Leadership experiences of elite football team physicians during the COVID-19 pandemic: a pilot study

Sean Carmody,1,2 Gurneeet Brar,3 Andrew Massey,4 Craig Rosenbloom,5,6,7 Vincent Gouttebarge,1,2,8,9 Mike Davison10,11

ABSTRACT

Objectives The purpose of this study was to explore the leadership experiences of elite football team physicians during the COVID-19 pandemic.

Methods A pilot-study based on a cross-sectional design by means of an electronic survey was conducted. The survey relied on 25 questions divided into distinct sections including among others professional and academic experience, leadership experiences and perspectives.

Results A total of 57 physicians (91% male; mean age: 43 years) gave their electronic informed consent and completed the survey. All participants agreed that the demands of their role had increased during the COVID-19 pandemic. Fifty-two (92%) participants reported that they felt they were expected to take more of a leadership role during the COVID-19 pandemic. Eighteen (35%) reported feeling under pressure to make clinical decisions which were not in keeping with best clinical practice. Additional roles, duties and demands expected of team doctors during the COVID-19 pandemic were subdivided into communication, decision-making, logistical, and public health demands.

Conclusion The findings from this pilot study suggest that the way in which team physicians at professional football clubs operate has altered since the onset of the COVID-19 pandemic, with greater demands placed on leadership skills including decision-making, communication and ethical stewardship. This has potential implications for sporting organisations, clinical practice and research.

INTRODUCTION

The COVID-19 pandemic has had a profound impact on every person on Earth. Few industries have been spared from the resultant economic devastation, and professional football has faced enormous financial and health challenges as it has navigated the effects of the pandemic.1 In March 2020, as Governments throughout the world imposed ‘lockdowns’ to prevent the spread of coronavirus, professional football leagues were brought to a sudden halt.

Professional football provides physical, mental, social and economic benefits to its participants and those who follow it. It was in this context that consideration was given as to how to safely resume football during the COVID-19 pandemic with a phased return proposed.2 3 The subsequent safe return of football was dependent on devising and adhering to strict infection control protocols, including daily symptom monitoring, stringent social distancing and hygiene measures, rigorous testing procedures and in most cases, the requirement to play competitive fixtures ‘behind closed doors’ (ie, with no members of the public present).3 4 Team physicians were heavily involved in the adoption and adherence to policy. These demands were in addition to their usual workload of managing illness and injury, demands which likely intensified following the hasty resumption of football after a period of inactivity amidst a pandemic.6 7 Team physicians were also likely to have been expected to provide support to players and staff through the effects of such an uncertain period.8

The rapid emergence of COVID-19, and the ensuing chaos and disruption to professional football, is likely to have tested the leadership skills of team physicians. Accurate decision-making, effective communication, interdisciplinary collaboration and the management of uncertainty are all features of effective crisis leadership—and the implementation of these by team physicians will have been central to football’s continued return during the COVID-19 pandemic. Professional football clubs can be considered a complex adaptive system, and the quality of the relationships that were pre-existing or developed during the pandemic are likely to have significantly influenced outcomes.9

There are several studies describing the altered workload of team physicians during the COVID-19 pandemic in addition to studies detailing the impact the pandemic has had on players.4 5 10 However, no study has sought to specifically evaluate the leadership experiences of elite football team physicians during the COVID-19 pandemic. Such an exploration may provide an insight into the challenges team physicians faced which may ultimately help to shape future clinical training and policy in football medicine and beyond. It may also provide a reference point for sporting organisations navigating both the current and future pandemics. The purpose of this study was to explore the leadership experiences of elite football team physicians during the COVID-19 pandemic.

METHODOLOGY

Study design

A pilot-study based on a cross-sectional design by means of an electronic survey was conducted. This study was conducted in accordance with the Declaration of Helsinki.10 Ethical approval was sought...
and approved via EthOs (Manchester Metropolitan University) in June 2021.

**Participant selection**
The inclusion criteria for the participants of the study were as follows:
1. Medical doctor(s) working as team physicians for an elite football club or a national team
3. Able to read, comprehend and write English text
Participants were invited to complete the survey over a 4-week period in June and July 2021.

