Written evidence submitted by The Rugby Football League

DCMS SELECT COMMITTEE INQUIRY INTO CONCUSSION IN SPORT
RESPONSE FROM THE RUGBY FOOTBALL LEAGUE

1. SUMMARY

- *The Rugby Football League (RFL) has protocols across the game in relation to concussion (covering recognition, removal and rehabilitation) which are consistent with equivalent sports and, where applicable, in line with the Berlin Conference Consensus Statement on Concussion in Sport.*

- *The RFL's protocols have evolved as a result of increased knowledge and understanding of concussion.*

- *The RFL's protocols differentiate between levels of the game to reflect the different resources (including medical) available.*

- *The RFL will continue to seek to monitor and follow best practice (based on research and scientific evidence) in relation to concussions and head contact.*

- *Education of all involved at all levels in all sports (directly or indirectly) is essential: the RFL is very supportive of a centralised, cross sports, education campaign. The RFL believes that, amongst others, this should cover participants, players, coaches, teachers, medical practitioners and key influencers within sporting environments.*

- *The RFL will continue to be guided by broader scientific evidence and undertake scientific research to inform decisions. Where applicable, this will distinguish between men's and women's Rugby League.*

- *The RFL believes that collaboration between sports is important to ensure that the benefits of research projects are maximised. Collaboration between sports will ensure that evidence is developed in a timely manner, with sufficient data to draw robust conclusions from findings. Given the differing financial status of sports, broader financial support for research, would likely facilitate research in a more collaborative and cohesive manner. This includes having:*

    - *clarity on the specificity of research questions and design of studies; and*
    - *alignment of research practices/protocols across sports for minimum standards on research quality and further interpretation in line with research questions on contact/collision sport.*

- *In relation to all our work, we will continue (in conjunction with RL Cares – the sport's charity) to prioritise the welfare of existing and former players.*

- *More generally, team sports have been demonstrated to be of benefit to children and Rugby League has been shown to have a material positive social impact on Lower Socio-Economic Group communities. In making decisions it is important that the benefits and advantages of sports are given appropriate weighting.*

- *The RFL believes there is a role for the Government:*

- *in leading on a national cross sports education campaign;*
- *promoting the physical and mental health benefits of teams' sports (including contact sports); and*
- *in the co-ordination of and investment in research.*

2. INTRODUCTION TO THE RFL AND RUGBY LEAGUE

This response is submitted by the Rugby Football League (RFL).

The RFL is the Governing Body for Rugby League in the UK and is responsible for governing, protecting and growing the sport and Rugby League participants from the grassroots game to the England national teams. Further information about the RFL can be found at: www.rugby-league.com. The RFL is responsible for setting the regulatory framework for the whole of Rugby League.

All players are required to register with the RFL; however, where applicable, are employed by individual clubs.

Rugby League is played in various formats. The most common is the 13 a-side game, which is played at youth and adult levels, by male and female players.

A 13 a-side Rugby League match requires players to cover 4000 – 8000 m (e.g., women's Super League and International (Emmonds et al., 2020), and men's Super League (Dalton-Barron et al., 2020)), at low and high intensities. Rugby League players also undertake tackles and ball-carries during a match. Forwards and backs (the playing positions in Rugby League) are involved in on average 25 and 13 tackles per match, and both playing positions are involved in on average 11 ball carries per match (Naughton et al., 2020).

3. CURRENT RFL REGULATORY FRAMEWORK RELATING TO HEAD CONTACT AND CONCUSSION

Parts of the RFL's regulatory framework distinguish between the 'professional game' and the 'community game'.

From a regulatory perspective, the professional game includes the top 3 tiers of the Men's Game (Super League, Championship and League 1) and the Academy and Scholarship competitions; however, in some areas, there is also a distinction between the Super League and other tiers: this reflects the different resources available. The community game covers all other levels of the game.

Historically the Women's Game has been entirely governed by the community game framework; however, to reflect the growth in the Women's game over the last few years, in relation to the Women's Super League, the regulations for the Women's Super League are beginning to evolve to incorporate aspects of the professional game framework, including medical standards and the disciplinary function.

A. LAWS OF THE GAME

The Laws of the Game (which apply to all tiers of the Game) include that a player is guilty of Misconduct if he: (a) trips, kicks or strikes another player; or (b) when effecting or attempting to effect a tackle makes contact with the head or neck of an opponent intentionally, recklessly or carelessly; or (c) uses any dangerous throw when effecting a tackle; or (d) uses

a shoulder charge on an opponent; or (e) behaves in any way contrary to the true spirit of the game (NB. this includes dangerous contact).

Part of the rationale for the above Laws is to seek to protect the health of players. The RFL has a range of systems and processes in place to seek to ensure that the Laws are followed and/or that any breaches are appropriately sanctioned.

On-Field Policies

During a match, any breach of the above Laws, could be sanctioned by the Referee with options ranging from a penalty to a player being temporarily (yellow card) or permanently (red card) removed from the field of play.

The Laws of the Game are supported by On-Field policies that provide a framework for implementing the Laws in given situations.

The On-Field policies provide that in more serious cases of foul play a player may be either temporarily or permanently removed from the field of play: with the following being those listed most relevant to head contact.

- High tackles with direct contact with the head or neck which are deemed forceful.

- Dangerous throws in which the head or neck of the attacking player make forceful contact with the ground.

- Shoulder charges which make forceful contact with the head or neck of the attacking player or make forceful movement of the head or neck of the attacking player (whiplash).
- Crusher tackles in which a defending player has a grip/hold of the attacking player with both arms and applies unnecessary pressure or force to the head/neck/spinal column of the player.

