Australian Cricket

CONCUSSION AND HEAD TRAUMA POLICY

Version:	5.0
Date last reviewed:	31 July 2020
Review frequency:	Annual

The CRICKET AUSTRALIA CHIEF MEDICAL OFFICER is responsible for this document.

DOCUMENT CONTROL

Name:	Australian Cricket Concussion & Head Trauma Policy
Status:	Active
Last Updated:	31 July 2020
Owner:	CA Chief Medical Officer
Location:	AMS On request from the CA SSSM Manager
Version Release:	5.0
Next Review Date:	1 May 2021

REVISIONS

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1. PURPOSE

1.1 Australian Cricket 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 *2017 Berlin Consensus Statement on Concussion in Sport* (**Consensus Statement**), *2019 Concussion in Sport Australia: 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 This Policy applies to: (i) all male, female and 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 a blow 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.

3. RELATED DOCUMENTS

3.1 2017 Berlin Consensus Statement on Concussion in Sport

3.2 2019 Concussion in Sport Australia: Position Statement

3.3 2018 ICC Concussion Guidelines

3.4 Sport Concussion Assessment Tool 5th edition (SCAT5).

3.5 CA Playing Conditions.

3.6 Relevant Clothing and Equipment Regulations.

4. PROTECTIVE EQUIPMENT REQUIREMENTS

4.1 The use of helmets by umpires as per the CA Playing Conditions and Clothing and Equipment Regulations.

4.2 The recommended use of products/attachments properly fitted to helmets that provide additional protection for the vulnerable neck/occipital area of the batsman (Neck Guards).

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

4.4 Any helmet which is required to be replaced in accordance with clause 4.4 above, must be returned to CA, so that it may be examined and/or returned to the manufacturer for further analysis and testing.

5. HEAD AND NECK TRAUMA MANAGEMENT

5.1 Trivial and non-trivial head or neck impacts:

(a) Most head and neck impacts are non-trivial

(b) A head or neck impact can be determined as "trivial" if the impact is deemed to have been of such low force that a concussion could not have conceivable occurred; for impacts to the very distal parts of the neck (e.g. trapezius region) an impact could be deemed trivial from a concussion perspective because of lack of significant indirect force to the head.

(c) Any ball impact that directly strikes a batter when bowled by a pace-bowler; or directly strikes a close fielder, bowler or non-striker on the head or neck should generally be considered non-trivial. Impacts to batters off balls from pace bowlers that result in minimal deviation of the ball may occasionally be considered trivial (e.g. fielded on the full by wicketkeeper, first slip or leg slip)

(d) The determination if other head or neck impacts are trivial or not, will be made by the highest-qualified medical person based on the observation of the incident either live or on reviewing video replay. If this person did not see the incident directly and clearly then video must be viewed and commented on in order to classify the incident as trivial

(e) For trivial head or neck impacts, documentation must include a consultation note on the AMS but SCAT5 or CogSport[1] testing are not routinely required.

(f) Medical staff should monitor participants with trivial head or neck impacts for evolving or delayed signs of concussion or vascular injury, in case the original determination of Trivial classification was incorrect.

5.2 If a Participant receives a non-trivial blow to the head or neck (either bare or while wearing protective equipment), whether by ball or otherwise, then the highest qualified medical personnel attending the match/training venue may undertake the Concussion Protocol outlined at Appendix 1 to this Policy, if they deem the blow warrants it or if signalled by the match officials to enter the field of play. Importantly, this can include:

(a) completing an on-field assessment (in accordance with the applicable CA Playing Conditions for a match) to determine whether a concussion or vascular injury is established or suspected. The highest qualified member of the medical team should enter the field of play as soon as practical. If it is immediately obvious that a participant has received a non-trivial head/neck impact, or if one of the umpires

[1] It is possible that mid-season (December 2020-January 2021) we will be required to migrate from Cogsport program to Cognigram program. Cognigram is similar using the same supplier as Cogsport. We have been advised that Cogsport may be retired as a platform at the end of 2020. If this occurs, all references in this policy to Cogsport will be replaced by Cognigram.

signals for medical staff to enter the field, then this assessment should be immediate (i.e. prior to the next ball being bowled). If a head/impact impact was not immediately obvious (e.g. if doctor/physio noticed an impact but unsure whether it was to helmet or to shoulder and player in no obvious distress), then video replay or third-party witnesses should be consulted. If a head/impact is established with short delay but a further ball has been bowled, the highest-qualified medical professional should enter the field for an assessment at the next change of over to make a check.

