Title: Sport-related concussion return-to-play practices of medical team staff in elite football in the United Kingdom

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Abstract:

This study explored sport-related concussion (SRC) return-to-play (RTP) behaviours and attitudes of medical team staff working in elite football in the United Kingdom. Usage and awareness of The Football Association (FA) guidelines, concussion education rates of players and coaching staff, and collection of baseline concussion assessments. Additionally, confidence in managing RTP post-SRC, perceived player under-reporting of symptoms, use of enhanced RTP pathways, and coaching pressure on RTP were investigated. A cross-sectional questionnaire study was distributed online by organisations including or representing medical staff working in elite football in the United Kingdom. A total of 112 responses were gathered. High awareness rates of the FA guidelines were found (96%) with variable rates of player and coaching staff concussion education. Baseline concussion assessments were collected by 80% of respondents with 93% feeling very confident or confident in managing the RTP of a player with a SRC. 60% rarely or never experienced coaching pressure around player RTP, and 24% felt players always or very often under-reported symptoms to expedite their return. 90% had a moderate to high confidence in the Sport Concussion Assessment Tool-5 (SCAT-5) as a RTP decision tool, and 66% always or very often used an enhanced RTP pathway. Confidence in managing player RTP post SRC and use of enhanced RTP pathways were high, as was confidence in the SCAT-5 as a RTP decision tool. Respondents raised concerns around player under-reporting of symptoms to accelerate RTP post-SRC, and perceived coaching pressure around decision making.

Keywords: soccer, rehabilitation, head injury, doctor, physiotherapist, therapist

Word count: 3772

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Introduction

Sport-related concussion (SRC) is often defined as representing the immediate and transient symptoms of traumatic brain injury (Mccrory et al., 2017). Ekstrand in 2011 published a SRC incidence rate in male elite European football of 0.06 concussions/1000 hours of exposure, or one concussion per team every other season (Ekstrand et al., 2011). Concern has been raised about this figure underestimating the true incidence of SRC in elite football, with a recent Swedish study finding a concussion incidence rate of 1.19/1000 player game hours (Prien et al., 2018, Junge and Dvořák, 2015, Abraham et al., 2019, Vedung et al., 2020).

The process of returning a concussed athlete to sporting participation can be complex, with the timing of the process being important to the athletes and coaching staff. It is well recognised that injuries have a significant influence on team performance within male elite football, resulting in pressure for player return to availability following any injury (Hagglund et al., 2013, Eliakim et al., 2020). Return-to-play (RTP) decisions post-SRC are a source of potential influence from players, coaching staff, and other external pressures (Broglio et al., 2010, Turner et al., 2020, Kroshus et al., 2015, Williams et al., 2016). Despite this pressure, club medical staff have an ethical obligation to return the player without comprising their health or performance, or their own professional responsibilities (Turner et al., 2020).

Using a graduated stepwise rehabilitation strategy post-SRC has been commonly adopted and advocated (Mccrory et al., 2017). Guidelines outlining RTP post-SRC decision aids are available publicly, but their routine use within an elite sporting environment is variable (Donaldson et al., 2016, Rosenbloom et al., 2021). RTP decisions are medical and, therefore, should be made by medical professionals, ideally in a multidisciplinary approach when possible, using a multi-faceted approach (Mccrory et al., 2017, Feddermann-Demont et al., 2014). The English Football Association (FA) published guidelines in 2015 which set a standard of care for management of all players across all leagues with suspected SRC, with a recent study finding a 97% awareness of these guidelines amongst medicals staff working in elite football in the United Kingdom (The Football Association, 2015, Rosenbloom et al., 2021). Despite high guideline awareness, adoption of some of the recommendations around player and coaching staff education and collection of baselines concussion assessments varied showing awareness and knowledge does not automatically infer adoption (Rosenbloom et al., 2021).

