Australian Cricket

CONCUSSION AND HEAD TRAUMA POLICY

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REVISIONS

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1. PURPOSE

1.1 Australian Cricket **(AC)** considers it critical to pursue best practice in prevention and management of concussion and head trauma arising in the course of participating in Cricket Australia-sanctioned competitions and training sessions.

1.2 Cricket Australia (**CA**) endorses the *2023 Amsterdam Consensus Statement on Concussion in Sport* (**Consensus Statement**), *2023 AIS Concussion and Brain Health Position Statement,* and 2018 *International Cricket Council Concussion Guidelines.* It is the aim for this Policy to be consistent with these consensus statements and guidelines where possible.

2. SCOPE

2.1 The concussion and management principles within this Policy applies to: (i) all male, female and elite pathway players and (ii) all match officials (collectively referred to as Participants):

(a) participating in any CA sanctioned competitions and matches, or training for such competitions or matches; or training for international cricket competitions or matches (collectively, **Elite Cricket**); and

(b) who receive an impact to the head or neck (either bare, while wearing protective equipment or whiplash type mechanism), whether by ball or otherwise.

2.2 In relation to players representing Australia in international cricket competitions or matches, CA will (where possible within the ICC's rules) follow this Policy.

2.3 The governance processes outlined in this Policy apply to all AC staff (employees, contractors etc..) involved in CA sanctioned cricket training and matches / tournaments including High Performance staff, SSSM staff, coaches, selectors etc.

3. RELATED DOCUMENTS

3.1 2023 Amsterdam Consensus Statement on Concussion in Sport

3.2 2023 AIS Concussion and Brain Health Position Statement

3.3 2018 ICC Concussion Guidelines

3.4 Sport Concussion Assessment Tool (SCAT) 5th (SCAT5) and 6th edition (SCAT6).

3.5 CA Playing Conditions.

3.6 Relevant Clothing and Equipment Regulations.

3.7 Published research papers:

(a) Evaluation of CogSport for acute concussion diagnosis in cricket. James K, Saw AE, Saw R, Kountouris A, Orchard JW. BMJ Open Sport Exercise Med. 2021 Apr 22;7(2):e001061

(b) Neurocognitive changes associated with concussion in elite cricket players are distinct from changes due to post-match with no head impact. Goh SC, Saw AE, Kountouris A, Orchard JW, Saw R. J Sci Med Sport. 2021 May;24(5):420-424.

(c) Concussion in cricket: Clinical findings using Sport Concussion Assessment Tool and recovery timeframes. LM Lallenec, AE Saw, A Kountouris, R Saw, J Orchard. Journal of Concussion 5, 2021, 2059700221993322

(d) Situational factors associated with concussion in cricket identified from video analysis. AE Saw, DJ Howard, A Kountouris, AS McIntosh, JW Orchard, R Saw, Journal of Concussion, 4, 2020, https://doi.org/10.1177/2059700220947197

(e) Concussion Guidelines in National and International Professional and Elite Sports. Davis GA, Makdissi M, Bloomfield P, Clifton P, Cowie C, Echemendia R, Falvey EC, Fuller GW, Green GA, Harcourt P, Hill J, Leahy K, Loosemore MP, McCrory P, McGoldrick A, Meeuwisse W, Moran K, Nagahiro S, Orchard JW, Pugh J, Raftery M, Sills AK, Solomon GS, Valadka AB. Neurosurgery. 2020 Aug 1;87(2):418-425

(f) International consensus definitions of video signs of concussion in professional sports. Davis GA, Makdissi M, Bloomfield P, Clifton P, Echemendia RJ, Falvey ÉC, Fuller GW, Green G, Harcourt P, Hill T, McGuirk N, Meeuwisse W, Orchard J, Raftery M, Sills AK, Solomon GS, Valadka A, McCrory P. Br J Sports Med. 2019 Oct;53(20):1264-1267

(g) International study of video review of concussion in professional sports. Davis GA, Makdissi M, Bloomfield P, Clifton P, Echemendia RJ, Falvey ÉC, Fuller GW, Green G, Harcourt PR, Hill T, McGuirk N, Meeuwisse W, Orchard JW, Raftery M, Sills AK, Solomon GS, Valadka A, McCrory P. Br J Sports Med. 2019 Oct;53(20):1299-1304

(h) Incidence of Concussion and Head Impacts in Australian Elite-Level Male and Female Cricketers After Head Impact Protocol Modifications. Hill T, Orchard J, Kountouris A. Sports Health. 2019 Mar/Apr;11(2):180-185.

3.8 Medical professionals assessing for concussion in cricket should be particularly familiar with the papers of Saw et al (2020) on Situational factors associated with concussion in cricket, and James et al (2021) on Evaluation of Cogsport in cricket, for interpretation of Cognigram testing results and Video assessment in assessing cricket head impacts.

4. PROTECTIVE EQUIPMENT REQUIREMENTS

4.1 The mandatory use of helmets and products/attachments properly fitted to helmets that provide additional protection for the vulnerable neck/occipital area of batters (***Neck Guards***) by players as per the CA Playing Conditions and Clothing and Equipment Regulations and the recommended use of helmets for umpires.

4.2 Helmets should be replaced immediately in accordance with the manufacturer's recommendations following an impact.

4.3 It is strongly recommended that umpires officiating in One-Day or T20 matches (***White Ball***) or standing at the bowlers' end for any training sessions for White Ball competitions are strongly recommended to wear an approved helmet or equivalent protective equipment.

5. HEAD AND NECK TRAUMA MANAGEMENT – CATEGORISING HEAD IMPACTS

Head or neck impacts can be classified as either **'Trivial'** or **'Non-Trivial'** based on how reasonable it is that the impact force or mechanism are likely to lead to concussion.

