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Australian Football League concussion guidelines: what do community players think?

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ABSTRACT

Background: Preventing concussion in sport is a global challenge. To assess community-level adult male Australian Football players' views on following the Australian Football League's (AFL) concussion guidelines.

Methods: 3 focus groups, each comprising 6 players from 1 regional league, were conducted until saturation of issues raised. Discussions followed a semistructured script and were audio-recorded and transcribed verbatim. Thematic analysis was conducted by 2 coders independently.

Results: Identified advantages of the guidelines included highlighting the seriousness of concussion; changing the culture around playing with concussion and shifting return-to-play decision responsibility from players to others. Disadvantages included players being removed from play unnecessarily; removal of players' rights to decide if they are fit to play and players changing their behaviours to avoid being removed from play. Identified facilitators to guideline use included local league enforcement; broad information dissemination and impartial medically trained staff to assess concussion. Identified barriers to guideline use included players' desire to play at all costs; external pressure that encouraged players to return to play prematurely; and inconvenience and cost.

Conclusions: Players generally understand that the AFL concussion guidelines protect their long-term welfare. However, their desire to play at all costs and help their team win is a common barrier to reporting concussion and adhering to guidelines. Leagues should take a lead role by mandating and enforcing the use of the guidelines and educating coaches, game day medical providers and players. The return-to-play component of the guidelines is complex and needs further consideration in the context of community sport.

What are the findings?

- Community Australian Football (AF) players support the implementation of concussion guidelines provided they are applied consistently, equally and openly, for all players across all clubs.
- The 'play at all costs' and 'not letting the team down' attitudes of community-AF players is a barrier to players reporting concussion symptoms and adhering to concussion guidelines.
- Community-AF players recognise the need for the decision about removal from play to be taken out of the players' hands but they want to be sure that whoever is making the decision will not remove them from play unnecessarily.
- Community-AF players question the relevance and applicability of current return-to-play guidelines, especially concerning medical clearance outside of the game setting and the need for individualised training programmes before returning to play.

INTRODUCTION

Reports of sport-related concussion continue to make headlines worldwide, an interest that is mirrored in the academic literature, and with good reason. As many as 3.8 million sports-related traumatic brain injuries occur each year in the USA alone.[1] The incidence of hospitalisation for sport-related concussion in Victoria, Australia, increased at an average annual rate of 5.4% between 2002 and 2011.[2] The fear of possible long-term brain damage perceived by parents and athletes is real, whether perpetuated by the media or not, and it is important that these fears are addressed.[3]

With a clear need for evidence-based concussion guidelines, international consensus statements have been developed and revised over more than a decade.[3–5] These guidelines have been accepted as the 'gold standard' for assessing and managing sports concussion and have been adopted and/or endorsed worldwide by many professional sporting organisations.[6] However, in the community sporting context, the effectiveness and impact of these guidelines remains questionable,[6] with consistent evidence indicating non-compliance with the guidelines across several sports at the community level of play.[7–9]

Although the reasons for non-compliance with concussion guidelines are not fully understood, research efforts have been directed to the translation of concussion guidelines into practice in community sport. Based on this, it is generally agreed that there is some breakdown in the delivery (and hence subsequent uptake and adoption) of the concussion guideline key messages to the relevant community sport stakeholders.[3 6 8]

One sport devoting particular research attention to the implementation of the concussion guidelines at the community level is Australian Football (community-AF).[10] This popular community participation sport[11] has a relatively high risk and rate of injury compared with other popular community sports.[12 13] Concussion has been ranked as the fourth most common injury across levels of AF participation.[14 15] The Australian Football League (AFL) first developed its community-AF concussion guidelines in 2011 based on the 2008 International Consensus Statement on Concussion in Sport.[5] These guidelines outlined game day management of concussion (including recognition and immediate response) as well as follow-up and return-to-play procedures. The guidelines were disseminated to community clubs primarily through the AFL website (http://www.aflcommunityclub.com.au/index.php?id=66) with an expectation that those responsible for managing players with concussion (eg, coaches, medical staff, health professionals) would act on them.

Previous studies have identified concussion knowledge gaps and misconceptions held by community-AF coaches and on-field healthcare providers (known as sports trainers).[16] Various factors have also been identified as being most likely to influence their intention to use the concussion guidelines[17] and their attempts at implementing them.[18] While it is reasonable to recognise the predominant and critical role of clubs, coaches and support staff in ensuring the appropriate management of concussion in community-AF,[19] there are other end-users who must contribute to the smooth conduct of this process. Players are one such group.