(b) Concussion is established through the reporting of symptoms and/or observation of signs. Symptoms are generally subjective to the individual (e.g. dizziness, headache, nausea) and signs are generally objective (e.g. loss of consciousness, altered balance, amnesia, disorientation, uncontrolled fall).

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.

(c) if a concussion is suspected or a further assessment is required, following the Concussion Protocol by removing the Participant from the sporting environment and completing the compulsory multimodal concussion-specific (SCAT5 and CogSport) tests in a standardised fashion. For more detail on administering the SCAT5 and CogSport tests see item 10 of this policy.

(d) if a concussion is diagnosed, following the return to play steps contained in the Concussion Protocol.

5.3 If the highest qualified medical personnel 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.

5.4 If a concussion is not suspected after a non-trivial head or neck impact, the highest qualified medical person (doctor if present) at the match or training session must ensure that SCAT5 and CogSport testing of the participant are completed. This should be done at the next break in play if higher risk of concussion (see section 5.11). If lower risk of concussion, it can be completed at the end of the days play. In instances, when a doctor or physiotherapist is not present or available, a paramedic, sports trainer or suitably qualified first aider may make the initial assessment and decision on whether a player should be immediately removed from play, but ensure that a concussion assessment is completed by a doctor or physiotherapist as soon as practical.

(a) If there is still no concussion suspected after the assessments on the day of the impact incident, the doctor or physiotherapist in attendance (or covering the game), must ensure that a clinical review (either phone or in-person) takes place to confirm that the participant's status has not changed. The clinical review must

occur before the next training session or match participation; or within 48 hours of the incident: whichever comes first.

(b) If there is no concussion diagnosed but the nature of the impact or initial presentation suggests that delayed concussion is a possibility after the routine post-impact assessment, the doctor or physiotherapist must ensure that a clinical review (in-person), SCAT5 and CogSport testing take place before the next training session or match participation; or within 48 hours of the incident: whichever comes first to either confirm or exclude concussion diagnosis.

See Appendix 1 for further clarification of the management of participants when concussion is not suspected after a head or neck impact.

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

5.6 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 vascular 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.

5.7 If there is a qualified doctor on duty at a match or training session, the doctor will make any assessments required under this Policy. At matches or training sessions where a qualified doctor is not present, a physiotherapist, paramedic, sports trainer, or suitably qualified first aider will be present to make any necessary initial assessments, however;

a) he/she must refer the Participant to a doctor as soon as possible if there is any suspicion of a concussion or hospital if he/she suspects a serious head/neck injury);
b) in the event of a paramedic, sports trainer or suitably qualified first aider making the initial assessment, the doctor and/or physiotherapist allocated to the match/training should be notified of the incident, and can direct what further review is required;

CA supports a conservative approach to the diagnosis and treatment of concussion and head/neck injuries.

5.8 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.

5.9 After a non-trivial blow to the head/neck, if any of the following are present:

a) loss of consciousness for any time;
b) amnesia – inability to remember recent details;
c) inability to keep balance;

d) vomiting not explained by another cause, such as known gastroenteritis; and/or
e) tonic posturing or fitting
f) visual field defects
g) other signs of brain ischaemia,

then the diagnosis of concussion (or more serious head trauma) is established. These presentations are considered as "**Category 1**" clinical findings that are diagnostic of concussion.

5.10 Where available, broadcast footage must be used to help determine whether a concussion or serious head/neck injury should be suspected. For a clearly serious head injury, a highest qualified medical personnel should immediately run on the field as part of emergency response without waiting to access a replay. However, in instances where the doctor or physiotherapist appropriately determines that it is not necessary to attend to the participant on the field of play, or attends to the participant on to the field of play and then decided a participant can continue without further assessment; a video replay of the incident must be checked (where available) to assist the medical personnel in double checking whether a concussion or serious head/neck injury should be suspected. Where the video cannot be checked prior to the decision on whether the player needs to leave the field, the highest qualified medical personnel can instead ask the umpires whether they observed any of the signs of concern immediately after impact.