5.1 **Trivial head impacts**:

(a) The determination if head or neck impacts are trivial (or not), can only be made by an AC appointed and suitably qualified medical person ***('AC Medical Person***'). This can be done if the incident is witnessed either live or on reviewing video replay by an AC Medical Person or witnessed by a reliable third party if they can provide an accurate description of the incident to the AC Medical Person.

(b) If the incident is not observed directly (by AC Medical Person or reliable third-party) or clear on video then it cannot be classified trivial.

(c) For the purposes of this document an 'AC Medical Person' must be an AC appointed doctor if one is present, or an AC appointed physiotherapist (who has received training in the management of head impacts in cricket) in instances where a doctor is not present. AC Medical Person must have sufficient training and experience in safely conducting concussion assessments.

(d) A head or neck impact can be determined as "trivial" if the impact is deemed to have been of such low force that it is reasonable to expect that a concussion could not have occurred.

(e) Examples of possible trivial impacts include;

(i) Ball impacts to the very distal parts of the neck could be deemed trivial from a concussion perspective because of lack of significant indirect force to the head.

(ii) Ball impacts to batters or wicketkeepers that were bowled by spin or slow bowlers and strike the helmet are generally trivial because of the low pace of the ball but would be non-trivial if the batter or wicketkeeper was not wearing a helmet.

(iii) Impacts to batters off balls bowled by pace (fast) bowlers that result in minimal deflection of the path of ball (glancing impact) may occasionally be considered trivial (e.g. if the deflection is so small that it can be fielded on the full by wicketkeeper).

(f) The documentation of **trivial** head impacts **must** include:

(i) a medical (or physiotherapy) consultation notes on the AMS, and

(ii) a Head Trauma Report form on the AMS

Note: a SCAT test or Cognigram testing are not mandatory for trivial head impacts.

(g) The AC Medical Person who made the documentation of the incident **must** monitor the Participant (by checking in with them via phone or in person and document this on the AMS via a consultation note) for evolving or delayed signs of concussion or vascular injury, in the next 24 hours, even in cases where the head impact has been deemed trivial.

5.2 **Non-trivial head impacts**:

(a) Most head and neck impacts are **non-trivial**, that is, the impact (direct or indirect) is sufficient enough that there is a possibility of concussion.

(b) Identification of video and observed signs for non-trivial head and neck impacts:

(i) If a Participant receives a non-trivial impact to the head or neck, a qualified medical person should try to make a determination to assess if video or observed signs are present. A video replay can be promptly checked if the player is not in immediate distress.

(ii) The qualified medical person should immediately enter the field of play (or training area) to attend to the Participant as soon as it is safe to do so (i.e. play or training has stopped) and any replay check has been performed.

(c) ***Non-trivial*** head impacts can be categorised as either ***Category 1, Category 2 or Category 3****:*

(i) ***Category 1*** signs and symptoms**.**

Observed signs:

(A) loss of consciousness for any time;
(B) clearly dazed or disoriented;
(C) definite inability to keep balance;
(D) vomiting not explained by another cause (such as known gastroenteritis); or
(E) tonic posturing or fitting.

Clinical signs & symptoms:

(F) visual field defects or oculomotor signs (e.g. nystagmus),
(G) amnesia – inability to remember recent details,
(H) definite confusion,
(I) definite behavioural changes,
(J) other signs of brain ischaemia, or
(K) clear symptoms of concussion that allow an immediate diagnosis to be made.

Any of these presentations are considered diagnostic of concussion and immediate removal from play is required. Further testing on the day of play is not required to establish the diagnosis.

(ii) ***Category 2*** signs and symptoms.

(A) possible behavioural changes,
(B) possible confusion,
(C) possible balance disturbance
(D) possible loss of consciousness (e.g., slow to rise from a fall), or
(E) any clinical suspicion not otherwise captured which may include mild or transient symptoms that do not meet the threshold for category 1 criteria.

These presentations require immediate removal from play for an off-field assessment.

(iii) ***Category 3*** signs and symptoms include:

(A) any non-trivial head impact without Category 1 or 2 criteria; or
(B) any head impact with force that could have feasibly caused a concussion, but no Category 1 or 2 signs and no concussion related symptoms (after on-field check).

These presentations require ongoing monitoring during that day and an off-field assessment at the next appropriate opportunity.

6. HEAD AND NECK TRAUMA MANAGEMENT: ASSESSMENT & DOCUMENTATION

6.1 There are three key components to the initial assessment after a head impact.
(a) Witness the head impact (directly or through third party)
(b) On-field Assessment
(c) Off-field assessment

Table 1 summarises the assessment tests and documentation required for trivial and non-trivial head impacts.

6.2 **Witnessing the head impact**. When a head impact occurs, the AC Medical Person responsible must try to obtain as much information about the incident as possible by either:
(a) observing the incident live, and/or
(b) reviewing a video replay, and/or
(c) obtaining a reliable third-party observer account.

6.3 **On-field assessment.**
(a) An on-field assessment must take place for every head impact (trivial or non-trivial), either immediately or at the next or most appropriate break in play. The timing or urgency of the on-field assessment will be determined by AC Medical Person depending on their evaluation of the incident.
(b) An on-field assessment must involve:
i) Asking the participant if they have any new symptoms after the head impact, and specifically asking for the presence of common concussion symptoms.
ii) Performing modified (cricket specific) **Maddox questions**.
1) What venue are we at today? [compulsory question]
2) What bowler has been bowling this last over? (or similar)
3) How was the last batsman dismissed? (or similar)

4) Who did you play against in your most recent match before this? (or similar)

iii) Asking the participant for a description of the event (and if this description does not sound accurate, checking with the umpires if the AC medical person did not witness the event clearly).

The above on-field assessment must allow for the assessment of disorientation, behavioural change, amnesia, confusion or other signs of brain ischemia.