In the professional game, the referee is also empowered to assist with the smooth operation of the concussion rules (see section c. below) including that:

- Where a player refuses to follow the instructions of the medical staff to leave the field of play, the medical staff may ask the referee to instruct the player to leave the field.

- If a match official has concerns that a player may have suffered a concussion he may stop play and call the medical team onto the field of play to express his concerns and ask them to examine the player.

Video Referee Protocols

Where Super League, Challenge Cup or international matches are broadcast live, a video referee will be present. The video referee can intervene during a match to adjudicate on try scoring situations, restarts of play and incidents of foul play.

In the case of foul play, the scrutiny afforded by this instant replay technology acts as a deterrent against foul play for players in the knowledge that even if the on-field officials miss an incident, it can be instantly flagged to them owing to the multiple camera angles available. This is an important tool for promoting player safety and reducing foul play.

The video referee may intervene to assist the referee in the following circumstances where foul play has been committed:

- If a penalty has been awarded, the video referee will assist in identification of players and give clarification to the referee once a replay has been seen. The video referee can advise the referee of his opinion as to the outcome of the incident but cannot overturn the initial penalty unless there is prior foul play warranting a sin bin or dismissal. The final decision will lie with the on-field referee.

- If a penalty has not been awarded then the video referee will only advise on foul play if, in his opinion, it is of a serious enough nature for a player to be sin binned or sent off. The final decision will lie with the on-field referee.

- If after the play the ball, the video referee can inform the on-field referee that there has been an incident that should be placed on report (if the on-field officials have not picked up on the incident) but a penalty will not be awarded and play will resume at the point where the referee stopped the game to place it on report. If a player immediately leaves the field of play, then the interchange is a 'free' interchange.

Disciplinary Action

In addition to any action that might be taken on the field of play, disciplinary action may also be taken following matches. The purpose of this is to ensure that appropriate sanctions are imposed for any breaches of the Laws of the Game including those which could impact player health and welfare. The potential for disciplinary action to be taken after matches and for sanctions to be imposed (including match bans and fines) acts as a deterrent to foul play and an incentive for players to ensure that they do not breach the Laws and to ensure their technique, particularly when tackling, is correct.

Professional Game

- In relation to the professional game, the decision on whether to charge a player with Misconduct following a match is made by a Match Review Panel. The Panel is made up of the RFL Compliance Manager (who provides the administrative support to the Panel) and up to 4 side members drawn from people with appropriate expertise (such as former players, referees and coaches). Any hearings are heard by the Operational Rules Tribunal which is made up of a legally qualified chair (usually a judge or retired judge) and 2 side members with appropriate experience of the game. Each member of the MRP have received training from the RFL Chief Medical Officer in relation to potential signs of concussion. All Operational Rules Tribunal members and Match Review Panel members have three training meetings per annum which can include information regarding contact with the head.

- In the case of matches involving Super League teams, all matches are reviewed in full by a member of the Match Review Panel to identify incidents of potential Misconduct which should be considered by the Panel. The identified incidents are then considered by the Panel on the Monday morning immediately following the round of matches. One of the key areas of focus for this group is to ensure that Player safety and wellbeing is preserved, this is considered within the review and deliberation process. This includes situations which may carry the risk of compromising players' health in relation to head injuries.

- In relation to all other tiers of the professional game, the Panel meet on the Thursday following each round of matches and consider any incidents that have been reported

by Match Officials or otherwise brought to the attention of the Panel. There are 2 side members in attendance for these meetings.

- In relation to each incident the Match Review Panel consider, the Panel has the following options:

  - Charge the player with On Field Misconduct (an "Offence"). In which case for cases graded A-C, a Penalty Notice will be issued, or for cases graded D-F (or in exceptional A-C grade cases) the matter will be referred directly to the Operational Rules Tribunal for determination.

    The grades and normal suspension range for each grade are listed below:

Grade	Normal Suspension Range
A	NFA - 1 match
B	1-2 matches
C	2-3 matches
D	3-5 matches
E	4-8 matches
F	8+ or suspension period

    Depending on the severity, breaches of the applicable Laws, could fall within any of the above Grades.

    Acts which are deemed to be of a careless nature would be graded by the Match Review Panel at Grades A or B: for example if a ball carrier dips just prior to contact with a tackler. Reckless acts, such as making a genuine attempt to tackle but doing so in a reckless manner would be graded at B to C. Intentional acts carry the most severe sanctions of D to F: these would be acts such as no attempt to tackle legitimately and/or with violence in the contact. There are aspects of fluidity within the grading process to take into consideration the merits of each act.

  - Caution the Player – in which case, subject to the player's right of appeal to an Operational Rules Tribunal, the Caution will be placed on the Player's record.

  - Decide there is no case to answer (in which case the Panel may still send the player a warning/advice letter).

  - Where a player has been dismissed from the field of play, the Panel may deem the referee's decision to send the player from the field of play sufficient punishment and place this finding on the player's record.

  - Refer the matter to the Compliance Manager for further investigation.

- In the case of Offences not automatically referred to the Operational Rules Tribunal, a charged player may:

  - Accept the Penalty Notice – in which case they will serve the suspension outlined in the table above (whether this is at the top or bottom of the range depends on the player's previous record – players with a poor disciplinary record are more likely to receive the top range of the sanction).

- Challenge the imposition of the Penalty Notice to the Operational Rules Tribunal on the grounds of either guilt or improper grading.

- For all Charges heard by the Operational Rules Tribunal, following submissions from the Compliance Manager and the charged Player / Club, the Tribunal determine whether the player is guilty of Misconduct and, if so, the applicable Grade and Sanction. Where a Player is found guilty, in addition to any suspension, a fine is also imposed (the amount dependent on the tier of competition).