5.11 Mechanisms and presentations known to be of higher risk of concussion in cricket, include (but not limited to);

(a) (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 rebounds back in front of the batter (towards to the bowler) is a high risk mechanism for sustaining concussion; or
(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 if this mechanism occurs. By contrast, mechanisms known to be of lower risk of concussion include but are not limited to (i) Impact to the grille / front of the head/neck/helmet as opposed to the back / side; (ii) Glancing blow where ball does not substantially change trajectory post impact . These do not exlude a diagnosis of concussion but are of lower risk

(b) a player reports feeling "less than normal" on SCAT5 or CogSport symptom or reports severe grade of symptoms
(c) a player has slower than both normal/average performance on CogSport Detection or Identification (sections 1 and 2) CogSport tasks

5.12 More subtle symptoms (e.g. headache, dizziness, feeling of vagueness), especially if low severity and without co-existing symptoms, are less conclusive, and in these scenarios, the Concussion Protocol in Appendix 1 should be completed. These presentations are sometimes referred to as "Category 2" clinical findings that are diagnostic of concussion.

5.13 The doctor or highest qualified medical personnel (physiotherapist if no doctor present, and first aid provider if no physiotherapist or doctor) on duty will make the final diagnosis of whether a concussion has occurred. If no doctor 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.

6. CONCUSSION SUBSTITUTE

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

6.2 For matches where a Concussion Substitute is available, the highest qualified medical personnel 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 highest qualified medical personnel 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

(c) 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) when a concussion is resolved and the Participant is available to participate in the match again (if they have not already been substituted out of the match). A player will not be allowed to participate in the match again until the relevant medical personnel formally notifies the match official of the concussion being resolved.

7. RETURN TO PLAY

7.1 If a concussion has been diagnosed the final determination on whether a participant may return to play, must be made by a qualified medical officer. In case of uncertainty, the qualified medical officer should always adopt a conservative approach to return to play.

7.2 The return to play process will be determined by the Concussion Protocol in Appendix 1. Importantly:

(a) the Participant must not return to play on the same day (i.e. for the match in a limited overs match) if the diagnosis of concussion is established;

(b) the medical officer should not be influenced by the player or umpire, any coach, administrator or support staff or others suggesting an early return to play;

(c) regular medical reviews are required (e.g. daily or every second day) that should encompass: a medical assessment including a comprehensive history and neurological examination; determination of the clinical status of the Participant including whether there has been improvement or deterioration since the time of injury; and 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 staged physical activity must not occur for at least 24 hours after a concussion diagnosis. After the initial 24 hours, the Participant may return to staged physical activity once they are able to complete their usual daily activities without concussion related symptoms or the Participant is cleared under clause 7.3;

(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. A Participant may be required to sit out the duration of a multi-day match and/or further matches if required through the medical review.

7.3 A Participant must not return to train for or play cricket until clearance has been provided by an AC MO (or other suitably qualified doctor) after conducting an assessment of the player (with the clearance and assessment to be documented on the AMS).

7.4 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.

8. PATHWAY PLAYERS

8.1 Managing concussion in pathway (adolescent) players requires a more conservative approach. The Child SCAT5 has been developed for use by medical professionals for the assessment of children between the ages 5-12 years. For players aged 13 years or older, the SCAT5 / CogSport tests can be used.

Child SCAT5 - http://bjsm.bmj.com/content/bjsports/early/2017/04/26/bjsports-2017-097492childscat5.full.pdf

8.2 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.

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

9. DOCUMENTATION

9.1 All case notes related to a concussion or suspected concussion (and all other head traumas) must be documented on:

(a) the AMS (or through a separate incident report if the Participant is an umpire); **and**

(b) a Head Trauma Report Form completed on the Athlete Management System and sent to the CA Chief Medical Officer and CA Sports Science and Sports Medicine Manager

(c) other than for trivial head impacts, at least one SCAT5 on the AMS and one CogSport test (results uploaded onto AMS) on either the day of the injury or the following morning before playing / training.

