaite at the surface, <sup>28</sup> suggesting there was no air remaining in John's cylinder from which to fill it.
- 25. Rescue breaths were performed on John as he was removed from his dive equipment and pulled onboard the 'Red Rover'. 29 Also onboard and diving this day was witness Bryan Russo, a paramedic, who stated that at this time John as not breathing and was cyanosed in the face. He further observed that John 'looked like someone in cardiac arrest' and could find no palpable carotid pulse. 30
- 26. There was no automated external defibrillator (**AED**) on board the vessel and there was no bag valve mask, meaning John could not be provided with 100% oxygen for resuscitation.<sup>31</sup> It is apparent that the medical equipment on board the 'Red Rover' was not adequate for resuscitation of an unresponsive diver.

<sup>&</sup>lt;sup>22</sup> Ibid.

<sup>&</sup>lt;sup>23</sup> Coronial Brief, statement of Alan Braithwaite dated 20 August 2021.

<sup>&</sup>lt;sup>24</sup> Coronial Brief, statement of Chuan Leng Lim dated 3 March 2021; statement of Alan Braithwaite dated 20 August 2021.

<sup>&</sup>lt;sup>25</sup> Coronial Brief, statement of Alan Braithwaite dated 20 August 2021.

<sup>&</sup>lt;sup>26</sup> Coronial Brief, statement of Chuan Leng Lim dated 3 March 2021.

<sup>&</sup>lt;sup>27</sup> Coronial Brief, statement of Bryan Russo dated 10 March 2021; Exhibit 10, PADI Incident Report Form completed by Alan Braithwaite, dated 1 March 2021.

<sup>&</sup>lt;sup>28</sup> Coronial Brief, statement of Alan Braithwaite dated 20 August 2021.

<sup>&</sup>lt;sup>29</sup> Coronial Brief, statement of Alan Braithwaite dated 20 August 2021.

<sup>&</sup>lt;sup>30</sup> Coronial Brief, statement of Bryan Russo dated 10 March 2021.

<sup>31</sup> Ibid.

- 27. Witnesses describe making every effort to revive John and urgently deliver him to medical care. The evidence suggests that all persons involved in the rescue and recovery acted in John's best interests and did so in difficult conditions.<sup>32</sup>
- 28. Bindi called triple zero at 4.57 pm,<sup>33</sup> while Mr Russo continued cardiopulmonary resuscitation (**CPR**) until the 'Red Rover' arrived at the Queenscliff jetty at 5.16 pm.<sup>34</sup> They were met at 5:25pm by Ambulance Victoria members.<sup>35</sup> John was found to be in cardiac and respiratory arrest and was airlifted to the Alfred Hospital.<sup>36</sup>
- 29. John's condition continued to deteriorate at the Alfred Hospital over the following days. On Tuesday 2 March 2021, he was transitioned to comfort care when it became clear that he would not recover from his injuries, and he passed away the same day at 1:43 pm.<sup>37</sup>

# Identity of the deceased, pursuant to section 67(1)(a) of the Act

- 30. On 2 March 2021, John Robert Gregg, born 10 February 1969, was visually identified by his de facto partner, Bindi Millson.
- 31. Identity is not in dispute and requires no further investigation.

# Medical cause of death, pursuant to section 67(1)(b) of the Act

- 32. Forensic Pathology Fellow Dr Chong Zhou from the Victorian Institute of Forensic Medicine conducted an autopsy on 4 March 2021 and provided a written report of his findings dated 1 April 2021.
- 33. The post-mortem examination revealed severe atherosclerosis<sup>38</sup>, with severe narrowing of one of the major coronary arteries, and borderline cardiomegaly (enlarged heart). Dr Zhou explained that cardiomegaly is most commonly caused by hypertension, but may also be seen in association with ischaemic heart disease and chronic excess alcohol consumption. He further explained that a borderline enlarged heart with severe coronary artery disease may

<sup>&</sup>lt;sup>32</sup> Coronial Brief, statement of Bindi Millson dated 20 August 2021; statement of Alan Braithwaite dated 20 August 2021; statement of Bryan Russo dated 10 March 2021;

<sup>&</sup>lt;sup>33</sup> Coronial Brief, statement of Bindi Millson dated 20 August 2021;

<sup>&</sup>lt;sup>34</sup> Coronial Brief, statement of Blair Stafford dated 26 July 2021.

<sup>&</sup>lt;sup>35</sup> Coronial Brief, statement of Matthew Carew dated 5 September 2021.

<sup>&</sup>lt;sup>36</sup> Coronial Brief, statement of Matthew Carew dated 5 September 2021.

<sup>&</sup>lt;sup>37</sup> Medical Deposition completed by ICU Registrar Dr Jack Murray, Alfred Health, dated 2 March 2021.

