



Department of Jobs, Skills, Industry and Regions

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Ref: BSEC-2-24-36395

Judge John Cain
State Coroner
Coroners Court of Victoria
65 Kavanagh Street
SOUTHBANK VIC 3006

Dear Judge Cain

Inquest into the death of Shane Tuck (COR 2020 003895)

I refer to your Finding delivered on 11 December 2023 following the inquest into the death of Shane Tuck.

The Finding includes recommendations that were directed to the Department of Jobs, Skills, Industry and Regions (DJSIR) and the Professional Boxing and Combat Sports Board (the Board). These recommendations have been carefully considered by DJSIR and the Board and are the subject of ongoing action that is reflected in the responses that follow.

Recommendation 14

DJSIR extend the terms of reference for the review of the Board's regulatory framework to include a review of the oversight and regulation of amateur boxing and combat sports in Victoria and that the training and education regimes in amateur and professional boxing and combat sports be aligned and standardised.

The Coroner's recommendation to extend the terms of reference for the review is supported in full. The scope of the regulatory review has been extended following delivery of the Finding to include the matters referred to in this recommendation.

The training and education regimes in professional boxing and combat sports continue to be revised and improved to raise awareness and comprehension across stakeholders of the risks, symptoms and management of traumatic brain injury including concussion. Further revisions, alignment and standardisation in amateur boxing and combat sports will be considered following completion of the regulatory review.

Recommendation 15

DJSIR and the Board work with their interstate counterparts to develop a national database of all boxers registered to fight in Australia with a view to making evidence-based processes applicable to all. Without dictating the information or data to be stored on the database, it should include to a minimum of the name, age, trainer, gender, serology results, injuries, medical suspensions and fight history of all registered boxers.

The Coroner's recommendation is supported in principle subject to resourcing and involvement of interstate counterparts. DJSIR has written to the Australian Sports Commission to bring the matter to the attention of the Senior Sport Officials Group. The Board will bring the matter to the attention of its state counterparts and is currently reviewing the national databases in use in the amateur and professional boxing sectors to assist in determining the additional components that may be required to address the Coroner's recommendation.

Recommendation 16

The Board and DJSIR continue to develop appropriate systems for baseline neurological testing and collection of that data longitudinally to inform changes to the rules and regulations of boxing in Victoria, and in research on the brain health of professional boxers overtime.

The Coroner's recommendation is supported in full subject to finalised design and resourcing. The Board's Medical Advisory Sub-Committee's work in developing the combat sports neurological testing protocol for the collection of baseline and longitudinal data commenced following the Board's acceptance of Sport Medicine Australia's Report into Concussion Awareness in the Combat Sports Sector and establishment of its Medical Advisory Sub-Committee.

Recommendation 17

As part of the regulatory review, the DJSIR and the Board:

a) review the current rules and regulations for professional and amateur boxing in Victoria with a view to restricting persons under the age of 14 years from participating in any boxing activity involving hits to the head. To the extent that requires engagement with amateur boxing and its organisations, the Minister or other appropriate government representative should implement this restriction on registered amateur boxing organisations and/or extend the jurisdiction of the Board to enable it to have regulatory oversight of amateur boxing

b) using the same modalities, develop and disseminate explicit and age-appropriate education to prospective child boxers and their parents/guardians about the risks associated with boxing (including sparring) of repetitive head injury, traumatic brain injury and developing CTE.

This recommendation is supported in principle however implementation is contingent on the findings and recommendations from the regulatory review that was referenced under Recommendation 14.

Recommendations 18, 19 and 21(a)

18. DJSIR and the Board undertake ongoing research to investigate the viability of amending its rules, including reducing the length of rounds, the overall length of a fight, changing the scoring system to reduce scoring based on higher impact, with a view to reducing the amount of head trauma experienced by boxers in their career and the associated risk of CTE and other neurological brain disease.

19. The Board explore ways to reduce the amount of sparring for professional boxers including restricting sparring by registered boxers in the lead up to a bout and at training.

21(a) The Board and DJSIR on advice from the MASC:

develop a longitudinal research project aimed at trialling the use mouthguard accelerometer technology to monitor the number and severity of head knocks sustained by boxers per year. It is a matter for the Board and DJSIR on advice from the MASC (or based on other relevant medical advice) to determine the terms of reference for any such longitudinal research project of that kind.

Recommendations 18, 19 and 21(a) are supported in principle however their implementation is still under consideration and is subject to resourcing. This will include consideration of any scientific evidence that suggests better health and safety outcomes for contestants, that might be progressed through research. The Board, on advice from its Medical Advisory Sub-Committee and through engagement with the global boxing bodies, will consider the research that is already underway and what further research may usefully inform potential amendments to rules and practices in both competition and training settings to effectively reduce and prevent the risks associated with repetitive head injury in boxing and combat sports.