The RTP post-SRC recommendations within the FA guidelines adopt and reflect the most recent consensus meeting recommendations which suggest a minimum of a week to progress through a

full rehabilitation protocol (Mccrory et al., 2017). An initial period of rest is followed by a progressive graduated return to exercise with close monitoring of SRC related symptoms with increasing physical exertion. Players cannot progress through each stage until they are symptom free, and the time spent at each stage varies depending on age. It is accepted that in some circumstance and environments there may be an enhanced level of medical care and closer athlete supervision. In response, additional “enhanced” RTP guidelines are described which allow an accelerated return. The implementation of the enhanced guidelines is very prescriptive with clear minimum requirements outlined but require strict supervision by appropriate medical personnel as part of a structured concussion management programme and cannot be used in any athlete under the age of 16 (The Football Association, 2015, Mccrory et al., 2017). One requirement on the enhanced guidelines is “baseline SCAT5 and/or computerised neuro-psychometric/cognitive testing of the player has been conducted prior to the injury” (The Football Association, 2015). The Sport Concussion Assessment Tool-5 (SCAT-5) is a sport concussion evaluation tool used by healthcare professionals in the acute evaluation of suspected concussion of individuals ages 13 or older (Echemendia et al., 2017). The SCAT-5 is an updated version of the preceding SCAT-3, with changes being based on a systematic review and synthesis of current research, public input and expert panel review as part of the 5th International Consensus Conference on Concussion in Sport held in Berlin in 2016 (Echemendia et al., 2017, Mccrory et al., 2017).

An adult (>18 years old) on the standard RTP pathway can return within 19 days at the earliest, and on the enhanced pathway in 7 days. Under-19-year-olds can return earliest at 23 days on the standard RTP pathway, and those aged 17-19 can return in 12 days on the enhanced pathway. Concerningly, figures from The Union of European Football Associations (UEFA) Elite Club Injury Study showed a median RTP of only 5 days post SRC within elite European clubs (Ekstrand et al., 2020). This is shorter than the minimum 7-day period outlined in the most recent concussion consensus statement (Mccrory et al., 2017).

It is accepted that the majority of injured athletes recover from a SRC from a clinical perspective within the first month post injury (Mccrory et al., 2017). Within elite male Swedish league footballers there was a median of 10 days before returning to full contact play, whilst elite female Swedish league footballers took a median of 20 days (Vedung et al., 2020). In a cohort of elite male footballers who sustained a SRC there was a substantially increased risk of sustaining a non-concussive injury within the year after a concussion (Nordström et al., 2014). This shows that the impact of SRC can persist after the minimum RTP time has been observed.

SRC management can be complicated due to player under-reporting of symptoms with the factors influencing athletes’ injury awareness being organisational, societal, and individual (Chen et al., 2019). A study in elite male and female Swedish footballers showed 27% continued to play or

practice immediately after concussion (Vedung et al., 2020), and 17% of elite male rugby league players in Australia chose not to report likely concussive episodes and concussion-related symptoms to medical staff (Longworth et al., 2021). Interestingly, 60% of Italian elite male adolescent footballers indicated they had failed to report concussive symptoms that season with 94% doing so as they did not feel SRC was serious, and 89% saying it was an accepted part of the game (Broglio et al., 2010). Only 36% of elite English footballers felt the medical staff alone should be responsible in-game removal decisions, and 40% thought RTP decisions were not made by the medical staff (Williams et al., 2016).

To aid understanding of how best practice guidelines (The Football Association, 2015) around RTP in football are perceived and implemented, the objectives of this study were to assess attitudes and confidence around RTP post-SRC of medical staff working in elite football in the United Kingdom. Existing research has not yet explored subjective perceptions by medical staff on RTP decisions including player under-reporting of symptoms and perceived influence by medical staff on decision making, which, as already discussed, is a recognised issue within elite footballing populations.

Methodology

Questionnaire Development

An original questionnaire based on the 5th Consensus Statement on Concussion in Sport and the FA concussion guidelines (The Football Association, 2015, Mccrory et al., 2017) was created (Appendix A). The full methodology was previously detailed and published (Rosenbloom et al., 2021). Confidence in returning players post SRC and confidence in the SCAT-5 were assessed using a 5-point confidence based Likert Scale. Personal experience of player or coach pressure to RTP, player under-reporting of symptoms, and use of the of the FA “enhanced pathway” were explored using a 5-point frequency based Likert Scale. Questionnaire usability, relevance, and content validity were checked by all the authors and by members of the English Football Association medical team acting as external experts. The questionnaire was hosted on a secure website by Online Surveys (JISC, Bristol, United Kingdom).