<sup>&</sup>lt;sup>38</sup> Build-up of cholesterol and other material in the artery wall.

predispose a person to the development of a cardiac arrhythmia (abnormal heart rhythm), particularly in the setting of physical activity, which may in turn lead to cardiac arrest.

- 34. Dr Zhou also found sequelae of cardiac arrest, including hypoxic ischaemic encephalopathy (brain injury as a result of insufficient oxygen and blood flow), centrilobular necrosis of the liver and ischaemic changes within the small bowel.
- 35. Dr Zhou opined that drowning may have contributed towards death following John's incapacitation from cardiac arrhythmia, but was unable to confirm or exclude that possibility at autopsy, as there are no specific or diagnostic signs of drowning.
- 36. There was no evidence of any injuries which may have caused or contributed to death.
- 37. Toxicological analysis of ante-mortem blood samples taken upon admission to the Alfred Hospital on 27 February 2021 was found to be non-contributory.
- 38. Dr Zhou provided an opinion that the medical cause of death was:
  - a) Hypoxic ischaemic encephalopathy and multi-organ failure;
  - b) Coronary artery atherosclerosis in the setting of a scuba dive
- 39. I accept Dr Zhou's opinion.

# **FURTHER INVESTIGATIONS**

# John's dive equipment

- 40. An air test on a sample of air from the Academy of Scuba was conducted by Scuba Repairs and Service Centre on 3 May 2021. This test indicated no issues with the quality of air consumed by divers from cylinders on 27 February 2021.<sup>39</sup>
- 41. In January 2021, John purchased the diving equipment he was using on 27 February 2021 via Facebook on a website called 'Melbourne buy swap sell dive gear'. In the conversation between John and the seller, John indicated that he did not mind what condition the gear was in, as long as it was usable. <sup>40</sup> The equipment was sold on the basis that it was tested and usable, meaning that it had been cleaned and placed in a tank to ensure it had no leaks and was

<sup>&</sup>lt;sup>39</sup> Coronial Brief, Scuba Repairs and Service Centre Air Quality Report dated 3 March 2021.

<sup>&</sup>lt;sup>40</sup> Coronial Brief, Attachment 1, Correspondence regarding purchase of dive equipment, 26 January - 2 February 2021.

functioning properly. 41 No certificate of service was discussed between John and the seller, nor was one provided. 42

- 42. On 7 March 2021, John's dive equipment was located by another diver on the sea floor near the J4 Submarine. An equipment check was conducted by Sally Adams of Snorkel and Dive Safari, Altona. Ms Adams is a dive service technician certified to conduct equipment checks and carry out repairs on scuba equipment. Apart from the obvious damage to the BCD and excessive sand and grit build up from time spent unattended in the ocean, the equipment check showed it to be operating correctly. Ms Adams found a heavy resistance to gas flow from the primary regulator, meaning a large degree of inhalation effort would be required by the diver to prompt air flow through it. 44
- 43. Ms Adams also found a pressure discrepancy of 20 bar with the SPG, meaning it would read 20 bar more than was actually present in any attached cylinder. A discrepancy of 20 bar could mean that John's actual cylinder pressure was only 180 bar at the commencement of the third dive. If John's SPG reading was only 40 bar when he began to struggle, as observed by instructor Braithwaite, 45 a discrepancy of 20 bar could mean that his cylinder pressure was actually only 20 bar, which would provide approximately two minutes of breathing time at that depth with 'typical' levels of exertion. 46
- 44. In conference with Senior Constable Ellis, I was advised that SPGs can be tested against other calibrated gauges, but that even if a gauge is properly calibrated, a bump or knock can place it out of calibration. Senior Constable Ellis explained that SPGs are best used as a guide when diving, and that any dive plan should allow sufficient breathable air to comfortably finish the dive. Training and best practice is to be on the surface with 50 bar remaining to provide a suitable safety buffer for any inaccuracies in the gauge. I note this is more than John appears to have had when first assisted by Lim and Braithwaite, regardless of the gauge inaccuracy. Training, guidelines, pre-dive planning and any briefing should reflect the importance of returning to the surface with sufficient air remaining in a diver's cylinder.<sup>47</sup>

<sup>&</sup>lt;sup>41</sup> Coronial Brief, statutory declaration of Maurizio La Rocca dated 1 August 2021.

<sup>&</sup>lt;sup>42</sup> Coronial Brief, statutory declaration of Maurizio La Rocca dated 1 August 2021.

<sup>&</sup>lt;sup>43</sup> Coronial Brief, statement of Hee Man Lee dated 26 August 2021.

<sup>&</sup>lt;sup>44</sup> Coronial Brief, statement of Sally Adams dated 27 August 2021; Equipment Check Card dated 26 April 2021.