The CA Chief Medical Officer will maintain, and make available as requested, a Head Trauma/Concussion Incident Register.

9.2 The case 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;

(b) whether any influence was attempted by the Participant or any other person involved in the match;

(c) the clinical reasoning if the SCAT5 assessment or CogSport Concussion Test were considered inconclusive; or

(d) where any clinical judgement overrides the SCAT5 assessment or CogSport Concussion Test results.

9.3 Where any case notes are taken in relation to 9.2 (a) or (b), a separate notification containing these notes and any other relevant details must also be sent to the CA Chief Medical Officer and Sports Science Sports Medicine Manager as soon as possible.

9.4 The return to train/play written notification described in section 7.3 must also be clearly documented on the Athlete Management System.

10. MINIMUM REQUIREMENTS FOR CONCUSSION TESTING

10.1 In respect of each domestic cricket season, each State AC MO must complete:

(a) For players participating in domestic competitions including State/WNCL and the W/BBL, a baseline (where possible) CogSport Concussion Test on 100% of the

male and female contracted players before commencement of the cricket season, excluding those who completed a baseline CogSport Concussion Test in respect of the immediately previous cricket season; and

(b) For all pathway players participating in the CA U17s Male, U18s Female and U19s Male National Championships, a baseline CogSport Concussion Test before commencement of the National Championship (as applicable), excluding those who completed a baseline CogSport Concussion Test in respect of the immediately previous cricket season.

10.2 The Concussion Protocol outlines the minimum requirements for conducting a SCAT5 assessment and a CogSport Concussion Test. All concussion assessments should be conducted in a standardised fashion. CA has therefore set as minimum requirements for conducting assessments the following:

(a) Adequate time should be allowed to conduct the appropriate medical assessment, including the SCAT 5 and/or CogSport. For example, a concussion diagnosis cannot be excluded in less than 10 minutes; and