- The Sentencing Guidelines include mitigating and aggravating factors which the Tribunal may consider in determining sanction. In respect of injury caused, the Tribunal may consider the following points by way of aggravating factors:

  - Violence

  - Injury caused – If the Misconduct has caused an injury to an opponent, this may result in a higher penalty than if no injury had occurred. For the avoidance of doubt, if an incident has caused a player to receive a concussive injury the Operational Rules Tribunal should consider it as an aggravating factor.

  - Length of time an injured opponent is likely to be out of the game.

- There is the potential of a further appeal to an Operational Rules Tribunal Appeal Panel; however, this is only on limited grounds.

The rigorous approach set out above and potential sanctions, acts as a significant deterrent to deliberate foul play and a significant incentive to ensure correct tackle technique to avoid contact with the head or neck of opposition players.

Community Game

- In relation to the community game, the decision on whether a player is guilty of Misconduct following a match is made by relevant Competition Disciplinary Tribunals. The Panel is made up with an appointed Chair and up to three side members drawn from people with appropriate expertise (such as former players, match officials, coaches, and club officials).

- All Disciplinary Panels have the power to:

  - Determine whether a Misconduct offence has been committed.

  - If a Misconduct offence has been committed, determine the appropriate sanction in accordance with the RFL's Operational Rules and sentencing guidelines.

  - Where it deems appropriate, refer the matter to any appropriate body.

- Most panels meet monthly; however, this is dependent on the number of cases to be dealt with. Not all games within the Community Game are recorded so it is necessary to rely on the match officials providing written reports on any incidents.

- Disciplinary Panels only hear cases that are referred to them as a result of reports received from the match officials. Usually these would only be as a result of an on

field dismissal but other cases can be referred if a serious incident is reported to the competition administrator.

- Sanctions range from a warning and advice as to technique through to an indefinite ban based on a number of factors including severity of injury caused and whether the tackle was deemed to be careless, reckless or intentional.

- Competitions also have the power to fine players who are found guilty of Misconduct and fines range from £10 to £20 per match a player is banned for. This only applies in the adult game.

B. CLINICAL ADVISORY GROUP

Whilst ultimately the RFL Board set the regulatory framework for the sport, they are guided by a Clinical Advisory Group.

The Clinical Advisory Group has recently become a formal sub-committee of the RFL Board to reflect the importance of its work and recommendations.

The Clinical Advisory Group is made up predominately of individuals who have clinical roles within the Game representing a multidisciplinary approach. The role of the Clinical Advisory Group includes to:

- Collectively advise on the evolution of the Medical Standards across the Game.

- Discuss and develop new guidance on medical matters for the Game.

- In relation to the above, consider developments in other similar sports.

- Consider any recommendations from any sub-groups established by the Group.

- Provide recommendations to the Board on matters arising, as and when required.

- Input, as appropriate, into other groups including but not limited to the Laws Committee.

Any future changes to the Game itself would be guided by scientific research – adopting an evidence-based approach to decision making.

C. MEDICAL STANDARDS AND OTHER APPLICABLE REGULATIONS - PROFESSIONAL GAME

The majority of regulations relating to concussion in the professional game are set out in the Medical Standards. The Medical Standards are reviewed ahead of each season with input on relevant areas from the Clinical Advisory Group (as requested). Updates to the Medical Standards are shared with clubs (including CEOs) and club doctors.

Any breach of the Medical Standards is Misconduct and is investigated by the RFL Compliance Manager and, where appropriate, sanctions imposed or the matter referred to an Operational Rules Tribunal.

Summarised below are the key provisions of the Medical Standards relating to concussion and head contact. Where applicable these are in line with the Berlin Conference Consensus Statement on Concussion in Sport.

- **Clinician at Matches** - A minimum number of appropriately trained and qualified clinicians are required to be present at matches.

    - Clinicians are required to have a valid sport specific advanced pre-hospital trauma course. The RFL's IMMOFP (Immediate Medical Management On the Field of Play) qualification is accredited by the Royal College of Surgeons Edinburgh and contains Rugby League specific pre-hospital trauma care education. The education includes interactive pre-course learning, lectures, and practical scenario-based teaching on head injury and concussion recognition, removal and rehabilitation in line with the RFL Medical Standards.

    - Where 'doctor or equivalent' is referred to, this means a Doctor, Advanced Nurse Practitioner or Paramedic; however, individuals who fall in the latter 2 categories require evidence of experience in an acute setting and sign off by the RFL's Chief Medical Officer to ensure they have the appropriate clinical competencies to undertake the role.

    - Where 'physiotherapist or equivalent' is referred to, this means a Physiotherapist, Sports Therapist or Sports Rehabilitator; however, again, the latter 2 require sign off by the Chief Medical Officer.

    - Super League clubs are required to have at least 1 doctor and 1 physiotherapist at all matches and a 2nd doctor or equivalent at home matches.

    - At Championship level, the home team is required to have a doctor and physiotherapist or equivalent at all matches and the away team is required to have a physiotherapist or equivalent. The home team doctor deals with any injuries to either team.

    - At all other professional game matches, the home team is required to have a doctor or equivalent and physiotherapist or equivalent and the away team is required to have a physiotherapist or equivalent. The home team doctor or equivalent treats all players and match officials.

    - For away matches, a physiotherapist or equivalent is required to travel on the team bus in case of delayed concussion or other injuries.

- **Clinicians at Training** - A minimum number of appropriately trained and qualified clinicians are required to be present at training sessions.