<sup>&</sup>lt;sup>45</sup> Coronial Brief, statement of Alan Braithwaite dated 20 August 2021.

<sup>&</sup>lt;sup>46</sup> Coronial Brief, Appendix 3, Diving Calculations – prepared by Leading Senior Constable Stephen Ellis; Appendix 2, ADAS Dive Supervisor, Course Notes, Chapter 5. Para 4 – Calculations.

<sup>&</sup>lt;sup>47</sup> Email from Leading Senior Constable Steve Ellis, Search and Rescue Squad, 22 July 2023.

# Worksafe investigation

- 45. Following John's death, WorkSafe conducted an investigation into the circumstances surrounding the diving incident pursuant to the *Occupational Health and Safety Act 2004* (**OHS Act**). WorkSafe investigators conducted site visits at the Academy of Scuba and Redboats, obtained witness statements, photographed safety equipment and gathered relevant documents. The WorkSafe investigation was further informed by the observations of Victoria Police and other materials obtained during the course of the concurrent police investigation. On 31 March 2023, the Coroners Court was provided with a copy of the WorkSafe brief of evidence.
- 46. As a result of their investigations, WorkSafe inspectors issued Improvement Notices to Redboats in relation to the availability of resuscitation equipment on their charter boats. Compliance with the Improve Notices could be achieved by:
  - a) provision of bag valve masks in each oxygen supply kit suitable to provide supplemental oxygen and ensuring spare supplies of single use components are available in each kit and ensuring that employees have received training in their use;<sup>48</sup> and
  - b) providing an AED on each boat for use during CPR, providing training to employees that provide first aid in the use of the AED; or undertaking a validated risk assessment that clearly identifies that this it is not reasonably practicable to provide an AED as part of CPR on Scuba Charters.<sup>49</sup>
- 47. WorkSafe subsequently confirmed that Red Boats achieved compliance with the Improvement Notice relating to bag valve masks in November 2021. The Improvement Notice relating to provision of AEDs was later cancelled under section 114 of the OHS Act in October 2021 following a request for internal review.<sup>50</sup>
- 48. The Victorian WorkCover Authority did not commence a prosecution against any party in relation to this matter.

<sup>&</sup>lt;sup>48</sup> WorkSafe Inspection Report DHR-7569; Improvement Notice WS-44193.

<sup>&</sup>lt;sup>49</sup> WorkSafe Inspection Report DHR-11166; Improvement Notice WS-44193.

<sup>&</sup>lt;sup>50</sup> Email from WorkSafe to Coroners Court of Victoria dated 12 July 2023.

# John's health status

- 49. It is clear that John's health at the time of the diving incident was a major contributor to his death. Dr Zhou's finding at autopsy that, seemingly unknown to John, he had severe coronary artery disease, means that at the time he recommenced scuba diving in early 2021, he was at significantly greater risk of cardiac arrest upon exertion.
- 50. The PADI Medical Statement provided to divers by the Academy of Scuba for completion before diving includes a medical questionnaire and information about the physical demands of diving, including that diving 'can be strenuous under certain conditions', and that a diver's 'respiratory and circulatory systems must be in good health'. It also states that persons taking medication on a regular basis should consult their doctor before participating in a diving program. The questionnaire section is prefaced by an explanation that its purpose is to 'find out if you should be examined by a doctor before participating in recreational diver training' and that '[a] positive response to a question does not necessarily disqualify you from diving'.<sup>51</sup>
- 51. John answered 'no' to all questions on the questionnaire, before signing and dating it. Accurate responses to the questionnaire would have indicated that John was in fact taking prescription medications, was over 45 years of age and currently receiving medical care, had experienced lung disease (severe pneumonia) a year earlier, experienced recurrent back problems, and had a past history of alcoholism.<sup>52</sup> Accepting that John was unaware of his coronary disease, it is nevertheless possible that disclosure of the conditions he was aware of would have prompted dive instructors to require appropriate medical clearance before allowing John to dive.
- 52. John's general practitioner stated he was not aware that John was returning to scuba diving and that, being aware of his medical history and the questions on the PADI Medical Statement document, he 'would not have provided [his] endorsement without a formal Scuba diving medical being performed by an appropriately qualified physician'.<sup>53</sup>
- 53. A recent study into compressed gas diving deaths in Australia in the period 2014 to 2018 suggests that the circumstances of John's death are sadly not unique. The study found that '[a]dvancing age, obesity and the associated cardiac disease have become increasingly prevalent in diving fatalities' and emphasised the need for 'appropriate assessment of fitness

<sup>&</sup>lt;sup>51</sup> Coronial Brief, PADI Medical Statement, Participant Record, dated 27 February 2021.