Inclusion Criteria

Respondent inclusion criteria included healthcare professionals working in elite football within the United Kingdom, who are involved in the return to play of players post SRC. Staff working in Men’s and Women’s football in first team, academy settings, national teams, and in disability football were invited to participate. The terminology of elite was chosen rather than professional and semi-professional due to a lack of an agreed terminology and variability in definition. ‘Consultant level doctors’ in the United Kingdom are deemed as those who have completed a training program in their chosen specialty. General practitioners (GPs) are not deemed as consultants.

Distribution Approach

Recruitment was via organisations whose membership included medical staff working in elite football. This recruitment approach was chosen to increase participation, rather than only contacting the clubs' designated medical officer. Organisation selection was agreed by all authors and included: The British Association of Sport and Exercise Medicine (BASEM), The Faculty of Sport and Exercise Medicine (FSEM), The Football Medicine and Performance Association (FMPA), and The Football Association Medical Society (FAMS). Healthcare members of the organisations were sent at least one email by the respective organisations with some also promoting recruitment via social media (Twitter and Linkedin). Involvement was without obligation with no financial benefit. Recruitment opened beginning of January 2020 and closed end of February 2020. The nature of distribution prevented an exact response rate being calculable.

Ethical approval was granted by XXX ethical research committee, ethics code XXX. Consent was gained using a pre-participation leaflet with confirmation of acceptance being required. Respondents could withdraw up until completion of the questionnaire. All information collected was anonymous and non-identifiable.

Statistical Analysis

Analysis was conducted within Statistical Package for Social Sciences (SPSS; version 26, IBM Corp, NY, USA) with significance set at $p \leq 0.05$. Pearson X^2 was used to assess difference in nominal data between groups. Differences in non-parametric Likert scale responses were assessed using Mann-Whitney U tests (U) for differences between two distinct groups, or Kruskal-Wallis test (H) for differences between more than two distinct groups. When analysing responses to coach or player education or baseline concussion assessment rates, answers of "not sure" were grouped with "no" responses, due to any uncertainty around the definite delivery of education and/or concussion assessment collection inferring deviation from the FA recommendations.

Results

A total of 136 completed questionnaires were received. Thirteen respondents were excluded for not being involved in RTP decisions post SRC, five for not working in the United Kingdom, and six for not working in football leaving 112. The majority of respondents were male (77%), lived in England (88%), and worked in Men's football (86%). 53% were doctors, 29% physiotherapists, 15% sports and/or rehabilitation therapists, and 3% sports scientists. Full respondent demographics are seen in Table 1. A high percentage of respondents worked in the top 5 tiers of men's' football (The Premier League, The English Football League Championship, The English Football League One, The English Football League Two, and The National League) and the top 2 tiers of women's' football (FA Women's Super League, and The FA Women's Championship) as seen in Table 3 (77%, N=86).

Table 1 near here

Concussion Education and Guideline Awareness

Player and coach concussion education and FA guideline awareness levels within this cohort are seen in Table 2. Awareness of the FA guidelines was high with 96% (N=108) being aware, and 4% (N=4) not being aware. Concussion specific education delivery to players per season was indicated by 49% (N=55) of respondents, 41% (N=46) did not, and 10% (N=11) were not sure. Coach concussion education per season was delivered by 38% (N=42) of respondents, 44% (N=49) did not, and 19% (N=21) were not sure.

Table 2 near here

Baseline Concussion Assessment

Collection of baseline concussion was indicated by 80% (N=90) or respondents, 17% (N=19) did not, and 3% (N=3) were not sure (Table 2). Of those who collected baseline assessments; SCAT-5 assessments were collected by 98% (N=88), ImPACT by 13% (N=12), and CogSport by 3% (N=3).

Confidence in managing return-to-play post sports-related concussion

When asked '*how confident do you feel in managing the return to play of a player with a concussion'*; 38% (N=43) felt very confident, 55% (N=62) felt confident, 5% (N=5) felt neither confident nor unconfident, and 2% (N=2) felt unconfident. Confidence levels between those who collected baseline testing and those that did not were not significantly different (p=.77). Of those who worked more than 30 hours a week at their club, 97% (N=35) felt very confident or confidence in RTP decisions, compared to 91% (N=60) of staff working under 12 hours a week.