    - At Super League, it is best practice for a physiotherapist to be present. If a physiotherapist is not present, it is mandatory for a sports therapist or sports rehabilitator to be present.

    - All Super League coaching and support staff are required to have an approved First Aid qualification or training.

    - At all other tiers of the professional game, it is best practice to have a physiotherapist, sports therapist or sports rehabilitator present. If this is not possible, it is mandatory for a qualified first aider to be present. It is best practice for all coaching and support staff to have a first aid qualification.

- **Mandatory Medical Equipment** – The Medical Standards list certain medical equipment and drugs which must be present at all Matches. The Mandatory equipment required allows medical care to be provided for all treatment, including emergency head injury management.

- **Baseline Assessments** - Before each season, there is a mandatory baseline assessment including CogniGram, and SCAT5 for all professional players. It is also mandatory at Super League first team level and best practice for all first team players at other clubs for a full neurological assessment baseline pre-contact. Taking part, or a Club allowing a player to take part, in contact training or matches without a baseline would be serious misconduct.

    - SCAT5 - is a standardised tool for evaluating concussions designed for use by physicians and licensed healthcare professionals, used for athletes aged 13 and over.

        - Preseason SCAT5 baseline testing can be useful for interpreting post-injury test scores. The screens are undertaken by a clinician Areas of assessment include immediate assessment (circumstances relating to the athlete following initial first aid provision). The next step is a consideration to the athlete's background including questions on recent concussions and symptom scoring by the athlete. Step 3 involves cognitive screening on orientation, immediate memory and months in reverse. Stage 4 includes neurological screening including balance testing, tandem gait, finger to nose. Stage 5 is the delayed recall stage (can the athlete recall any of the immediate recall questions asked 5 minutes earlier).

        - The pre-season baseline is used as a comparative marker for assessment following a concussion or suspected concussion within the season. Should a player's baseline return as lower than the pre-season score this should be used as part of (never standalone) a clinician's concussion assessment. Individuals who pass a SCAT5 assessment may still be diagnosed with a suspected concussion.

    - CogniGram - The CogniGram platform is a scientifically valid computerised test system intended to assist healthcare professionals with the rapid assessment of cognition.

        - The system can be used by athletes from age 6 to 99. The tests take approximately 10 – 15 minutes and provide fast results with the capability of detecting subtle changes in cognition. The CogniGram test consists of four test components: Detection Test, which focuses on Psychomotor Function; Identification Test, which focuses on Attention; One Card Learning Test, which focuses on Learning; and One Back Test, which focuses on Working Memory. Once all four test components are completed, individual test performance is then compared against Cogstate's proprietary normative dataset, established in pre-season.

        - This tool is used in conjunction with symptom checklists and balance assessment. It is important that it is not relied upon as the only decision-making tool within the process.

- Where a player cannot establish a CogniGram baseline, Clubs should arrange an alternative baseline such as King Devick.

- CogniGram baselines are used in the Graduated Return to Play Protocols to assist in identifying signs of a player's recovery from a concussion.

- **Removal from the Field of Play and Assessment**

- The RFL Medical Standards detail the signs and symptoms of concussion in line with the criteria within the Berlin Consensus for Sports Related Concussion.

- Players must be removed from play (or training) if they have any possible signs or symptoms of concussion or if the medical staff suspect they may have concussion for another reason (e.g., reliably informed). In circumstances of diagnostic uncertainty when concussion is not an obvious or clear diagnosis, medical staff are encouraged to act cautiously and 'if in doubt, sit them out'- reporting this as a possible/probable concussive event and implementing the cautious return to exercise as appropriate.

- In the case of 'Category One' symptoms, it is assumed a concussion is present without the need for further qualifying assessment in order to diagnose this. The player must be examined for any more serious consequences of head injury and cannot return to the field of play under any circumstances. Category One symptoms are:

    - Clinical features including abnormal neurological signs of a serious or structural head and/or neck injury requiring emergency management and hospital transfer
    - Confirmed loss of consciousness
    - No protective action in fall to ground
    - Traumatic convulsion
    - Impact seizures including tonic posturing, tonic/clonic jerks
    - Loss of body tone (floppy)
    - Ataxia – unsteady on feet
    - Memory impairment
    - Disorientated or confused, dazed blank/vacant stare or not their normal self
    - Behavioural change atypical of the player

- In the case of 'Category Two' symptoms, concussion may be a possible cause, and consequently the player must undergo a Concussion Assessment by an appropriately trained clinician to determine whether he can return to the field of play. Category Two symptoms are:

    - Possible loss of consciousness
    - Loss of responsiveness (player motionless until medical staff arrive)
    - Possible impact seizure including (possible tonic posturing, tonic/clonic jerks)
    - Possible balance disturbance, specifically slow to stand following contact with a delay greater than 10-15 seconds
    - Suspected facial injury or facial fracture
    - Any other sign or reported symptom that may indicate concussion

- In 2014, Concussion Interchanges were introduced: this allows a player to be removed from the field of play for a Concussion Assessment without losing an interchange: the intention being to prioritise the safe management of head injuries and support medical staff.

- Whilst responsibility for medical judgements sits with the clinicians, to support the purpose of the regulations, if a Match Official has concerns that a player has suffered a concussion, he may stop play and all the medical team to examine the player.

- A player can only be subject to one Concussion Assessment per game.

- A Concussion Assessment allows a player with a suspected concussion to be removed from play for a minimum of 15 minutes to be assessed by a doctor using standardised tests and clinical judgement.

- During the Concussion Assessment SCAT5 (detailed above) serves as an aid to clinical judgement.