(c) If the on-field assessment was unsatisfactory (concussion possible), the participant must be immediately removed from play.

(d) If ***Category 1*** observed signs are evident the diagnosis of concussion is established.

(e) If ***Category 2*** observed signs are evident or if the on-field assessment is unsatisfactory for any other reason (e.g., uncertainty exists over the presence of new symptoms), the participant must be immediately be removed for an off-field assessment (SCAT and Cognigram).

(f) If ***Category 3*** status is confirmed (a ***non-trivial*** head impact without Category 1 or 2 criteria has occurred and the initial on-field assessment was satisfactory), an off-field assessment should be completed at the first available time (e.g. next innings break).
If the incident is determined to be a ***trivial*** head impact (see section 5.1), the participant must be monitored and assessed again at the completion of the session (match or training) or post-match or training.
Medical notes of these assessments must be documented on the AMS.

6.4 Off field assessment.

(a) The off-field assessment should ideally be performed by a doctor where possible. Alternatively, a suitably qualified AC Medical Person (physiotherapist) can perform the assessments required and report to the team doctor.

(b) An off-field assessment must include;
- (i) a SCAT test (on the AMS) for non-trivial head impacts. Note that the on-field and optional sections of the SCAT are not required, and whatever version of the SCAT is on AMS is adequate at the relevant time.
- (ii) a Cognigram test for:
  - (A) Category 2 signs or symptoms or
  - (B) where there are concussion related symptoms post-head impact.

A SCAT or Cognigram test is not required if the diagnosis of concussion has already been established (e.g., due to ***Category 1*** criteria).

(c) If the outcome of the off-field assessment was satisfactory (i.e., a diagnosis of concussion has not been established or possible) then the player may return to play that day, but delayed symptoms of concussion must be monitored for.

(d) Repeat off field assessment for head impacts with ***Category*** 2 criteria, if the outcome of the initial off-field assessment was satisfactory a repeat off-field assessment must be performed either prior to the next match day or training session, or at 48 hours post impact, whichever is soonest. This must include;
- (i) a clinical assessment,
- (ii) a SCAT test (on AMS),
- (iii) a Cognigram test.

(e) Repeat off field assessment for head impacts with ***Category 3*** criteria, if the outcome of the initial off-field assessment was satisfactory a clinical assessment should be performed either prior to the next match day or training session of at 48 hours, whichever is soonest.

6.5 Definitive concussion diagnosis and 'high risk' head impacts for concussion.

(a) ***Definitive concussion diagnosis.***

At any point during the various stages of assessment, the diagnosis of concussion is established if ***Category 1*** video or observed signs are present, or the outcome of an off-field assessment is unsatisfactory.

In these instances, the participant must immediately be removed from play (or not allowed to return to the field) and they must enter the Graduated Return to Play (***GRTP***) process (***Appendix 2).***

(b) ***High risk head impacts.***

Based on CA led research there are mechanisms and presentations known to present a higher risk of concussion in cricket, these include (but are not limited to);

(i) a batter being hit by a ball bowled by a pace bowler which both impacts on the back/side of the head/helmet/neck **and** deflects greater than 90 degrees from its path after impact,

(ii) an impact of ball or bat to unprotected head.

Whilst the mechanisms outlined above do not warrant mandatory removal for assessment after head impact, medical personnel are encouraged to err on the side of caution in terms of removal of the player for further assessment if this mechanism occurs.

6.6 Documentation of the off-field assessments.

The following minimum documentation is required after a head impact and/or concussion:

(a) ***AMS consultation notes*** are required for:

(i) All head impacts (***trivial or non-trivial***) must have an appropriately coded ***initial AMS consultation*** by the AC Medical Person who conducted the assessment or witnessed the incident.

(ii) At a minimum, a **subsequent *AMS consultation*** must be recorded just prior to a Participant returning to play after concussion (irrespective of completion of a GRTP template in the participant's AMS medical or physiotherapy module.

(iii) When the 'availability' status changes in any direction (available ←→ modified ←→ unavailable).

(iv) When the clinical reasoning if the SCAT assessment or Cognigram were considered inconclusive.

(v) Where any clinical judgement overrides the SCAT assessment or Cognigram results.

For all consultations on the AMS, the 'availability status' must be selected (available, modified or unavailable). Participants injury status must not be changed to available until a consult note is made and the GRTP template is changed to reflect that they have completed the GRTP process (***Appendix 2***).

(b) **Head Impact Assessment (HIA) form.**

For all head impacts (***trivial or non-trivial***) a HIA form must be completed on AMS (or GER AMS App).
A HIA must be completed to include:

(i) the outcome of the on-field assessment (initial assessment),
(ii) off field assessment (subsequent assessment of the incident on the same day as the incident),
(iii) same day review (check in later in the day, post-match or next morning) and,
(iv) 48 hours post head impact, or pre the next cricket training or match session review (whichever comes first).

(c) **SCAT assessment.**
A SCAT assessment should be completed using the SCAT form on AMS (or GER AMS App). Either of SCAT5 or SCAT6 versions of the assessment test can be utilised. It is advisable to use the version that is populated in the AMS and GER AMS App.

(d) **Cognigram assessment.**
When a post-head impact Cognigram test (either to confirm / exclude the diagnosis of concussion or as part of the RTP process) is required (see section 6.4), the test result must be exported from the Cognigram portal and added to the Cognigram tab in the player consultation note on the AMS for that injury.

(e) **GRTP Template.**
When a diagnosis of concussion is established the GRTP template must be completed on the AMS medical module.