Perceived coaching pressure on return-to-play post sports-related concussion

When exploring perceived pressure from coaching staff on accelerating return, 9% (N=10) always felt coach pressure, 12% (N=13) felt it very often, 20% (N=22) sometimes, 32% (N=36) rarely, and 28% (N=31) never (Figure A). There was no significant difference in respondents who always or very often felt coaching pressure when comparing those that collected baseline concussion assessments and those that did not (18% (N=7) vs. 32% (N=16); p=.15), or those who educated their coaching staff every season and those that did not (18% (N=7) vs. 22% (N=16; p=.91).

Perceived player symptom under reporting in clinic to accelerate return-to-play post sports-related concussion

When asked about perceived players under-reporting of symptoms in clinic to return to play sooner following a concussion; 4% (N=4) always felt players underreported symptoms, 20% (N=22) felt very often, 50% (N=56) sometimes, 22% (N=25) rarely, 5% (N=5) never (Figure B). There were no

statistical differences when exploring perception of players always or very often under reporting of symptoms in respondents who educated players per season (13%; N=7) and those that did not (33%; N=19; p=.129), respondents who educated their coaching staff per season (16%; N=6) and those that did not showed no statistical differences (27%; N=20; p=.361), and respondents who collected baseline concussion assessments (18%; N=16) and those that did not (45%; N=10; p=.168).

***Figure A and B near here ***

Use of the FA Advanced Return-to-Play Pathway

When asked if they used the FA advanced return-to-play pathway; 36% (N=40) indicated they always used the FA advanced guidelines when returning a player from an SRC, 30% (N=33) very often, 13% (N=15) sometimes, 6% (N=7) rarely, and 15% (N=17) never (Table 3). Higher rates of usage of the enhanced pathway were seen in respondents working in Men's first team football. 82% (N=50) of respondents working in Men's first team football always or very often used the enhanced pathway, compared to 60% (N=15) of those working in Men's 17-23 age group football (Table 3). Increasing rates of usage were seen in respondents working in clubs further up the Men's football pyramid: Premier League (87%, N=20), English Football League Championship (78%, N=18), English Football League One (75%, N=12), League Two (70%, N=7). In those working in Men's or Women's team aged 16 or under (N=11), 55% rarely or never used the enhanced pathway (N=6). Of the 22 respondents who did not or were not sure if they collected baseline concussion assessments, 36% (N=8) always used the enhanced pathway, 14% (N=3) did very often, 27% (N=6) did sometimes, 5% (N=1) rarely did, and 18% (N=4) never did.

Table 3 near here

SCAT-5 confidence in RTP

Of the 90 respondents that collected baseline concussion assessments; 27% (N=24) had a high confidence in the SCAT-5 as a tool in player return-to-play, 63% (N=57) had moderate confidence, 9% (N=9), and 1% (N=1) had no confidence in it. High to moderate confidence was seen in 90% (N=81) of respondents who collected baseline concussion assessments, compared to 82% (N=18) who did not collect baseline assessments.

Discussion

Confidence in the management of player return-to-play post-concussion was high with 93% feeling very confident or confident, with a high awareness of the FA guidelines (96%). There was a concern that players were under-reporting symptoms in clinic to speed up their return to play post-concussion with only 27% of respondents thinking players rarely or never did this. This is supported by other

studies which show 64% of players would continue to play knowing they may have sustained a concussion (Williams et al., 2016), and 45% of players would knowingly return-to-play with a concussion (Tsao, 2014). Pressure from players around their return is well documented with decision making being influenced by their perception of the importance of their upcoming games (Williams et al., 2016, Broglio et al., 2010, Tsao, 2014).

Confidence in SCAT-5 as a return to play tool was high with 90% having a high or moderate confidence in it, however neuro-psychometric testing alone should not direct management decisions but should provide an aid in the decision-making process (Mccrory et al., 2017). Current guidelines and pathways rely heavily on player symptom reporting with the assumption that players engage in this process with honesty. Medical professionals working in elite sports are at risk of litigation should questions be asked regarding the management of players RTP post-SRC (Turner et al., 2020). Not following recommendations or having objective evidence to support RTP decisions, may be putting medical professionals at risk. A recent study of European elite football physicians showed that 63% of respondents did not collected any baseline neurological or neuropsychological assessment each season, suggesting that practices can be improved (Gouttebarge et al., 2021). Use of detailed objective neuro-psychometric testing such as ImPACT and CogSport were low. Given the partly subjective nature of the SCAT-5, higher utilisation of additional objective neuro-psychometric testing could reduce player under reporting of symptoms during the rehabilitation process.