- Where a Player returns a SCAT5 comparable to their pre-season baseline, then the Doctor or Equivalent may use their clinical judgement to determine whether the Player has suffered a concussion. Where the doctor or equivalent deems the player is fit to return to play, the player may do so at the end of the 15-minute assessment period (not earlier).

- A Doctor or Equivalent, in their match-day clinical assessment, may not overrule an adverse SCAT5.

- **Pitchside Video Replay System**

  - At Super League, it is mandatory for there to be a pitchside video replay system at all matches for use by medical staff to assist with the identification of concussion symptoms. As set out above, if this footage shows that the player has had a Category One Symptom, they are not permitted to return to the field of play.

  - At all other levels of the Professional Game, it is best practice.

- **Immediate After Care** – The Medical Standards set out the steps that should be followed where a player has been diagnosed with concussion. This includes the supervision of a responsible adult and the provision of a patient information leaflet on head injuries and concussion.

- **Mandatory Reporting**

  - All concussions or potential concussions (in matches and training) have to be reported to the RFL by the applicable club doctor. Each concussion or suspected concussion must be reported within 24 hours of the incident. This applies to each level of the professional game. Should a player display or report delayed onset of symptoms, this must also be reported within 24 hours of the clinician being informed.

- Where a concussion assessment has taken place and, the doctor has determined that the player is not concussed, a copy of the SCAT5 must be submitted with the Concussion Report.

- Prior to a player being able to play or train, their club must submit a return to play form. A copy of the CogniGram report and where applicable, the SCAT5 must be submitted with the return to play documentation.

- In the case of players who have had 2 concussions in 12 months or a difficult concussion and have been referred to a specialist for assessment, a copy of the specialist report must also be submitted prior to the player's return to play.

- **RFL Monitoring**

- In relation to the Super League, the Match Review Panel report back to the RFL on potential concussions or issues of concern. The information obtained includes match footage plus a brief outline of the individual(s) involved; any mechanism of potential injury; any signs or symptoms displayed of potential concussion; whether the instance involved actions deemed to be accidental, misconduct, poor technique or unknown (as not demonstrated within the footage). This information is then reviewed by the RFL and compared to information received from the applicable Club. Any discrepancies or concerns are referred to the Chief Medical Officer. If the Chief Medical Officer has any concerns over the treatment, the incident will be referred to the Compliance Manager for investigation.

- At matches where Match Commissioners are appointed, they report any incidents where either a Player was taken off for a concussion assessment (which allows, where applicable, for the RFL to ensure that the appropriate return to play protocols are followed) or where they have concerns that a Player should have been taken off for an assessment (any such incidents are then reviewed and, if necessary, education and/or compliance action taken).

- **Graduated Return to Play Protocol**

- All players who have been diagnosed with a suspected concussion have to follow a Graduated Return to Play (GRTP) protocol as set out below. This incorporates a mandatory rest period which is more cautious for younger players due to brain development.

    - For Under 18 players, the rest period before GRTP is 7 days
    - For Under 16 players, the rest period before GRTP is 14 days

- The GRTP must be managed by a Doctor or Equivalent who may delegate the observation of progress to a healthcare professional save that the Doctor or Equivalent must confirm that the player is able to progress to Stage 5.

- Players may only continue to the next level of the GRTP if they are asymptomatic at the current level. If there are any post-concussion symptoms, then the player should drop back to the previous asymptomatic level and not progress again until at least a further 24-hour rest period as passed. Accordingly, the periods below are minimum periods.

Graduated Return to Play Stages Following Concussion (Super League Men's)

Stage	Time	Activity Level	*Exercise at each stage of GRTP*	Objective
Zero	Head injury day-DAY ZERO	None	*None*	Assessment, treatment & recovery
Concussion Report to be completed & submitted to the RFL (all Clubs) *GRTP PROTOCOL ALL DAYS ARE POST DAY ZERO*				
1	DAY 1 and DAY 2	No activity for 48 hours (adult) or 7 days (U18 Academy) or 14 days (U16 Scholarship)	*Symptom limited physical & cognitive rest*	Recovery
2	DAY 3	Light aerobic exercise	*Walking, swimming or stationary cycling keeping intensity <70% maximum predicted heart rate.*	Increase heart rate
3	DAY 4	Sport specific exercise	*Running drills – no impact.*	Add movement
4	DAY 5	Non-contact training drills	*More complex training drills eg passing drills. May start progressive resistance training.*	Exercise, co-ordination and cognitive load.
Doctor or Equivalent must confirm that the player may progress to Stage 5 (all Clubs)				
5	DAY 6	Full contact practice	*Normal training activity*	Restore confidence and coaching staff to assess functional skills
CogniGram Return to Play test to be taken				
6	DAY 7	Return to play	*Normal training and/or match activity*	Recovery complete

- **Repeat Concussions**

  - Players who have: (i) a second (or subsequent) concussion within 12 months; (ii) a history of multiple concussions; (iii) unusual presentations; (iv) persistent symptoms; or (v) prolonged recovery (prolonged recovery means a player who still shows concussive symptoms ten days or more after the concussive incident), must be assessed and managed by a specialist with experience in sports related concussion.

  - In such circumstances the player may not return to play until the specialist has given written confirmation that in his opinion he is fit to do so. The player concerned must be provided with the specialist's report and signs an acknowledgement of this.

D. FIRST AID STANDARDS AND OTHER REGULATION - COMMUNITY GAME

First Aid Standards in the community game are also reviewed ahead of each season: relevant updates are shared with clubs (including first aiders) and leagues. Given the limited medical personnel and resources within the recreational game, a more cautious approach compared with the professional leagues is mandated within RFL Policies for potential or suspected concussions in the community game.