Table 1. *Assessment Tests And Documentation Required For Trivial and non-Trivial Head/Neck Impacts*

	Video Review	Clinical Assessment & AMS Notes (initial, next day check in and/or 48 check in)	HIA (Day 0 & 48 hr review)	SCAT (on AMS)	Cognigram (uploaded to AMS)
Type of impact	**Non-Trivial Head / Neck Impacts**				
Category 1	Required	Required	Required	Not required (concussion established)	Not required (concussion established)
Category 2	Required	Required	Required	Required	Required
Category 3 - possible concussion symptoms	Required	Required	Required	Required	Required
Category 3 - no concussion symptoms	Required	Required	Required	Required	If SCAT test inconclusive / unavailable
	Trivial Head / Neck Impacts				
Trivial	Required	Required	Day 0 only	Not required	Not required

7. HEAD AND NECK TRAUMA MANAGEMENT: RETURN TO PLAY

7.1 When a diagnosis of concussion has been established, the final determination on whether a participant may return to training and play, can only be made by an AC doctor.

7.2 GRTP Essentials. A participant must not be allowed to return to play or made available to play until they have satisfied all of the following criteria:

(a) Fully completed the GRTP requirements documented in the RTP Template on the AMS for that concussion. Each step of the GRTP must be clearly documented as completed,
(b) At a minimum, completed all eight (6) stages of the GRTP process outlined in ***Appendix 2***, with the minimum defined number of days between each stage (minimum eight (8) days* from head impact to return to playing),
(c) Has an AMS consultation note by the AC Doctor stating the GRTP process has been completed and documenting the clinical status of the Participant,
(d) Has completed a satisfactory Cognigram test (relative to their baseline) in the final 48 hours of the GRTP process, and the Cognigram result uploaded onto the AMS, and
(e) The participant remains free of concussion related symptoms.

*NB: Eight (8) days is generally the minimum number of days that a participant may return to playing, but it is expected that a large proportion of participants will require longer return to play times and more extensive rehabilitation.

7.3 Expedited RTP in Exceptional Circumstances.
In exceptional circumstances, a participant may be permitted to return to match play, in less than the minimum 8 days set out in section 7.2(b) of this Policy if the AC Doctor managing the GRTP determines that it is safe for the participant to progress through each GRTP stages in an accelerated fashion if they;
(a) there were no Category 1 signs at the initial presentation (head impact)
(b) they are able to maintain a minimum gap of 24 hours between each GRTP stage, minimum of six (6) days from head / neck impact to return to play,
(c) the participant has not experienced any other concussions in the previous 12 months, and
(d) after review and approval by the AC RTP Concussion Advisory Panel (see ***Appendix 5***).

7.4 There are key GRTP processes that **must be followed** when managing a Participant who has been diagnosed with concussion.

(a) The GRTP process can only commence when the criteria outlined by the Concussion Protocol in ***Appendix 1***.
(b) The Participant must not return to playing in the same match if the diagnosis of concussion is established.
(c) Regular medical reviews by an AC Medical person (ideally the AC Doctor) are required (e.g. daily or every second day) that should include;
    (i) a medical assessment including a symptom check, how they are coping with daily activities or any rehabilitation / training activities and a neurological examination if required;
    (ii) determination of the clinical status of the Participant including whether there has been improvement or deterioration since the time of injury; and

(iii) determination of the need for emergent neuroimaging to exclude a more severe brain injury or of referral to a neurology specialist (e.g., for multiple concussions or those not resolving within an expected time period).

(d) Return to physical activity must not occur for at least 24 hours after a concussion diagnosis. After the initial 24 hours, the Participant may commence the GRTP process (outlined in ***Appendix 2***), including some restricted physical activity once they are able to complete their usual daily activities without concussion related symptoms.

(e) Staged physical activity should be upgraded on a graduated basis with progression through stages and Participants must return to a previous stage if symptoms worsen. See Appendix 2 for recommended GRTP progressions.

(f) The staged activity for return to training and playing must be documented on the AMS through the GRTP template with each stage of the GRTP clearly documented.

(g) A Participant diagnosed with concussion must be instructed by the AC Medical Person making the diagnosis that they must not be performing activities that may put themselves and others at risk such driving a motor vehicle, climbing ladders, riding a bike etc. until medically cleared to do so.

8. HEAD AND NECK TRAUMA MANAGEMENT: GOVERNANCE

8.1 Recording and reporting interference or breach of this policy.

All consultation notes should record any difficulties in diagnosis, including:

(a) whether the Participant complied with the requirements of this Policy to leave the field or training area for assessment where required; or

(b) whether any influence or obstruction or interference was attempted by the Participant, or any other person involved in the match or training session.

Where any case notes are recorded in relation to 6.7 (a) or (b), a separate notification containing these notes and any other relevant details must also be sent (email) to the CA Chief Medical Officer (CMO) and the CA Head of Sports Science Sports Medicine as soon as possible.

8.2 Managing head impacts in the absence of a qualified AC Medical Person;

(a) In instances where an AC Medical Person is not present or available at the time of the head impact; a paramedic, sports trainer or first aider may make the initial determination of whether a player should be immediately removed from play within their scope of practice, level of concussion training, experience and qualifications. CA supports a conservative approach to removing participants after a head impact, particularly when there is no AC Medical Person available. If this does occur, the qualified medical person allocated to the match/training or the AC Medical Person responsible for the team or match should be notified

of the incident in order to direct any further immediate actions that may be required. When no AC medical person is allocated to the team or match, the relevant SMO should be contacted.

(b) In instances where an AC medical person is not present or available and a participant is removed from play, an off-field assessment should be completed by an AC medical person as soon as practical, participants should not be allowed to return to play until this is completed.

(c) A Cognigram test completed remotely may be a useful aid for assessment in circumstances where the player has a non-trivial head impact that does not require presentation to hospital and an AC medical person or other qualified medical person is unavailable in person on the day. If a player is remote and an off-field assessment by an AC medical person cannot be performed in a timely manner, aspects of the off-field assessment including SCAT 6 symptom check may be performed by Telehealth, when deemed appropriate by the AC doctor responsible for the participant.