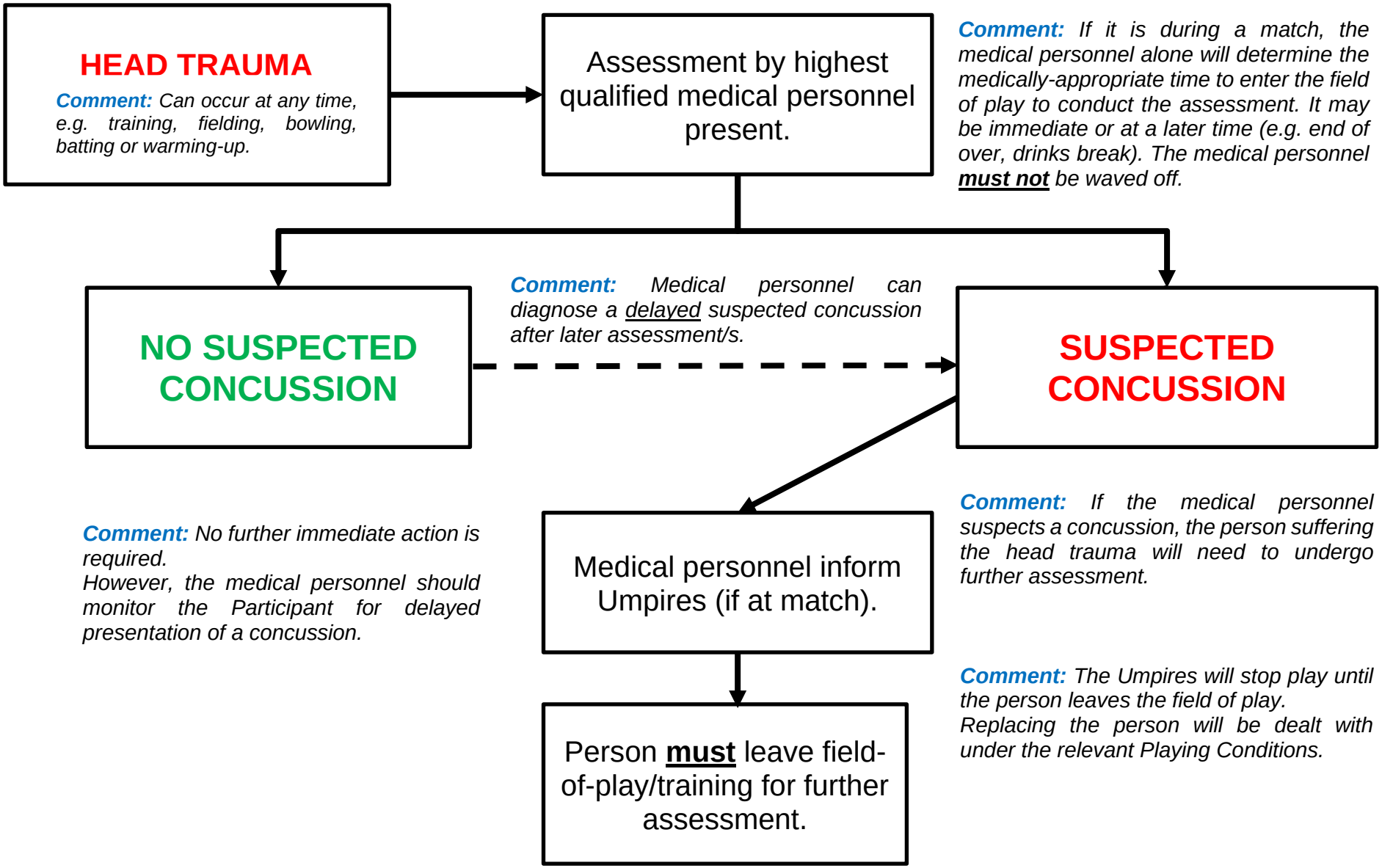
(b) Adequate facilities should be provided for the appropriate medical assessment. At a minimum, off-field assessments should be performed in a distraction-free environment (e.g., locker room, medical room) rather than on the sideline. No staff other than medical staff should be present while the assessment is being undertaken, unless permitted by the medical staff or expressly requested by the participant. Video replays of the impact may be consulted to identify any concussion signs or symptoms.

10.3 The diagnosis of a concussion (and/or fitness to train and play) is a clinical judgment, made by a medical professional. Neither the SCAT5 nor the CogSport Concussion Test 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 SCAT5 assessment or CogSport Concussion Test results when inconclusive and the AC MO must keep detailed clinical notes as required under section 9 above.