<sup>&</sup>lt;sup>52</sup> Ibid., statement of Dr Marc Herington dated 27 July 2021.

<sup>&</sup>lt;sup>53</sup> Coronial Brief, statement of Dr Marc Herington dated 27 July 2021.

to dive.<sup>54</sup> This study also cites an earlier study of scuba deaths in the period 2001-2013 which identified 'the increasing age of victims, the prevalence of pre-existing medical conditions, inexperience, a poor buddy system, and failure to ditch weights in an emergency' as key causative elements in those deaths.<sup>55</sup>

# FINDINGS AND CONCLUSION

- 54. Pursuant to section 67(1) of the *Coroners Act* 2008 I make the following findings:
  - (a) the identity of the deceased was John Robert Gregg, born 10 February 1969;
  - (b) the death occurred on 02 March 2021 at Alfred Health, the Alfred Hospital, 55 Commercial Road, Melbourne, Victoria, 3004, from hypoxic ischaemic encephalopathy and multi-organ failure; and
  - (c) the death occurred in the circumstances described above.
- 55. Having considered all of the circumstances, I am satisfied that John's death was the result of misadventure, but I cannot, even with the benefit of hindsight, reach any comfortable conclusion about whether his cardiac event preceded, or resulted from, his running out of air whilst underwater.

## RECOMMENDATIONS

- 56. Pursuant to section 72(2) of the Act, I make the following recommendations in relation to recreational diving:
  - (i) That consideration be given by Standards Australia and relevant stakeholders to amending the Australian Standards so as to require recreational dive providers to:
    - a. ensure divers under their supervision understand the medical conditions which elevate the risks associated with diving and the importance of accurate and forthright medical screening;
    - b. require all divers over 45 years of age under their supervision to complete and produce a current dive medical for all dives over 18 metres (deep dives).

.

<sup>&</sup>lt;sup>54</sup> Lippman, Lawrence, Fock, Compressed gas diving fatalities in Australian waters 2014 to 2018, Diving and Hyperbaric Medicine, Vol 53, No.2 2, June 2023.

<sup>&</sup>lt;sup>55</sup> Ibid., p.76.

- c. require all divers under their supervision to demonstrate an understanding and proficiency in emergency drills for all dives over 18 metres (deep dives), including removal of weights and buddy breathing.
- (ii) That consideration be given by Standards Australia and relevant stakeholders to amending the Australian Standards so as to require recreational dive charter operators to carry:
  - a. adequate medical equipment available at the dive site for immediate use if required. This includes oxygen resuscitation equipment. Oxygen equipment should be capable of providing a spontaneously breathing patient with an inspired oxygen concentration of 100%. The equipment should also facilitate oxygen enriched artificial ventilation of a non-breathing patient.<sup>56</sup>
  - b. an Automated External Defibrillator (AED). I note that the Australian Resuscitation Council, in their 'Guideline 9.3.2 – Resuscitation in Drowning' provides some guidance on the use of AEDs and confirms that defibrillation on a wet surface is usually not dangerous, provided there is no direct contact between the user and the individual when the shock.<sup>57</sup> I also note that PADI requires current CPR and first aid training, including AED training, to be eligible for certification as a Diversater or Instructor.<sup>58</sup>
- 57. Whilst I cannot be certain that these recommendations would have altered the outcome for John, diving is a popular and high-risk activity, so every risk that can be reasonably mitigated should be.

<sup>&</sup>lt;sup>56</sup> See also Australian/New Zealand Standard 2299.1:2015, *Occupational diving operations, Part 1: Standard operational* practice, paragraph 3.9.

<sup>57</sup> ANZCOR Guideline 9.3.2 – Resuscitation in Drowning. Australian and New Zealand Committee on Resuscitation. https://www.resus.org.nz/assets/Uploads/ANZCOR-Guideline-9.3.2-Resuscitation-in-Drowning-Nov-2021.pdf. Published November 2021.; citing FAQs: Basic Life Support (CPR). Resuscitation Council UK. https://www.resus.org.uk/home/faqs/faqs-basic-life-support-cpr. Published 2021.

<sup>&</sup>lt;sup>58</sup> PADI website. <a href="https://www.padi.com/education/professional">https://www.padi.com/education/professional</a>.

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

Pursuant to section 73(1B) 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:

Bindi Millson, Senior Next of Kin

Mary Gregg, Mother

**Chloe Gregg, Daughter** 

Julliette Gregg, Daughter

Wendy Grant, Alfred Health

Robert Tarjani, WorkSafe Victoria

**Standards Australia** 

**SCUBA Divers Federation of Victoria** 

**Diving Industry of Victoria Association Inc** 

Leading Senior Constable Stephen Ellis, Coroner's Investigator

Signature:

and I have

Coroner Simon McGregor

Date: 19 February 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.