8.3 Emergencies and neck injuries.

For a clearly serious head or neck injury, a qualified medical person should immediately enter the field of play as part of an emergency response without waiting to access a replay. If video was unable to be checked prior to the on field assessment it should be checked as soon as possible afterwards. Umpires or other witnesses may be used to provide additional descriptions of head impacts and subsequent participant responses that weren't initially observed by the qualified medical person.

More serious co-existing diagnoses (e.g., fractured skull, neck injury, vascular injury) should be managed as an emergency priority and once these are excluded then diagnosis of concussion can be considered. Vascular injury (such as vertebral artery dissection, carotid artery dissection, subarachnoid haemorrhage etc.) should be suspected if a player, after neck or base of skull impact, experiences transient or enduring neck pain, pain around the eye, headache, signs of brain ischemia (e.g., vertigo, ataxia, visual deficits, brainstem syndromes). Medical personnel should be vigilant to the evolution of signs and symptoms over subsequent days and have a low threshold for seeking investigative imaging if indicated.

8.4 Good medical practice.

All concussion assessments should be conducted in a standardised fashion. The minimum requirements for conducting assessments are as follows:

(a) Adequate time should be allowed to conduct the appropriate medical assessment, including the SCAT 6 and/or Cognigram. For example, a concussion diagnosis cannot be excluded in less than 10 minutes; and

(b) Adequate facilities should be provided for the appropriate medical assessment. At a minimum, off-field assessments should be performed in a distraction-free environment (e.g., locker room, medical room) rather than on the sideline.

(c) No staff other than medical staff should be present while the assessment is being undertaken, unless permitted by the medical staff or expressly requested by the participant.

The diagnosis of a concussion (and/or fitness to train and play) is a clinical judgment, made by a medical professional. Neither the SCAT nor the Cognigram should be used by itself (or together) to make, or exclude, the diagnosis of concussion. Nevertheless, an AC MO can use their clinical judgement to override the SCAT assessment or Cognigram results when inconclusive and the AC MO must keep detailed clinical notes regarding this.

The diagnosis of concussion cannot be excluded until a minimum of 48 hours after a head or neck impact to account for the possibility of a delayed concussion presentation.

8.5 Compliance with this Policy

Compliance with this Policy requires the following:

(a) If the qualified medical person directs a Participant to leave the field or training area (if a concussion is diagnosed or if further assessment is required), the Participant must leave the field (in accordance with applicable CA Playing Conditions) or training area.

(b) No person, including the Participant under assessment, should attempt to influence or interfere with the medical personnel in making their assessment or the decision to remove the Participant from the field for further assessment.

(c) The match situation is not relevant in the management of the Participant and whether they are required to leave the field of play if concussion or other serious head/neck injury is suspected or diagnosed. The primary and only concern in any assessment shall be the health, safety and welfare of the Participant suspected of having suffered a head or neck trauma/concussion. As an example, it is not relevant to the operation of this Policy, or the assessment of the Participant by the medical staff member or contractor, that the Participant is in a last wicket partnership to save or win a match.

(d) An AC medical person will make the final diagnosis of whether a concussion has occurred or if a participant is required to be removed from play for further assessment. If no AC medical person is present at the match or training session, the doctor responsible for the player and/or the match / training should be notified as soon as possible. A non-medical person is not permitted to determine if a Participant can return to training or playing after a head impact, even if a medical person is not present.

(e) A participant is not permitted to return to play in less than the minimum mandatory standdown periods outlined in section 7 of this Policy.

Failure to comply with the requirements of section 8.5 of this Policy may also constitute an offence under the Cricket Australia Code of Conduct for Players and Player Support Personnel (Code of Conduct) and may result in the sanctioning of Participants under that Code of Conduct.

9. CONCUSSION SUBSTITUTE

9.1 A Concussion Substitute is available as per the applicable ICC and CA Playing Conditions.

9.2 For matches where a Concussion Substitute is available, the AC medical person on duty must comply with the procedure outlined in the CA Playing Conditions when completing steps relating to the activation of the Concussion Substitute. Importantly, this includes:

(a) formally notifying (initially verbally and followed as soon as possible in writing) the match referee (or the highest-qualified match official at the match if there is no match referee) of any concussion diagnosis that he/she has made in relation to a Participant during a particular match;

(b) the AC medical person must not be the person required to make the decision to activate the use of a Concussion Substitute. His/her involvement in the process should be limited to providing the medical advice associated with the management and/or diagnosis of a concussion; and

10. PATHWAY (UNDERAGE) PLAYERS

10.1 Managing concussion in pathway (underage) players requires a more conservative approach compared to adult players as per the AIS guidelines and Amsterdam concussion statement.

10.2 Assessment: For players aged 13 years or older, the assessment process outlined for adult players in section 6 of this Policy apply including SCAT / Cognigram tests can be used.

10.3 Concussion Management in pathway players:

(a) Rehabilitation of adolescents is slower and initial attention should be to remove the adolescent from school and monitor symptoms related to schoolwork and then exercise and sport. Rehabilitation of adolescents is slower and initial attention should be to remove the adolescent from school and monitor symptoms related to schoolwork and then exercise and sport.

(b) It is recognised that education of adolescent players and parents, guardians and coaches is an important part of managing the concussion in adolescent participants. The medical staff working with pathway teams in CA sanctioned

tournaments, should endeavour to educate pathway players on concussion management and the application of this policy.