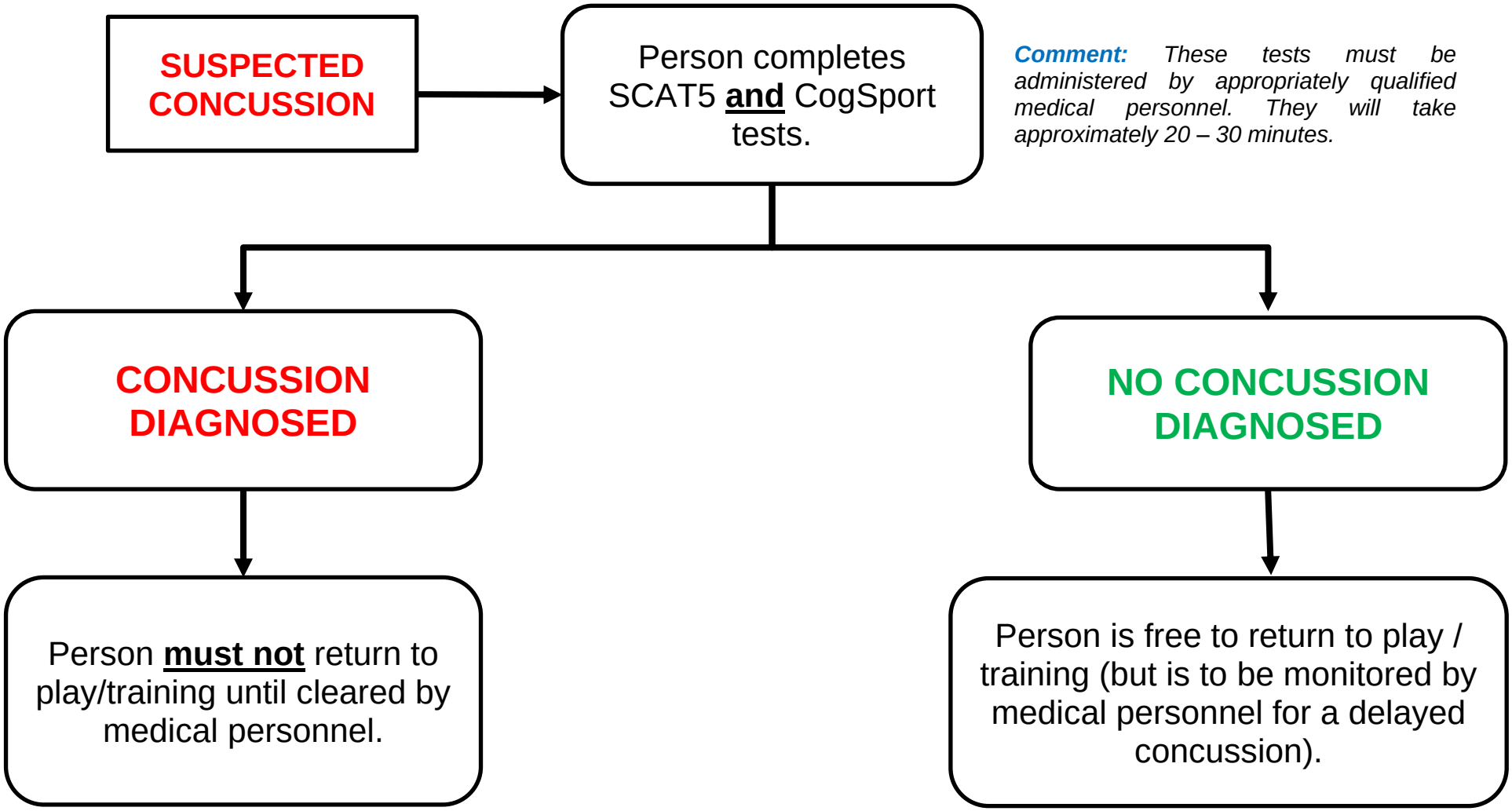
10.4 The diagnosis of concussion cannot be excluded until a minimum of 48 hours after the head or neck impact to account for possible delayed concussion.