- A qualified Level 3 first aider is required at each game. Each team is required to register their first aiders on the RFL's operating system and include the name of the first aider on the team sheet.

- All first aiders must have undertaken a HSE Three Day First Aid at Work (or equivalent) plus the RFL concussion course.

- Anyone with any signs or symptoms of a potential concussion is required to be removed from the field of play and seek medical assessment where appropriate.

- There is no system of concussion assessments in the community game, if there is any suspicion that a player has suffered a concussion they must be removed from

the field of play and cannot return until they have completed their Graduated Return to Play protocol.

- Players are required to follow an extended return to play process. A minimum of 19 days for adult players and 23 days for players under 19. These include a symptom free rest period of 14 days for adults and individuals under the age of 19. The graduated return period for under 19's is 8 days, and for adults 4 days, with a clearance by a doctor prior to returning to play.

- Community clubs have to submit concussion reports. These are logged on the RFL's operating system which automatically generates an advice email to the player.

Education materials (Headcase) supporting the above are available on the RFL website (which participants are signposted to as part of their registration with the RFL) and are also available on our education platform. All coaches receive concussion awareness training on the Level 2 Coaching Course and as part of a mandatory annual RFL CoachRight course.

The RFL's approach in the community game is aligned with the approach adopted in Rugby Union: we have adopted a collaborative approach to our campaigns to seek to provide a consistent message to participants.

Risks are mitigated by a combination of application of the above policies and education across the Game. At all levels of the Game we seek to raise awareness of concussion and the importance of appropriate management.

4. RFL RESEARCH PROJECTS AND INJURY AUDIT

A. INJURY AUDIT

The RFL implemented an injury surveillance research project in 2013, which was delivered by the University of Bolton (Fitzpatrick et al., 2018). The RFL funded the annual research costs for the project. Data were collected using a bespoke online system, developed by the University of Bolton. The injury surveillance research project used consensus definitions of injuries, including concussion, allowing the quantification and evaluation of injury and concussion incidence, severity and burden.

All sport-wide self-reported injury surveillance is reliant on accurate data reporting by club medical staff. In 2018, the RFL migrated the injury surveillance research project to Leeds Beckett University (Jones et al.), which then used a commercially available online medical recording management system (Catapult AMS). This improved the ease of data input for practitioners. Furthermore, the project was expanded to include Super League Academy and Reserves players. The implementation of this project was based on pilot research which was undertaken with a number of Super League Academies (Tee, Till & Jones, 2018). The RFL has contractual agreements for the above research projects, and funds agreed associated research costs (approx. £16 k pa).

In 2019 the RFL commissioned Leeds Beckett University (Jones, Scantlebury et al.; £12k pa) to evaluate the demands of Women's Super League, including a league-wide injury surveillance, and an evaluation of match demands and physical qualities, as a risk factor of fatigue related injuries (Scantlebury et al., 2021).

Published data from peer-reviewed studies show that the number of concussions per 1000 hours are 5 for senior Rugby League players (Fitzpatrick et al., 2018) and 13 for Academy players (Tee et al., 2018). The RFL continue to use data from the injury surveillance research project, to evaluate risk factors. For example, Hopkinson et al., (2021) used

injurious tackles (including concussive tackles) and video footage to evaluate the relative importance of tackle characteristics during Super League, which cause injuries.

The RFL implemented a league-wide microtechnology system at the Super League level in 2017, allowing the RFL to review match and training loads for research and monitoring purposes (e.g., Dalton-Barron et al., 2021). Concurrently, these data are reviewed with injury surveillance findings to determine areas of risk and modifiable factors.

B. EXISTING RESEARCH PROJECTS

Ongoing research projects include:

- **Review of Tackle Height and Technique (ongoing)**

  At the start of 2020, the RFL commissioned a research project to analyse a sample of U16 matches, to determine the percentage of tackles that result in head contact, which is a risk factor for head injuries (Tucker et al., 2017). The associated tackle technique has also been determined, which can be used to inform coaching practices. These findings will be presented to a wider group of stakeholders (coaches, referees) to discuss law modifications, based on the findings, to improve tackle technique and reduce the likelihood of a head contact occurring during the tackle. The research group (led by Leeds Beckett University) includes researchers who have experience of implementing similar trails in rugby union, including the recent trial in rugby union that unintentionally increased the number of concussions (World Rugby, RFU, Prof. Tucker, Prof. Stokes, Dr Brown et al.).

- **Causes of Head Collisions in Super League**

  Video footage of tackles which resulted in head collisions have been analysed by the research team at the University of Leeds (Tierney et al.) to determine risk factors. Currently, one season (2019) have been analysed. The team will analyse an addition season (2020) of footage, and the findings will be used to inform potential rule interpretation and law modifications, should risk factors relating to head contact be identified.

- **Risk Factors for Injury in Women's Rugby**

  As part of the RFL commitment to understanding concussion and injury risk factors in women's rugby league, the RFL commissioned a study to identify risk factors of injury in women's rugby league (Leeds Beckett University; Scantlebury, Jones et al.). Whilst empirical data are being collected as part of a wider project, immediate actions by the RFL can be made based on the findings of a consensus, which is establishing unique risk factors for women's rugby from international experts.

C. PROPOSED AND FUTURE RESEARCH PROJECTS

Given recent advances in technology, the RFL are exploring the implementation of a head contact monitoring system (i.e., instrumented mouthguards) across various levels of the game, to quantify and mitigate risks in an evidence-based way.