(c) RTP Essentials for **Pathway players**. Any participant who is under 18 years of age on the day they are diagnosed with concussion **must not RTP** (or be cleared as available to play on the AMS injury status) until they have satisfied all of the following criteria:

(i) Have a fully completed RTP template on the AMS for that concussion episode that clearly documents that they have completed all stages of the RTP processes,

(ii) At a minimum, completed all six (six) stages of the Pathway RTP process outlined in Appendix 3 over a minimum of fourteen (14) days,

(iii) Has an AMS Consultation note for the initial assessment by an AC Medical person and another at the end stage of the GRTP process by an AC Doctor stating the GRTP process has been completed and documenting the clinical status of the participant,

(iv) Has completed a satisfactory Cognigram test (relative to their baseline if there is one available) in the final 48 hours of the GRTP process, and the Cognigram result uploaded onto the AMS, and

(v) The participant remains free of concussion related symptoms.

(d) Key RTP processes **that must be followed** when managing a Pathway (under 18 years of age) participant who has been diagnosed with concussion.

(i) The GRTP process can only commence in line with the criteria outlined by the Concussion Protocol in Appendix 1.

(ii) After the initial 24 hours, the Participant may commence the GRTP process (outlined in Appendix 4), including some restricted physical activity once they are able to complete their usual daily activities without concussion related symptoms,

(iii) Staged physical activity should be upgraded on a graduated basis with progression through stages and Participants must return to a previous stage if symptoms worsen. See Appendix 3 for recommended Pathway RTP progressions,

(iv) The staged activity for return to training and playing must be documented on the AMS through the RTP template with each stage of the RTP clearing documented,

(v) If any participant sustains a second concussion in the same cricket season (July 1 to June 30), they must not RTP in the same season unless they have been cleared to do so by the AC Concussion Advisory Panel (see Appendix 5).

(vi) A Participant diagnosed with concussion must be instructed by the medical person making the diagnosis that they should not be performing activities that may put themselves and others at risk such driving a motor vehicle, climbing ladders, riding a bike etc. until medically cleared to do so.

11. BASELINE CONCUSSION TESTING

In respect of each Australian domestic cricket season, each AC MO must ensure the following:

(a) For all Participants (players only) taking part in international and domestic competitions, a baseline Cognigram test should be completed before commencement of the cricket season, excluding those who have completed a baseline Cognigram test in the immediately previous cricket season; and

(b) For all pathway players participating in the U16 and U19s Female; and U17 and U19s Male National Championships, a baseline Cognigram test is conducted before commencement of the National Championship, excluding those who have completed a baseline Cognigram test in the immediately previous cricket season.

12. MANAGEMENT OF PLAYERS WITH MULTIPLE, COMPLEX OR PROLONGED CONCUSSIONS

12.1 Role of the AC Expert Concussion Panel (‘***Expert Panel’***).

Players with multiple or complex concussions should be managed conservatively. These players often require multiple medical opinions from a variety of specialists.
Expert Panel can be established to streamline the diverse management of difficult concussion cases by establishing a panel of experts who jointly assess each case and, if possible, produce a consensus opinion.

12.2 Panel Members

In the instance when a player has sustained a concussion that is complex, the player or treating doctor may request that the case is reviewed by the Expert Panel.
The CA CMO and the player’s treating doctor will jointly determine suitable concussion experts and submit them to the player for approval.
At a minimum the Expert Panel should consist of the following members:

- Chair (the CA CMO or a treating doctor or psychologist)
- the SMO,
- any treating doctor
- external health practitioner experts (up to 5 people)

12.3 Referral to the Expert Panel

Referrals, including a summary of the case, shall be written to the panel members by the treating doctor. See Appendix 4 for an example of the player information and referral letter template.
Examples of the rationale where an Expert Panel may be required are:

- Participants with prolonged (> one month) symptoms not resolving.
- Multiple concussions with increasing symptom duration or symptom severity.
- Concussions occurring with diminishing impact force.
- Where there are conflicting management proposals that are difficult to resolve.
- Athletes considering retirement due to concussion.

12.4 Expert Panel meetings

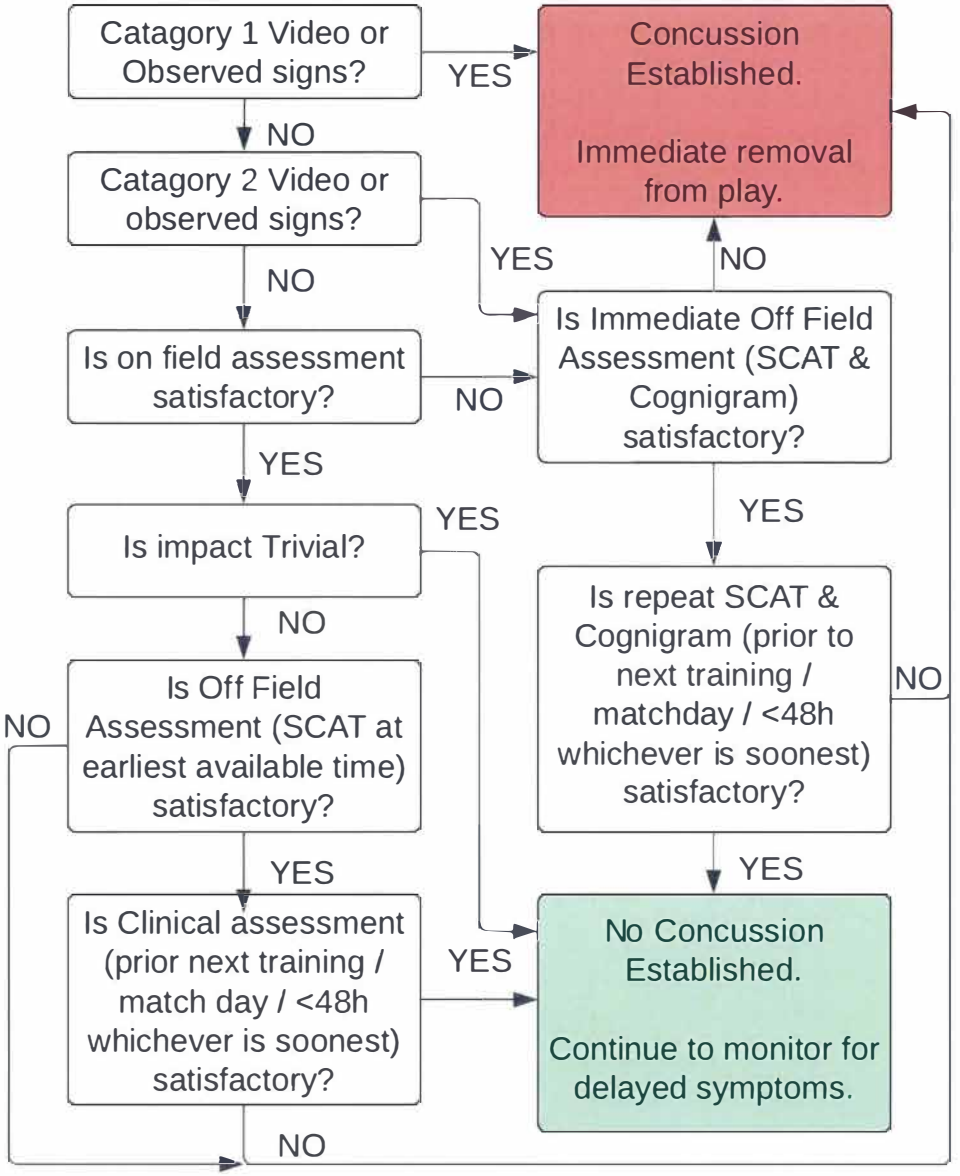
Where possible Expert Panel meetings will be held in person, although online meetings are also acceptable.
The Expert Panel members will receive relevant information at least 7 days before the meeting (with the player's consent).