There is a growing emphasis on player-specific concussion education with evidence that it increases footballers' knowledge and attitude towards concussion (Gouttebarge et al., 2019). Despite this, our study found no difference in medical staff perception of true symptom reporting in teams that educated their players and those that did not. Given the subjective nature of the study methodology, these results do not reflect player opinions or perceptions which could be a source of further research.

The FA concussion guidelines outline a standard return to play protocol and an "enhanced care setting" pathway for those working in environments which lend themselves to do so (The Football Association, 2015). Use of these guidelines were high with 66% of respondents saying they always or very often used the enhanced care pathway, with the highest frequency of use in men's first team staff (82% reporting always or very often using). Guidance on what settings the enhanced care pathway can be applied are clear, with one recommendation being that "baseline SCAT5 and/or computerised neuro-psychometric/cognitive testing of the player has been conducted prior to the injury". 77% of respondents who did not collect any baseline concussion assessment testing said they always, very often, or sometimes used the enhanced care setting guidelines. This is concerning, given that a useful adjunct of accelerating player return is serial neuro-psychological testing and is clearly outlined in the FA guidelines (Patricios et al., 2018, The Football Association, 2015, Mccrory et al., 2017). Of the 11 respondents working with players aged 16 or under, 7 (64%) indicated they

at times used the enhanced pathway. This is of interest as the enhanced pathway should not be used for any player who plays for an age group below under-17s.

Pressure felt from coaching staff in accelerating player return following concussion was present with 40% feeling pressure always, very often, or sometimes. Similar figures were seen in Italian football club level medical staff where 33% felt pressured by the coaching staff when making return to play decisions, suggesting that the landscape remains unchanged (Broglio et al., 2010). The same study found that no coach indicated that he/she had ever placed pressure on the medical team to accelerate the return a concussed athlete, indicating a mismatch between coaching staff behavioural self-perceptions and reality (Broglio et al., 2010). Higher figures of perceived pressure were seen in elite and semi-professional Welsh rugby union medical staff where 80% felt pressured to clear a concussed player by either the player themselves or the coach (Mathema et al., 2016). It has been shown in a non-elite population group that reducing pressure from coaching staff on player return can increase athlete symptom reporting, emphasising the important role that coaching staff have over athlete behaviour (Kroshus et al., 2015). One potential consideration would be to utilise independent concussion consultants to evaluate players prior to return. This may help share the decision-making and improve communication and collaboration around return decisions (Patricios et al., 2018).

Concussion specific education in other sports has been found to increase concussion knowledge in coaching staff including their return-to-play knowledge (Yeo et al., 2020, Griffin et al., 2017, Shanley et al., 2019). However, in this study there was no evidence of coaching education or collection of baseline concussion assessments changing the perceived pressure felt by medical staff to accelerate player return from coaching staff. This should not undervalue the importance of concussion education and baseline assessment collection and coaching staff behaviours which should be explored in more depth in the future.

Post-concussion care and return-to-play in elite sports can be a complex and challenging topic with guidelines only being recommendations as to best practice. The decision making should be directly guided and managed by medical staff.

Limitations

Due to the recruitment method calculating a response rate was not possible. The self-reported nature of the questionnaire raises limitations within the data set and relies on truthful completion. The questionnaire did not explore knowledge of the FA guidelines but only awareness, and the question around concussion substitutes did not give an explanation around the process involved due to concussion substitutes not existing at the time of the questionnaire creation. The self-selected and voluntary completion raises concern of selection bias, and the anonymous nature makes it impossible to identify whether the respondents were from across all clubs. The high heterogeneity

and small number of respondents within some of the groups limited intergroup comparisons and the potential significance of statistical analysis. The age and experience of managers and coaching staff were not collected, and whether this is a factor which may influence concussion attitudes within clubs is unknown and could be explored in future research. Given the novelty of the area of being explored there was no validated questionnaire available, but questionnaire content and usability was piloted prior to distribution.