The project has been approved by the Clinical Advisory Group (8 March 2021), and RFL Board (23 March 2021) and will be presented to the Super League Clubs (including at a meeting on 31 March 2021) for final approval. The project will require an investment of approximately £1 million over three years from all stakeholders to purchase approximately 1,300 instrumented mouthguards for use by professional (Super League and Academy) and

community players (including Women's Super League). Funding will be used to invest in 3 full-time PhD studentships, building a data management system which will allow the investigation of the number and type of head impacts across playing levels, within specific tackle scenarios, and during clinician defined concussive events, using advanced scientific methodologies. As such, this proposed project would allow the RFL to evaluate the current head contact load of players from an acute and longitudinal perspective, across the whole sport.

It is envisaged that the findings of the project will allow the RFL to implement specific guidance relating to head contact load exposure and identify higher risk situations.

5. PLAYER WELFARE

Player welfare and health are, and will continue to be, a priority for the RFL in setting the regulatory framework for the sport. Rugby League Cares (the RFL's partner charity) also plays an important role in supporting players and former players with a range of welfare and health matters.

The charity focuses on the biopsychosocial wellbeing of all current and former players and aims to support players to lead flourishing lives both on and off the field of play.

A holistic approach to this provision is adopted including physical wellbeing, mental wellbeing, career planning, education and training, relationship, culture and religion and finance.

The charity employs a fulltime Head of Player Welfare, Transition Manager and Careers Coach who are supplemented by a Part Time Community and Wellbeing Manager plus a small team of Peer Mentors.

Additionally, the charity's central team work alongside a fulltime Player Welfare Manager employed within each of the full-time professional clubs. Support is also provided by the central team to part-time clubs, Women's Super League, Match Official and England men's, women's and wheelchair RL teams.

The charity's Transition Manager provides support to players during each of the key transitioning stages of a player's career and most critically at retirement and post career. Grants are available to supplement the costs of retraining and education and for hardship as a result of injury, illness, sudden loss of earnings or crisis.

Rugby League Cares also delivers an extensive community programme working alongside the professional club's charities the Foundations. The key focus of the charity's community programme is to support the mental wellbeing of the sport's broad community to include community players, volunteers, administrators and fans. Former players are recruited as presenters and the service is delivered in a broad range of settings including stadiums, businesses and community sports clubs.

Within the above framework the charity supports a small number of 'memories clubs'. The 'memories clubs' work with isolated older people and those living with dementia for weekly get togethers looking back at the history and heritage of the sport.

6. SPECIFIC AREAS

Set out below are specific responses to the DCMS Inquiry questions which are not covered by sections 1 – 5 above.

A. SCIENTIFIC EVIDENCE FOR LINKS BETWEEN HEAD TRAUMA AND DEMENTIA AND HOW COULD RISKS BE MITIGATED

The RFL is aware of the emerging evidence relating to the link between head trauma and neurocognitive diseases. The RFL monitors and is starting to work with established experts within this field. Whilst we recognise associations have been found (e.g., Lee et al., 2019, Stewart et al., 2016, Mackay et al., 2019, Lehman et al., 2012, Russell et al., 2019), and retired players from contact sports have developed neurocognitive diseases, we are also aware that the current evidence is inconclusive.

As a governing body, we take a cautious approach in this area. In relation to our policies and practices, we follow the Consensus Statements on Concussion in Sport, most recently issued after the Berlin Conference (McCrory et al., 2017). Medical Standards are under regular review and will be further updated in line with recommendations following the 2021 Paris Conference to align with any new guidelines issued.

As set out above, the RFL's policies are guided by a Clinical Advisory Group made up of relevant medical experts from across the Game.

The RFL also has a Laws Committee which reviews the Laws of the Game. A representative from the Clinical Advisory Group sits on the Laws Committee and one of the guiding principles is player safety.

The RFL also commission and employ experts to undertake scientific research, which includes the reporting of concussive events in both the senior (e.g., Fitzpatrick et al., 2018) and junior (e.g., Tee, Till & Jones, 2019). In addition, the RFL has also established frameworks to quantify tackle technique, which have been published in scientific journals. (Hopkinson et al., 2021). These are being applied to matches to identify risk factors within a tackle.

B. IMPLICATIONS FOR YOUTH SPORT

Team sports have been demonstrated to be of benefit to children from both a physical and mental health perspective (Sport England; 2016, 2018, 2021). Rugby League has demonstrated a material positive social impact on Lower Socio Economic Group communities: this is demonstrated by the 2020 Rugby League Dividend Report produced for the sport by Manchester Metropolitan University.

Participation in Youth Rugby League is based upon the RFL's Player Development Framework. This framework sets out an integrated approach to facilitate the development of players at all levels of participation. It outlines a developmental and coaching philosophy, underpinned by an evidence base (cf Bayali & Hamilton 2010; Côté, Lidor & Hackford, 2009) of appropriate practice to bring about life-long participation, enjoyment and high performance with Rugby League appropriate to the age and stage of the participant.

Accordingly, particularly at Primary ages (7 to 11 years) the laws of the game are adapted so that children feel competent in learning new skills with a particular focus on enjoyment. The RFL currently recommends 'touch' (i.e. non-tackle) for children in the under 7 and under 8 years age groups. The reason for this recommendation is so that children can learn new skills appropriate to their level of competence and take away the apprehension (for parents as well) of sustaining injuries due to contact Rugby League whilst children develop their confidence.

Coach learning is tailored towards the environment that a coach is operating in. The UKCC Level 1 coaching Rugby League award is specifically aimed at those coaches operating in Primary RL (i.e. children under 11 years) and UKCC Level 2 coaching Rugby League certificate is aimed at those coaches that operate in the 13 a-side game.