Recommendation 20 and 21(b)

20. I recommend to the Board that its educational material, including its proposed mandatory training for registration be developed to specifically address not just concussion but the risks associated with repetitive head impact and traumatic brain injury in boxing, and the potential effects of that in the long term on a person participating in boxing, including sparring training, as well as specific reference to the potential long term effects of head knocks in boxing that include the development of CTE and other neurodegenerative diseases.

21(b) develop and implement specific education and training to boxers, trainers and other boxing stakeholders about the risk of repetitive head injury from sparring, including developing CTE.

These recommendations are supported in full. The Board's and its Medical Advisory Sub-Committee accepted the expert evidence given to the Coroner by Dr Cantu that the Board's education materials should be broadened and not be limited to concussion.

The Board subsequently revised the new video-based education materials to capture brain injuries, including concussions sustained in training and broader references to the risks associated with the long-term effects of repetitive head knocks and CTE.

In 2024 additional educative materials will be revised to cover a broader range of issues including traumatic brain injury and repetitive head trauma and the associated risks of developing CTE. The Board is establishing, as a priority, its own dedicated website to enable broad access and ease of navigation to these educative resources by the professional and amateur boxing and combat sport sectors.

DJSIR and the Board appreciate the seriousness of the Coroner's Finding arising from this inquest. A full list of the recommendations and DJSIR's response to each are provided in the attached table.

I convey my deepest sympathy to Shane's family for their loss.

Yours sincerely

A handwritten signature in black ink, appearing to read 'Tim Ada', with a stylized flourish at the end.

Tim Ada
Secretary

11/3/2024

Full list of Recommendations and DJSIR response**KEY**

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| Support in full | All elements of the recommendations are supported. |
| Support in part | Some elements of the recommendations are supported. |
| Support in principle | DJSIR supports the intent or merit of the policy underlying the recommendations but, does not necessarily support the method for achieving the policy or further analysis is required to determine the method for achieving the policy, and/or action is subject to further policy consideration or resourcing, etc. |
| Under review | Further analysis is required for DJSIR to determine its position. |
| Not support | DJSIR does not support the recommendation. |
| Not applicable | Recommendation is not applicable to DJSIR or the Board. |

| No | Recommendation | Response | Action |
|----|--|----------------|-----------------------------|
| 1 | The AFL consider implementing rules and guidelines that limit the number of contact training sessions in the off season, pre-season and during the season with a view to implementing these amended rules and guidelines by the commencement of the AFL/W 2025 pre-season. | Not applicable | Recommendation for the AFL. |
| 2 | The AFL implement a rule whereby concussions spotters at elite AFL/W games be empowered to mandate that a player be removed from the field of play for a medical assessment based on their live and/or video review of an incident. | Not applicable | Recommendation for the AFL. |
| 3 | The AFL employ independent medical practitioners to attend all elite AFL/W games to assist club doctors in the assessment of a player for a suspected or actual head injury. Whilst the decision to | Not applicable | Recommendation for the AFL. |

| No | Recommendation | Response | Action |
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| | enter a player into concussion protocols should be a joint decision by the independent medical practitioner and the club doctor, if a situation arises whereby the club doctor and independent medical practitioner cannot agree, the opinion of the independent medical practitioner should prevail. | | |
| 4 | <p>The AFL in consultation with the ALFPA consider how to best improve player awareness and review its current educational material on concussion and repeated head trauma including the risk of CTE to expressly address:</p> <ul style="list-style-type: none"> a) recognising the acute signs and symptoms of concussion and head trauma; b) responding and managing concussion and head trauma; and c) understanding the short and long-term risks of concussion and repeated head trauma. | Not applicable | Recommendation for the AFL and the ALFPA. |
| 5 | <p>The AFL:</p> <ul style="list-style-type: none"> a) continue to develop and disseminate its educational materials for prospective players and their families on the risk of repetitive head trauma in Australian rules football; b) review existing and develop further educational material, and disseminate it, concerning expressly and explicitly the risk of developing CTE through repetitive head trauma associated with the playing of Australian rules football, and do so expeditiously; c) continue to develop educational material with accessible language, and disseminate it through variety of platforms including in-person and virtual forums, social media platforms and webinars to reach children and the broader community concerning the risk of repetitive head trauma and its consequences by the playing of Australian rules football, and do so expeditiously; | Not applicable | Recommendation for the AFL. |