There is a noticeable absence in the literature about community-AF players' perception of, and response to, the AFL concussion guidelines.[6] The purpose of this study was therefore to assess community-AF players' views on the barriers and enablers towards following the AFL concussion guidelines.

METHODS

Player recruitment

A convenience sample of adult community-AF players from three clubs belonging to a large regional community-AF league was recruited. Club coaches were contacted via email and asked to invite their players to participate in the focus group discussions. Playing community-AF in the current season was the only inclusion criteria. Players did not need to have sustained a concussion to participate.

Focus group conduct

A qualitative approach[20] was adopted to enable open and detailed exploration of community-AF players' views on the AFL concussion guidelines. The players were encouraged to access the 2011 AFL concussion guidelines 1 week before participating in the focus groups. They were also provided with a hard copy of these guidelines at the meeting. Focus group discussions were conducted before the end of the 2012 playing season. Each discussion lasted ~30 min and took place at the football league clubrooms on a midweek evening. Six male adult community-AF players, aged in their early 20s, participated in each of the three focus groups (n=18 players overall). During the third focus group, it was evident that no new discussion points were emerging and it was considered that data saturation had been reached.

At the beginning of each focus group, players were provided with a written scenario and a set of follow-up questions (see online supplementary material A). They were asked to write brief responses to the follow-up questions to stimulate their thinking around some of the issues that would then be discussed. The remainder of the focus groups followed a semistructured script (see online supplementary material B).

Qualitative analysis approach

All focus groups were audio-recorded and transcribed verbatim. Transcripts were checked for accuracy against the audio-recordings and corrected for anomalies. Electronic copies of the transcripts were imported into QSR NVivo V.10 software for comprehensive thematic analysis. The transcripts were read and re-read, and coded by two independent researchers using QSR NVivo V.10 with thematic analysis as a framework. While the data were largely analysed using a realistic and descriptive methodology, a systematic framework for coding was established to identify player beliefs about the advantages/disadvantages and barriers/facilitators to following the guidelines.[21] Further subthemes were also extracted. Transcripts were coded independently and the small number of discrepancies between coders was resolved through discussion.

RESULTS

All participants were current community-AF players aged in their early 20s. No information was collected about their years of football experience or prior concussion history. The key themes and subthemes identified in the player-reported advantages/disadvantages are in table 1 and for the barriers/facilitators in table 2. Indicative quotes from the players are given in online supplementary files 1 and 2, to further illustrate the findings.

Beliefs about advantages of the guidelines

Three major themes emerged. Players believed that the guidelines would protect their immediate and long-term

Table 1 Themes and subthemes identified in community Australian Football player views on the advantages/disadvantages of the concussion guidelines (n=18)

Major themes	Subthemes
Advantages of following the concussion guidelines	▶ Highlights the seriousness of concussion ▶ Changes the culture around playing with concussion, putting player welfare first ▶ Provides a consistent approach to diagnosing and managing concussion ▶ Reduces the pressure on players to return to play and shifts the decision-making responsibility away from players ▶ Reduces the pressure that players place on each other to return to play ▶ Instils a sense of responsibility in coaches and officials
Disadvantages of following the concussion guidelines	▶ Players removed from play unnecessarily (false positives) ▶ Difficulty determining the presence/absence of symptoms, particularly in relation to the memory questions and non-specific symptoms ▶ Player frustration over the time it takes to diagnose and to return to play following a concussion ▶ Removal of player's right to decide whether or not they are fit to play ▶ Players changing the way they play to avoid being removed from play

Table 2 Major themes and subthemes arising from community Australian Football player views of the barriers and facilitators to following the guidelines (n=18)

Major themes	Subthemes
Factors that would facilitate the use of the concussion guidelines	▶ Having the use of the guidelines enforced by the local league ▶ Having the league run an information session for all clubs at the beginning of the season ▶ Clubs having a policy around using the guidelines and informing players ▶ Promoting the guidelines through the media and elite players ▶ Making hard copies of the guidelines available and visible to players and sports trainers ▶ Further education and information about concussion for sports trainers ▶ Having an impartial and medically trained person to decide whether a player is concussed or not
Factors that would impede the use of the concussion guidelines	▶ Increased pressure on sports trainers/doctors to return players to play ▶ Pressure from 'traditional/old school' coaches and sports trainers placed on other trainers and players to have players return to play ▶ A close or important game ▶ State of play (where the football is) at the time of the 'knock' ▶ Players wanting to play and to win at all costs ▶ A concussion incident that appears less severe—a softer 'knock'; player gets up quickly ▶ Inconvenience and cost of, as well as general reluctance associated with, visiting a GP during the stepwise return to play phase ▶ GPs being ill-informed about the guidelines ▶ How trained are doctors in knowing or pinpointing [concussion]?