Through formal Coach Education (i.e. UKCC level 1 and 2 qualifications), education is provided on-course to coaches that draws out best practice and highlights safe activity in terms of protective falling, correct tackle technique and design of training activity.
There is also a specific section on head contact that covers the basics of concussion recognition, signs and symptoms, memory function and red flag alerts. A pocket concussion tool is also issued.

From January 2021, an on-line Continuous Professional Development (CPD) module known as 'CoachRight' has been made mandatory for all coaches to complete. This module contains information for coaches about recognising signs of concussion, how to report concussion, how to treat concussion and protocols for GRTP.

The match characteristics of Rugby League differ between senior and junior players (Whitehead et al., 2018). For example, the running demands are similar between the levels, but the contact demands are lower at younger levels (Whitehead et al., 2019, Naughton et al., 2020). As such, the risk of concussion to youth players due to the rugby league tackle may be inherently different to senior players, although the RFL adopt a cautious approach to the care of youth players.

Youth sports are categorised based on annual age categories, aligned with the academic calendar. Rugby League has undertaken a large volume of research (e.g., Till et al., 2010, Till et al., 2014) into the relative age effect (i.e., the birth date of an individual within an academic calendar year) and maturity (e.g., biological growth and development). This is important to understand potential size mismatches that may occur. Based on these findings, the RFL has changed the playing pathway to de-prioritise competition at younger levels, which follows the evidence relating to the holistic youth sport participation and development (e.g., Rongen et al., 2018).

The RFL are committed to making evidenced based decisions, relating to the risk of rugby league to youth sport participants. The RFL believe that removal of *unnecessary* rather than *all* risks should be the priority within youth sport, to not disadvantage youth sport participants from engaging in social, sporting and physical activity events (Quarrie et al., 2017). Collectively, if unnecessary risks are mitigated, engagement in sport provides children with short-term and lifelong lessons relating to physical activity and health (Moeijes et al.,2019).

The RFL continues to monitor and evaluate the scientific evidence relating to injuries, in youth sport. To the RFL knowledge, youth rugby league does not pose a greater risk than other sports (Quarrie et al., 2017)).

C. FUNDING FOR FURTHER SCIENTIFIC RESEARCH

The RFL will continue to be guided by broader scientific evidence and undertake scientific research to inform decisions.

NGBs have a role to play in further research, with the RFL currently funding injury surveillance within Super League, Women Super League, Super League Academy,

in addition to employing researchers in a consultancy capacity within the organisation to deliver projects (e.g., Prof. Jones, Dr. Scantlebury, Dr Ramirez-Lopez). However, the funding for large-scale multi-sport research is limited by financial constraints. NGBs can provide the management of projects, support through regulatory frameworks and, in conjunction with clubs, access to players.

Collaboration between sports will ensure that the evidence is developed in a timely manner, with sufficient data to draw robust conclusions from findings. Given the differing financial status of sports, broader financial support for research, would likely facilitate research in a more collaborative and cohesive manner. This includes having:

- clarity on the specificity of research questions and design of studies; and

- alignment of research practices/protocols across sports for minimum standards on research quality and further interpretation in line with research questions on contact/collision sport.

The Government (governmental agencies) could have a role to play in coordinating this work and providing financial support for appropriate projects.

Any project looking to determine whether there is a link between head contact in sport and dementia would be, by its very nature, a long-term project. An appropriate balance needs to be made between research of this nature and shorter-term research projects – i.e. to identify which aspects of sports impact the head / brain most so that adjustments can be considered.

Alongside any research, education remains of critical importance. Whilst NGBs have a role to play in this, we believe that centralised consistent messaging involving all relevant stakeholders in sport (including players, parents, coaches, teachers and health care professionals) is essential and would serve as a foundation to any player progressing through to the professional game. This should include recognition, removal and rehabilitation. We therefore ask that Government consider a model similar to that which the Scottish Government have implemented, including the following aspects:

- form or support a central education model for all sports which is applicable and transferrable across all sports;

- that this is backed up by a campaign which assists all involved in the pathway in each sport; and

- that the application of the model is supported by and applies within school settings and NHS messaging.

D. ROLE OF NGBS AND MAJOR SPORTING ORGANISATIONS IN ENSURING MEMBER CLUBS RECEIVE UP TO DATE MEDICAL ADVICE AND PROMOTE GOOD PRACTICE

Each NGB has a responsibility to set the regulatory framework for its sport; however, the application of this framework requires all stakeholders to understand and fulfil their roles and responsibilities.

Our Member Clubs are the Rugby League Professional Clubs. In relation to the Professional and Community Game, our framework is outlined above.

As set out above, we believe that in terms of setting the standards, particularly for recreational sport, the Government (or Government agencies) has an important role in supporting NGBs with a consistent and sports-wide structure.

E. POTENTIAL IMPLICATIONS OF SUCCESSFUL LEGAL ACTION AND WHAT IMPACT THAT COULD HAVE ON SPORT IN THE LONGER-TERM

This is very difficult question to answer, given we do not know the basis of any claims and any rationale for why they might or might not be successful would be purely conjecture. In addition, any consideration of any claims will involve looking at the regulatory landscape of the relevant sport and knowledge at the relevant time: this may be very different to the current situation.

In addition to potential impact on perception and participation, the bringing of claims may have an impact on the ability of sports to get affordable insurance to cover similar claims in the future. Given the recognised benefits of sport (and the fact that many sports do not have significant reserves), this may require the Government to step in to ensure the ability for sports to continue to operate.

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