| No | Recommendation | Response | Action |
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| | <p>d) consider developing and disseminating information targeted at points of transition in the playing of Australian rules football that is specific to the level of transition and including information about heightened risk of repetitive head impacts, including the development of neurodegenerative disease, including CTE; and</p> <p>e) in developing this accessible and informative educational material that further consideration be given to how that educational material can be adopted at all community levels and in all environments in which Australian rules football is played including in suburban competitions, rural settings and through AFL supported competitions such as Auskick. The AFL consider obtaining evidence-based advice with respect to the most appropriate means to reach different community groups with its educational material.</p> | | |
| 6 | The Royal Australian College of General Practitioners give consideration to expanding the education programs for general practitioners provided at medical colleges, in medical degrees and within the ongoing professional development and training programs on the short and long-term effects of repetitive head trauma associated with contact sports and the risk of developing serious brain injury and disease, including CTE. | Not applicable | Recommendation for the Royal Australian College of General Practitioners. |
| 7 | The AFL continue to disseminate and develop evidence-based, and easy to understand education materials for concussion and repetitive head trauma for elite AFL/W and community club doctors, coaches, trainers and other volunteers involved in the Australian football community. | Not applicable | Recommendation for the AFL. |
| 8 | The AFL take all reasonable steps to promote and extend the use of mouthguard accelerometer technology in elite AFL/W clubs with a view to extending player uptake to 80% for the 2024 AFL/W season. In doing so, the AFL should consider obtaining specialist advice on overcoming any legal and privacy issues which may | Not applicable | Recommendation for the AFL. |

| No | Recommendation | Response | Action |
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| | prevent the AFL from mandating the use of the mouthguard accelerometer technology in elite AFL/W clubs and using the data for clinical research purposes. | | |
| 9 | The AFL develop and implement standardised neurological baseline testing for all elite AFL/W players. The data obtained from the standardising neurological baseline testing should be linked to the clinical profile of each player and should occur at the beginning of each elite AFL/W season. The data obtained by the AFL should be used to further longitudinal research into player brain health and the impact of repetitive head trauma in the playing of Australian rules football. If a player does not wish for their deidentified data to be used for research purposes, they should be required to opt out. | Not applicable | Recommendation for the AFL. |
| 10 | The AFL should develop educational material aimed at elite AFL/W players on the benefits of neurological baseline testing and the use of the deidentified data for clinical purposes to further longitudinal research into player brain health and repetitive head trauma in the playing of Australian rules football. Any such educational material should be evidence-based, updated with the current scientific research and disseminated with the assistance of the AFLPA. | Not applicable | Recommendation for the AFL. |
| 11 | The AFL and AFLPA expedite and improve their communications with AFL/W players (past and present) and encourage them to donate their brains at end of life for further research. That encouragement should include concrete information and education about the risks associated with repetitive head trauma including CTE that is delivered throughout a player's career and beyond. | Not applicable | Recommendation for the AFL and the AFLPA. |
| 12 | The Commonwealth Department of Health facilitate the adequate funding of brain banks nationally. | Not applicable | Recommendation for the Commonwealth Department of Health |

| No | Recommendation | Response | Action |
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| 13 | I recommend that the AFL explore with the AFLPA how they may engage the AFLPA in assisting with education and training for players on concussion and the risks associated with repetitive head trauma. | Not applicable | Recommendation for the AFL and the ALFPA. |
| 14 | DJSIR extend the terms of reference for the review of the Board's regulatory framework to include a review of the oversight and regulation of amateur boxing and combat sports in Victoria and that the training and education regimes in amateur and professional boxing and combat sports be aligned and standardised. | Support in full | <p>The Coroner's recommendation to extend the terms of reference for the review is supported in full. The scope of the regulatory review has been extended following delivery of the Finding to include the matters referred to in this recommendation.</p> <p>The training and education regimes in professional boxing and combat sports continue to be revised and improved to raise awareness and comprehension across stakeholders of the risks, symptoms and management of traumatic brain injury including concussion. Further revisions, alignment and standardisation in amateur boxing and combat sports will be considered following completion of the regulatory review.</p> |
| 15 | DJSIR and the Board work with their interstate counterparts to develop a national database of all boxers registered to fight in Australia with a view to making evidence-based processes applicable to all. Without dictating the information or data to be stored on the database, it should include to a minimum of the name, age, trainer, gender, serology results, injuries, medical suspensions, and fight history of all registered boxers. | Support in principle | The Coroner's recommendation is supported in principle subject to resourcing and involvement of interstate counterparts. DJSIR has written to the Australian Sports Commission to bring the matter to the attention of the Senior Sport Officials Group. The Board will bring the matter to the attention of its state counterparts and is currently reviewing the national databases in use in the amateur and professional boxing sectors to assist in determining the additional |