GP, general practitioner.

welfare by highlighting the seriousness of concussion and changing the culture around continuing to play with a concussion. They also believed that following the guidelines would prevent them from putting pressure on themselves or others to continue to play following a concussion. Finally, they considered a consistent approach to concussion management, overseen by league and club officials that was implemented by informed coaches and sports trainers, as a positive outcome of following the guidelines.

Beliefs about disadvantages of the guidelines

Two major themes emerged. Players believed that following the guidelines could result in overdiagnosis or misdiagnosis of concussion, particularly if coaches/sports trainers were excessively cautious or had difficulty distinguishing between symptoms of concussion and those of general fatigue (eg, nausea, dizziness). They also recognised their own reaction to the guidelines as a potentially negative outcome of following them. This was particularly related to the potential to feel frustrated over a lack of control and the time taken to complete the process of diagnosing concussion.

Facilitators for following the guidelines

Three broad themes emerged, namely enforcement, education and communication. Players believed in strong, clear enforcement of the guidelines at both the league and club level by way of policy. They also considered educating sports trainers in concussion management as a facilitator to following the guidelines. Finally, communication between the club and the players regarding club policy on concussion management was considered an important facilitator. Communication at the league level was also suggested, as was promotion of the guidelines through the media.

Barriers towards guideline use

Three broad themes emerged, namely characteristics of the people involved, characteristics of the game or state of play, and characteristics of the concussion incident. Players suggested that the pressure placed on sports trainers/doctors by players to return players to play may be a barrier to the guidelines being followed. Coaches and sports trainers with a 'traditional style' and players with a 'play and win at all costs' mentality were also considered a threat. They also believed that particular characteristics of the concussion incident, such as a less severe 'knock' and rapid player recovery, to be potential barriers to following the guidelines. Finally, important games or close contests were considered potential barriers.

The players also stated a number of barriers associated with the stepwise return-to-play guidelines that could prevent them being followed, particularly relating to the time and cost involved and the inconvenience associated with multiple general practitioner (GP) visits. Further, players were uncertain whether GPs know enough about managing a concussion using the guidelines.

DISCUSSION

This is the first study to consider the contextual factors that influence community-AF players' perceptions of, and their likely responses to, the AFL concussion guidelines.

A 'play at all costs' culture needs addressing

One of the most important messages to emerge from this study was that community-AF players experience an intense competitive drive resulting in a 'play at all costs' mentality. This was expressed through players' willingness to deliberately deceive sports trainers, ignore the advice of health professionals and put team success ahead of their own health to help their team win.

Ensure decision-making is independent of players' views

Players, by their own admission, are an unreliable judge of their own state of health on game day and most agree that they should not be involved in decisions around whether or not they are concussed or whether or not they should return to play. This finding is not surprising given that previous studies have found that school and collegiate athletes are reluctant to report concussion symptoms because they want to play and not let their team down.[22–24]

Players acknowledged the potential risks associated with the inappropriate management of concussion. In fact, outside of the game situation, players recognised the irrational nature of their own thought processes and decision-making in the heat of the sporting 'battle' and identified a need to almost be protected from themselves at those moments. As such, the players generally supported a shift in culture away from playing on after a concussion. They welcomed the guidelines as a means of protecting their welfare by taking the decision-making responsibility out of their hands. It seems that, despite adequate awareness and every good intention, following the concussion guidelines is not a priority for football players in the middle of a contest. Despite their overall support for the guidelines, the players in the current study still considered themselves a potential barrier to successful guideline implementation.