- Copies of all relevant medical history notes,
- Copies of all relevant medical imaging,
- Copies of all neuropsychological results,
- Copies of all relevant video footage of concussion injuries,
- Copies of any other relevant information,
- A list of all practitioners involved in the patient's management, and
- A consent form signed by the patient, consenting to participate in the process.

12.5 Expert Panel report

The Expert Panel recommendations should be summarised by the Chair and ensure the meetings notes are recorded in the player's AMS medical file. Each individual panel member should provide their own written report.

APPENDIX 1 – HEAD IMPACT ASSESSMENT FLOWCHART



APPENDIX 2 – GRADED RETURN TO PLAY (GRTP)

A1. 1. If a diagnosis of concussion has been established, a participant must enter the GRTP process outlined below (or in Appendix 4 for Pathway (under 18 years of age)).

A2.2 The GRTP process must be entered into the RTP Template on the AMS

AC Concussion GRTP Process		
Stage	**Activity**	**Progress timelines and rationale**
Stage 1	On day of concussion – relative inactivity rest of the next 24 hours (physical/cognitive)	24 hours relative inactivity (physical/cognitive) – no training / work / school etc. Can progress to stage 2 once symptoms resolve and after a minimum of 24 hours.
Stage 2	Light aerobic exercise e.g. walk or light stationary bike	If symptoms remain resolved after Stage 2 – progress to Stage 3 activity Progression to next stage should not be until the following day at a minimum.
Stage 3	Moderate intensity exercise. Cricket specific exercise with very low risk of head impact such as catching or ground fielding drills, batting to low risk throwdowns may be permitted after medical assessment and consideration.	If symptoms remain resolved after Stage 3 – progress to Stage 4 activity. Progression to next stage should not be until the following day.
Stage 4 (48 hours minimum)	Higher intensity exercise with low risk of head impact (e.g. high intensity cardio / resistance training, batting to spin only)	If symptoms remain resolved after Stage 4 - progress to Stage 5 activity. Progression to next stage should not be until 48 hours later.
Stage 5 (48 hours minimum)	Return to full unrestricted training	If symptoms remain resolved after Stage 5 and Cognigram returned to baseline - progress to Stage 6 activity. Progression to next stage should not be until 48 hours later.
Stage 6	Earliest possible RTP = Day 8	

APPENDIX 3 - RETURN TO PLAY FOR PATHWAY PLAYERS

AC Concussion RTP Process		
Stage	**Activity**	**Progress timelines and rationale**
Stage 1	On day of concussion - relative inactivity rest of the next 48 hours (physical/cognitive)	48 hours relative inactivity (physical/cognitive) - no training / work / school etc. Can progress to stage 2 once symptoms resolve and after a minimum of 48 hours.
Stage 2	Light aerobic exercise e.g. walk or light stationary bike	If symptoms remain resolved after Stage 2 - progress to Stage 3 activity. Progression to next stage should not be until a minimum of 48 hours later.
Stage 3	Cricket specific exercise with very low risk of head impact such as catching or ground fielding drills, batting to low risk throwdowns.	If symptoms remain resolved after Stage 3 - progress to Stage 4 activity. Progression to next stage should not be until a minimum of 48 hours later.
Stage 4	Higher intensity exercise with low risk of head impact (e.g. High intensity cardio / resistance training, batting to spin only)	If symptoms remain resolved after Stage 4 - progress to Stage 5 activity. Progression to next stage should not be until a minimum of 48 hours later.
Stage 5	Return to full unrestricted training	If symptoms remain resolved after Stage 5 and Cognigram returned to baseline - progress to Stage 6 activity. Progression to returning to play should not be until at least 14 days have elapsed since the initial injury.
Stage 6	Earliest possible RTP = Day 14	

APPENDIX 4 - CONCUSSION EXPERT PANEL - PLAYER TEMPLATE COVER LETTER AND INFORMATION

LETTER

Date

Dear

You have been referred to a Cricket Australia Inter-disciplinary Panel for the assessment of a complex concussion.