| No | Recommendation | Response | Action |
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| | | | components that may be required to address the Coroner's recommendation. |
| 16 | The Board and DJSIR continue to develop appropriate systems for baseline neurological testing and collection of that data longitudinally to inform changes to the rules and regulations of boxing in Victoria, and in research on the brain health of professional boxers overtime. | Support in principle | The Coroner's recommendation is supported in-principle subject to finalised design and resourcing. The Board's Medical Advisory Sub-Committee's work in developing the combat sports neurological testing protocol for the collection of baseline and longitudinal data commenced following the Board's acceptance of Sport Medicine Australia's Report into Concussion Awareness in the Combat Sports Sector and establishment of its Medical Advisory Sub-Committee. |
| 17 | As part of the regulatory review, the DJSIR and the Board: a) review the current rules and regulations for professional and amateur boxing in Victoria with a view to restricting persons under the age of 14 years from participating in any boxing activity involving hits to the head. To the extent that requires engagement with amateur boxing and its organisations, the Minister or other appropriate government representative should implement this restriction on registered amateur boxing organisations and/or extend the jurisdiction of the Board to enable it to have regulatory oversight of amateur boxing; and b) utilising the same modalities, develop and disseminate explicit and age appropriate education to prospective child boxers and their parents/guardians about the risks associated with boxing (including sparring) of repetitive head injury, traumatic brain injury and developing CTE. | Support in principle | This recommendation is supported in principle, however implementation is contingent on the findings and recommendations from the regulatory review referenced under Recommendation 14. |
| 18 | DJSIR and the Board undertake ongoing research to investigate the viability of amending its rules, including reducing the length of rounds, the overall length of a fight, changing the scoring system | Support in principle | Recommendation 18 is supported in principle and is subject to resourcing. The Board, on advice from its Medical Advisory Sub- |

| No | Recommendation | Response | Action |
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| | to reduce scoring based on higher impact, with a view to reducing the amount of head trauma experienced by boxers in their career and the associated risk of CTE and other neurological brain disease. | | Committee and through engagement with the global boxing bodies, will consider the research that is already underway and what further research may usefully inform potential amendments to rules and practices in both competition and training settings to effectively reduce and prevent the risks associated with repetitive head injury in boxing and combat sports. |
| 19 | The Board explore ways to reduce the amount of sparring for professional boxers including restricting sparring by registered boxers in the lead up to a bout and at training. | Support in principle | Recommendation 19 is supported in principle and action to address this recommendation is captured in response to Recommendation 18. |
| 20 | I recommend to the Board that its educational material, including its proposed mandatory training for registration be developed to specifically address not just concussion but the risks associated with repetitive head impact and traumatic brain injury in boxing, and the potential effects of that in the long term on a person participating in boxing, including sparring training, as well as specific reference to the potential long term effects of head knocks in boxing that include the development of CTE and other neurodegenerative diseases | Support in full | Recommendation 20 is supported in full. The Board and its Medical Advisory Sub-Committee accepted the expert evidence given to the Coroner by Dr Cantu that the Board's education materials should be broadened and not be limited to concussion. The Board subsequently revised the new video-based education materials to capture brain injuries, including concussions sustained in training and broader references to the risks associated with the long-term effects of repetitive head knocks and CTE. |
| 21 a) | The Board and DJSIR on advice from the MASC: a) develop a longitudinal research project aimed at trialling the use mouthguard accelerometer technology to monitor the number and severity of head knocks sustained by boxers per year. It is a matter for the Board and DJSIR on advice from the MASC (or based on other relevant medical advice) to determine the terms of | Support in principle | Recommendation 21(a) is supported in principle and is subject to resourcing. The Board, on advice from the Medical Advisory Sub-Committee will consider the scope, design and costs of a longitudinal study including the use of mouthguard |

| No | Recommendation | Response | Action |
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| | reference for any such longitudinal research project of that kind; and | | accelerometers to address the Coroner's recommendation. |
| 21 b) | b) develop and implement specific education and training to boxers, trainers, and other boxing stakeholders about the risk of repetitive head injury from sparring, including developing CTE. | Support in full | Recommendation 21(b) is supported in full and response to Recommendation 20 provides explanation of what action has been taken to date. Additional educative materials will be revised to cover a broader range of issues including traumatic brain injury and repetitive head trauma and the associated risks of developing CTE. The Board is establishing, as a priority, its own dedicated website to enable broad access and ease of navigation to these educative resources by the professional and amateur boxing and combat sport sectors. |