Future Directions

The level of interest in this area is growing, as is the body of research. This study has highlighted some potential avenues for further exploration and attention. A comparison of perceived underreporting of player symptoms and coaching staff interference on RTP decision could be assessed between staff working in different leagues, academy vs. first team settings, and men's vs. women's football. Exploration of coaching age and background may show differences in perceived pressure from coaching staff, as might player age and previous SRC concussion on under reporting of symptoms.

Conclusion

Awareness of the FA guidelines were high. Use of the enhanced return-to-play guidelines were common, with potential usage outside of the intended settings particularly regarding younger athletes. Medical staff working in elite football overall felt confident in managing the RTP of concussed players, however there was some concern about player symptom under-reporting to expedite return, and perceived coaching staff pressure on decision making processes. Collection of baseline concussion testing was high with utilisation of SCAT-5 testing accounting for the large majority of testing, with confidence in the SCAT-5 as a RTP tool being moderate to high. Use of more objective neuro-psychometric testing was low, which could be an area of future focus to reduce potential subjective player influence on RTP decisions.

Applied Recommendations:

- All medical staff working in elite football should be collecting baseline concussion assessments.
- Collection of SCAT-5 tests should be seen as a minimum, with additional neuro-psychometric testing being desirable.
- Use of enhanced return-to-play protocols should only be used in appropriate settings.
- Utilisation of independent concussion experts should be considered in complex cases.
- Diligent and comprehensive note keeping around player concussion care decisions should be made to safeguard both the player and the clinician.

Competing interests: CR, DB, and WC hold or have held clinical roles at the Football Association within

the youth pathway teams. DB, WC, and RC hold clinical roles in Premier League football clubs. CR holds a clinical role in a Women's Super League team.

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502 Table 1: Respondent demographics

		N	Male N (%)	Female N (%)
Total		112	86 (77%)	26 (23%)
Country	England	98	76 (78%)	22 (22%)
	Wales	2	1 (50%)	1 (50%)
	Scotland	9	8 (89%)	1 (11%)
	Northern Ireland	2	0	2 (100%)
	Ireland	1	1 (100%)	0
Men's/Women's	Men's football	96	76 (79%)	20 (21%)
	Women's football	16	10 (62.5%)	6 (37.5%)
Profession	Physiotherapist	33	22 (67%)	11 (33%)
	Sports and/or rehabilitation therapist	17	10 (59%)	7 (41%)
	Sports scientist	3	2 (67%)	1 (33%)
	Doctor	59	52 (88%)	7 (12%)
	Consultant level	21	20 (95%)	1 (5%)
	Non-consultant level	38	32 (84%)	6 (16%)
Age	Under 20 years	1	1 (100%)	0
	21-30 years	32	20 (62.5%)	12 (37.5%)
	31-40 years	38	31 (84%)	7 (16%)
	41-50 years	19	16 (84%)	3 (16%)
	51-60 years	17	13 (76.5%)	4 (23.5%)
	61-70 years	3	3 (100%)	0
	Over 71 years	2	2 (100%)	0
Years of experience	0-2 years	21	12 (57%)	9 (43%)
	3-4 years	24	17 (71%)	7 (29%)
	5-6 years	18	15 (83%)	3 (17%)
	7-10 years	12	10 (83%)	2 (17%)
	11-14 years	13	12 (92%)	1 (8%)
	Over 15 years	24	20 (83%)	4 (17%)
Hours worked in club per week	0-4 hours	39	30 (77%)	9 (23%)
	5-12 hours	27	20 (74%)	7 (26%)
	13-20 hours	6	4 (67%)	2 (33%)
	21-29 hours	4	3 (75%)	1 (25%)
	30+ hours	36	29 (81%)	7 (19%)

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Table 2: Number (%) of baseline concussion assessment collection and concussion education

	Yes (%)	No (%)	Not sure (%)
Player concussion education per season	55 (49%)	46 (41%)	11 (10%)
Coach concussion education per season	42 (38%)	49 (44%)	21 (19%)
Baseline concussion assessment collection	90 (80%)	19 (17%)	3 (3%)

Table 3: Use of enhanced FA concussion return pathway by team worked in, club level, and age group