The Panel of independent medical professionals with expertise in concussion has been assembled to review your case and provide a detailed, expert opinion regarding key clinical questions related to your management.

The clinical information (including history, investigations and any previous specialist opinions) and important questions to be addressed have been provided to the Panel by your team doctor.

Some general information is provided in the attached document, but if you have any further questions, please do not hesitate to contact us.

Kind regards

PLAYER INFORMATION SHEET

Background

The management of concussion can be challenging in some cases, especially those with multiple concussions or prolonged symptoms. The role of the Panel is to streamline the management in concussion by establishing an independent panel of experts who jointly assess each case and produce a consensus opinion.

The Panel's priority is to provide you with the best medical advice available, and your medical welfare is the Panel's primary goal.

Process

The Panel may be made up of medical professionals from different fields (e.g. Neurology, Sports Medicine, Neurosurgery, Rehabilitation Medicine, Neuropsychology and Physiotherapy), all with specific expertise in the assessment and management of concussion.

Referral to the Panel can be made by any doctor including a State Medical Officer or the CA CMO.

The Panel members will be chosen as a combination of treating health professionals (already involved in your case) and independent medical professionals (to provide a fresh assessment)

A Panel chair will be appointed, and the Panel will be convened as soon as possible at a time when all the selected Panel members are available. You will be notified of the date, time and venue of the Panel once it has been organised.

The Panel will consider all the information submitted to it, including the referral letter from your team doctor outlining your concussion and related medical history and key clinical questions, any imaging performed, and any other correspondence from other external referrals.

You will spend time with the Panel to provide a detailed history and be examined. There is nothing else that you specifically need to do, apart from be open and honest with the Panel for each of the questions asked.

The player should expect to spend 60 to 90 minutes with the examiners.

You may bring a support person with you to the Panel (such as a partner, parent, manager, etc).

Depending on availability of Panel members, this process can be performed Face to Face, Online or a hybrid of both.

The Panel will consider all the information gathered before and during the consultation. The Panel may provide some brief guidance to you before you leave the Panel, but a detailed Panel report will be prepared and with the player's permission, a copy will be sent to your team doctor and the CA CMO, once all the information has been put together and considered. This may take up to two weeks after the Panel appointment.

The player should discuss the Panel's recommendations with your team doctor.

The Panel's report and documentation will form part of your medical record and, as with any medical record, you have a legal right to access its' contents.

Confidentiality

All information, written, electronic and verbal, obtained in/from the Panel process will be managed with the strictest confidence, as per relevant Health Records and Privacy Acts.

Additional support

Having a concussion which is not following normal patterns of recovery can be very challenging on multiple levels. When combined with the added stress of a Panel review and seemingly uncertain future, this can often negatively affect mood and result in significant stress, anxiety and depression. The Australian Cricket medical and mental health practitioner network is available to support you.

Responsibilities

Player responsibilities

The player is expected to be honest with the examiners, provide all the relevant information, and not deliberately withhold any information.

Examiners' responsibilities

The examiners are expected to treat the player professionally and honestly, in strict adherence to the laws governing medical practice in Australia, and to treat all documents and findings in the strictest confidence, in compliance with the Health Records Act and the Australian Privacy Act.

Player consent form

I _____
(*Insert name)*

have read and understood this player information sheet and give consent to proceeding with this process

_____ / /
Player signature *Date signed*

APPENDIX 5 – AC CONCUSSION RETURN-TO-PLAY ADVISORY PANEL

5A.1. Role of the AC Concussion Return-to-play (RTP) Advisory Panel.

The AC Concussion RTP Advisory panel's (the ***Advisory Panel***) role is to review the medical case notes to determine if there is enough medical support consistent with the concussion management principles of this policy to allow a Participant who has sustained a concussion to return to playing cricket before the mandatory eight (8) days outlined in the GRTP process outlined in ***Appendix 2,*** but no sooner than six (6) days (6 x 24 hour periods) post head impact.

5A.2. Panel Members

The RTP Advisory Panel members will be appointed by the CA Head of SSSM (or EGM of High Performance and National Teams if the Head of SSSM is not available) and will consist of the following at a minimum:

a. The CA Chief Medical Officer (CMO).
   NB: If the CA CMO is not available or has a Conflict of Interest (see 5.A3 below)
b. One (1) of either the Australian Women's Team doctor or Australian Men's Team doctor
c. Two (2) State Medical Officers

5A.3. Conflict of Interest

Advisory Panel members will not be appointed to the panel if the Participant being reviewed is a current member of their state/territory team or w/BBL Club or has other conflict of interest as determined by the CA Head of SSSM.

5A4. Application to the Advisory Panel

Only an AC Doctor responsible for the medical care of a Participant can submit an application to have a case reviewed by the Advisory Panel. The application process must include the following:

a. An email marked Urgent sent ***from an AC email address*** to the CA Head of SSSM AND the CA CMO.
b. The applicant must also follow up with a phone text message or call to confirm receipt of the application within two hours of submitting the application (unless the Advisory Panel confirm receipt of the application before that).
c. The CA Head of SSSM or CA CMO must acknowledge receipt of the application as soon as practical to inform the applicant that the process has commenced.
d. The email must contain a bullet point summary of head impact, subsequent concussion diagnosis and the key reasons why the case should be considered for review.

5A.5. Application times

Applicants must not expect that their applications will be reviewed in less than 48 hours from the time of submitting the application but will take no longer than 72 hours to formally reply to the applicant. It is not guaranteed that a final decision will be made by the Advisory Panel within 72 hours of receiving the application if more information or further consultation is required.

5A.6. Appeal

The decision of the Advisory Panel is final and binding. No appeal process is possible. In the event of an unfavourable determination (or the panel being unable to be convened in time) then the minimum RTP will stay at 8 days.

SCHEDULE 5. CARDIAC SCREENING POLICY