APPENDIX 1 – CONCUSSION PROTOCOL

1. ASSESSMENT: AFTER A HEAD TRAUMA



2. DIAGNOSIS: AFTER A SUSPECTED CONCUSSION

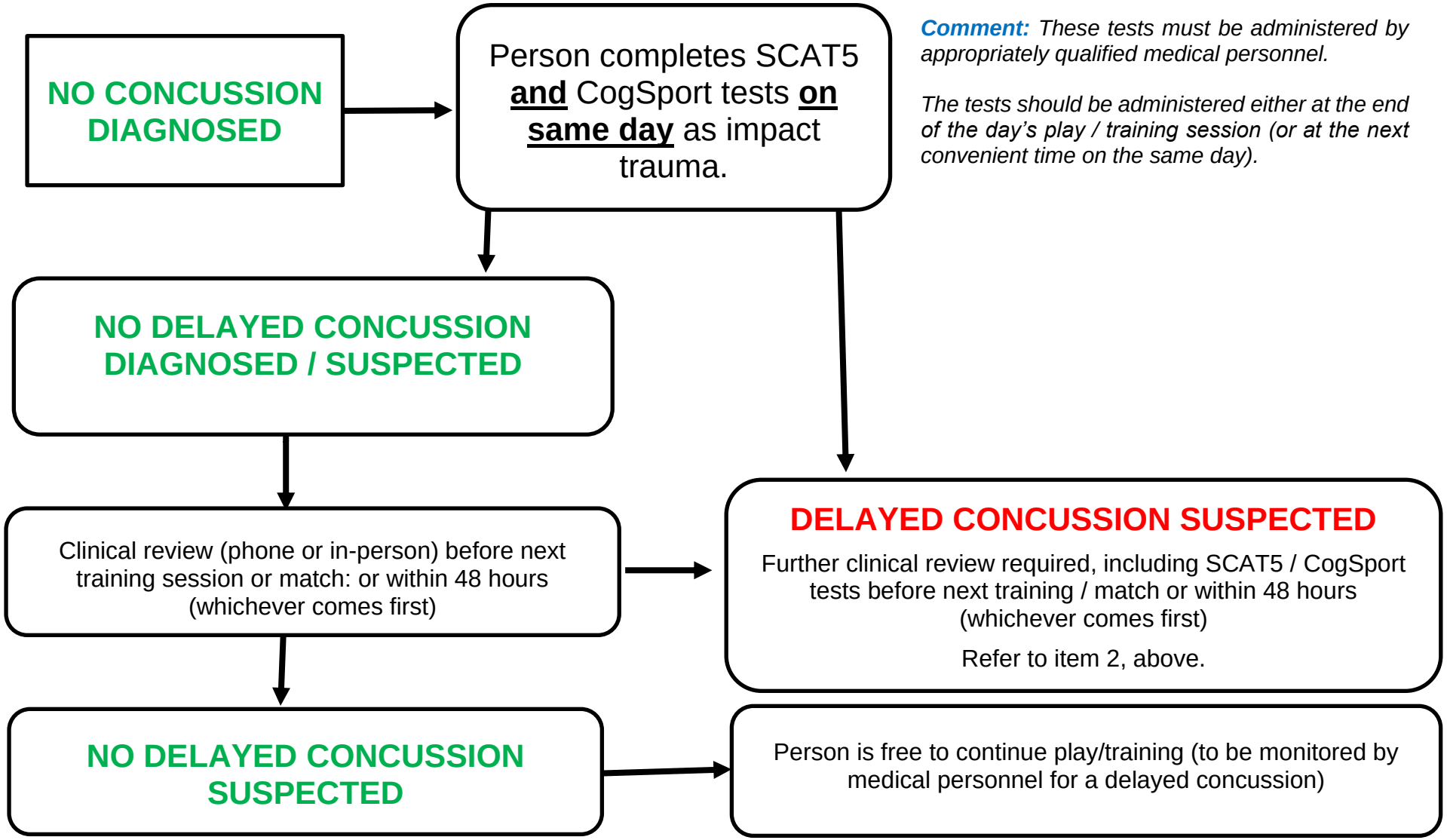


Comment: *These tests must be administered by appropriately qualified medical personnel. They will take approximately 20 – 30 minutes.*

IMPORTANT: *The activation of the concussion substitute is **NOT** a medical decision, however, can only be made after the diagnosis of a concussion. This decision to activate will need to be made by Team Management in accordance with the relevant Playing Conditions.*

However, Team Management may wish to consult with the medical personnel regarding the nature of the concussion prior to making their decision, recognising that the medical personnel is unlikely to be able to then provide a precise return to play time.

3. FOLLOW-UP: AFTER NO CONCUSSION DIAGNOSED



Comment: *These tests must be administered by appropriately qualified medical personnel.*

The tests should be administered either at the end of the day's play / training session (or at the next convenient time on the same day).

4. RETURN TO PLAY

DIAGNOSED CONCUSSION

After 24 hours, Person can be considered for commencing RTP process if conditions satisfied.

CONDITION: After the initial 24 hours, the Person may return to staged physical activity once they are able to complete their usual daily activities without concussion related symptoms or the Participant is cleared under clause 7.3 of the Policy to do so.

Person must be prescribed staged activity by medical personnel.

Medical personnel monitors staged activity prior to providing full clearance to play / train.

Comment: *These tests must be administered by appropriately qualified medical personnel.*

Person completes SCAT5 **and** CogSport tests, and clinical assessment prior to return to play. If at baseline (clinical assessment and SCAT5/ CogSport):

NO **YES**

Concussion not resolved.
Continue clinical review and management of the concussion by medical personnel.

Comment: *The medical personnel is responsible for determining the appropriate staging for activities.*

Concussion resolved. Person returns to play.