Ensure consistency of information deliver to players and others

The players strongly believed that the guidelines should be implemented consistently across all clubs in a given league/competition. This would reassure players that every club and every player would be treated equally in the case of a suspected concussion and that no team would be disadvantaged by following the guidelines. Collectively, players suggested that the league should take the responsibility for directing all clubs to follow the guidelines and enforcing them. If the league conducted a compulsory information session for all clubs at the beginning of the season outlining the expectations around following the guidelines, then all clubs could adopt a concussion management process accordingly.

Players have a desire to be well informed when their club adopted a concussion management policy that included following the AFL concussion guidelines. The players wanted to know, in advance, what was going to happen in the case of them suffering a suspected concussion. They stated that they did not need to know the specific details of the process, but rather wanted to be given an overview of what to expect, perhaps in a team presentation delivered by the coach with the people responsible for providing medical care on game days

also present. This would assist players to be more accepting of this process in the middle of the game situation.

Increase player confidence in the actions of coaches and medical care providers

The players wanted comprehensive and specific education for medical care providers (mainly sports trainers in the AF context) around recognising the symptoms of concussion. This was considered important in developing players' full confidence in a system where they will only be removed from play for a concussion when there is real evidence of one. This would help to alleviate player concerns over medical care providers becoming overly cautious in response to the current media hype around concussion and the possibility that they might jump to the immediate (and incorrect) diagnosis of concussion based on only non-specific symptoms such as nausea or dizziness.

Although players did not directly identify coach support of the concussion guidelines as an important factor in facilitating their implementation, they were quite clear about the potential for coaches to impede guideline implementation. Specifically, they noted that, with the decision-making about removal from the game shifting away from the player to the medical care provider, there was the potential for some 'old school' coaches to pressure medical care providers to return players to the field. Interestingly, players thought many more coaches could be tempted to do this during a final if a key player was involved. Players suggested that an impartial medical professional be employed to preside over the management of incidents involving concussion diagnosis for both teams in a match.

Return-to-play challenges

While players could see that the guidelines' game day management of a suspected concussion were feasible, they had clear reservations about the applicability of the stepwise return-to-play protocol and identified a number of difficulties specific to the community player trying to follow this protocol. Players reported problems with mandatory visits to a GP and individualised training programmes, neither of which they considered to be easy, desirable or close to common current practice. According to the players, the expectation that they would be able to afford the personal time and money to see a GP multiple times and to have an individualised training programme designed for them was unreasonable. They considered these requirements more suited to elite AF players in professional club environments. Moreover, at the time of this study, players were not confident that GPs were adequately informed about, or competent in administering, the concussion guidelines.

Study limitations

A notable limitation of this study is the small sample size of 18 participants spread over three focus groups. However, there was clear repetition of themes across all three groups, suggesting that a level of saturation was reached. The sample was drawn from only one regional community-AF league. No information was collected about the players' years of football experience or prior concussion history. While there is no obvious reason why the results would differ substantially across regional leagues, some caution should be taken in generalising the results to metropolitan community-AF players or to other regional leagues.

CONCLUSION

Overall, players were positive about the AFL concussion guidelines and appreciated the role they play in protecting their long-term welfare. However, those involved in the dissemination and implementation of the guidelines must understand that access to, or knowledge of, the guidelines alone is unlikely to change player behaviour.[8] Stand-alone education campaigns designed to convince players to actively report their symptoms are likely to be a waste of resources. However, the players would be more likely to accept other people's behaviour change in relation to concussion management and cooperate with the measures taken to protect them if: (1) leagues took a leading role in mandating and enforcing the use of the guidelines; (2) those responsible for making game day decisions were upskilled in identifying concussive symptoms; and (3) players were forewarned of what to expect.

It is worth noting that the advantages/disadvantages and facilitators/barriers identified by players are interrelated. For example, a consistent approach to concussion management was considered an advantage of following the guidelines, which would be facilitated by the introduction of league and club policy to enforce it. In turn, league and club policy could address the barriers associated with the strong desire held by staff and players to win games. Underlying the themes identified in all four areas was a strong sense that the players are competitive, team-orientated and protective of the integrity of community-AF. While they want to be protected from concussion, they do not want to be 'mollycoddled'. They want strong leadership from administrators at their league and clubs and well-informed people making the decisions on the ground.

The return-to-play component of the AFL concussion guidelines is complex and an area that clearly needs further consideration in the context of community-AF and from the community footballer's perspective. It presents the potential for future research involving the end users, from the player to the GP, to understand more fully how to build capacity to make the return-to-play process safe and achievable.

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