	Always (%)	Very Often (%)	Sometimes (%)	Rarely (%)	Never (%)	Total
Men's first team	28 (46%)	22 (36%)	6 (10%)	2 (3%)	3 (5%)	61
Men's team aged 17-23	7 (28%)	8 (32%)	4 (16%)	2 (8%)	4 (16%)	25
Men's team aged 16 and under	1 (14%)	0	2 (29%)	2 (29%)	2 (29%)	7
The Premier League	9 (39%)	11 (48%)	1 (4%)	1 (4%)	0	23
The English Football League Championship	11 (48%)	7 (30%)	3 (13%)	1 (4%)	1 (4%)	23
The English Football League One	9 (56%)	3 (19%)	2 (13%)	0	2 (13%)	16
The English Football League Two	4 (40%)	3 (30%)	0	3 (30%)	0	10
The National League	3 (60%)	1 (20%)	0	0	1 (20%)	5
Scottish Premier League	3 (100%)	0	0	3		3
Women's first team	0	3 (33%)	2 (22%)	1 (11%)	3 (33%)	9
Women's team aged 17-23	1 (33%)	0	0	0	2 (67%)	3
Women's team aged 16 and under	2 (50%)	0	0	0	2 (50%)	4
FA Women's Super League	1 (20%)	2 (40%)	1 (20%)	0	1 (20%)	5
FA Women's Championship	0	0	1 (25%)	0	3 (75%)	4
Total	**40 (36%)**	**33 (30%)**	**15 (13%)**	**7 (6%)**	**17 (15)**	**112**

Figure A: Count of perceived influence of coaching staff on RTP decisions

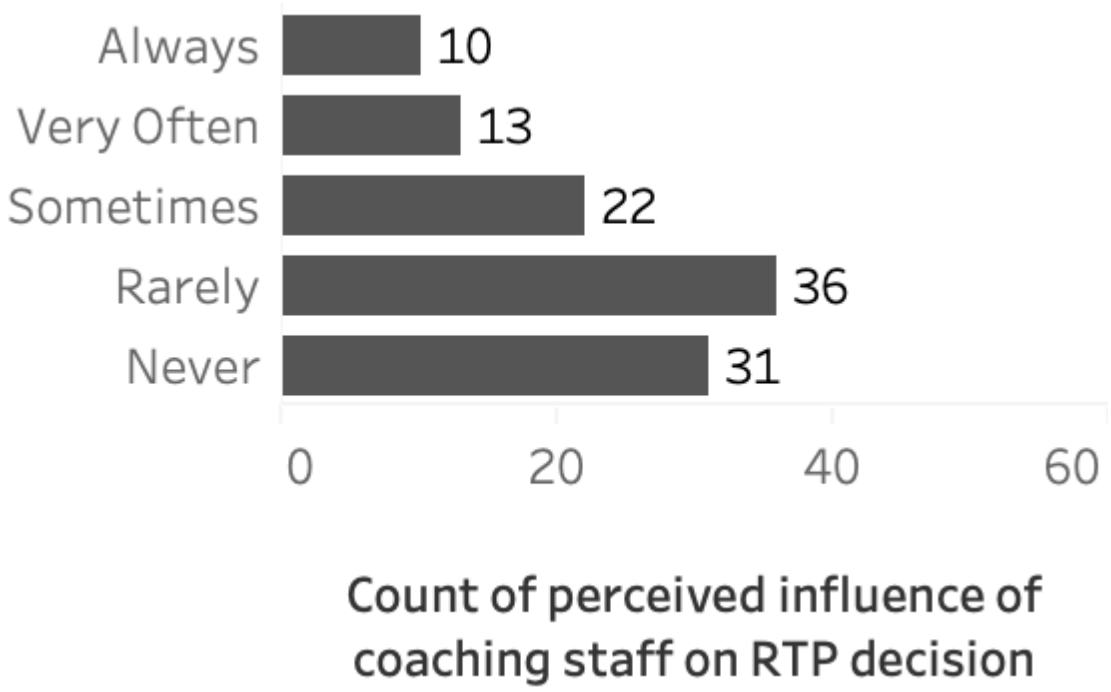

Figure B: Count of perceived under-reporting of symptoms by players to expedite RTP post SRC