**Survey design**
Twenty-five short and unambiguous questions or statements aimed at ascertaining leadership experiences among team physicians during the COVID-19 pandemic were developed by coauthors (SC, GB and MD) using appropriate expertise. The survey was internally validated by the authorship group, and trialled by an experienced professional football team physician prior to widespread dissemination. The questions were divided into distinct sections which included demographics (eg, age), professional and academic experience, details of organisation (eg, playing level, country in which the organisation is based), leadership experiences (eg, ‘Please specify any particular leadership skills/duties/demands that were required of you during the COVID-19 pandemic that you would never have anticipated beforehand’) and perspectives (eg, ‘Do you feel your relationship with those holding managerial roles within the club has enhanced as a result of the COVID-19 pandemic?’). Different response scales were used throughout the survey, with some requiring a ‘yes’ or ‘no’ answer, and others based on a 5-point Likert scale from ‘definitely true’ to ‘definitely false’. For some questions, participants were invited to submit responses using free-text. Free-text responses were grouped using reflexive thematic analysis into communication, decision-making, logistical and public health duties. Based on all questions, an electronic anonymous survey was compiled (Qualtrics XM). Information about the study was sent by email to potential participants through national and international football medical organisations (eg, FIFA Medical Network, Football Medicine and Performance Association). If interested in the study, participants gave their electronic informed consent and completed anonymously the survey. The complete questionnaire is attached to the online supplemental appendix 1 of this article.

**Data analysis**
Descriptive analyses were performed on the data collected from the electronic survey.

**RESULTS**

**Demographics**
A total of 57 physicians gave their electronic informed consent and completed the survey. Fifty-two respondents (91%) were male, and five (9%) were female. On average, participants were 43 years of age. The distribution of number of years medically qualified is outlined in figure 1.

Fourteen different countries were represented in this survey. Thirty of the respondents were working with organisations based in England (53%). The remainder of respondents were working with teams based in: The Netherlands (n=6, 11%), Germany (n=5, 9%), Belgium (n=4, 7%), Ireland (n=3, 5%), Portugal (n=3, 5%), Australia (n=2, 4%), Brazil (n=1, 1%), France (n=1, 1%), Scotland (n=1, 1%), Spain (n=1, 1%), Sweden (n=1, 1%), USA (n=1, 1%) and Wales (n=1, 1%). The participant characteristics are summarised in table 1.

**Team physician perspectives on the COVID-19 pandemic**
All participants agreed that the demands of their role had increased during the COVID-19 pandemic. Fifty participants (88%) agreed that their communication skills had enhanced during the pandemic. Forty-seven participants (83%) felt that
their relationships with those in managerial roles were enhanced during the pandemic.

Fifty-two (92%) participants reported that they felt they were expected to take on more of a leadership role during the COVID-19 pandemic, of which 40 (77%) felt ‘extremely prepared’ or ‘somewhat prepared’. Only four (7%) participants reported feeling ‘unprepared’. Eighteen (33%) reported feeling under pressure to make clinical decisions which were not in keeping with best clinical practice.

All but one of the participants were in favour of team physicians receiving more formal leadership training in order to better equip them for the demands posed by the role. Fifty-four (95%) of participants agreed that training for team physicians should have a specific focus on communication skills.

**Leadership skills, duties and demands during the COVID-19 pandemic**

Twenty-three (40%) participants described having either current or previous experience of leading a medical department in a sporting context. All participants were invited to use free-text to detail the leadership skills, duties and demands that were required of them during the COVID-19 pandemic.

**Communication**

Team physicians were expected to take on the role of communicating issues to non-medical stakeholders such as players, staff, the board, media and stadium management. Team physicians described being seen as the ‘go-to’ source for up-to-date information on public health guidance changes and needing to translate medical information into an understandable format for staff and players. Team physicians were expected to deliver critical information (eg, closing down departments at the club at short notice due to an escalating issue).

**Decision-making**

The need to be decisive during a time of crisis was a frequent theme described by the participants in this study. Many respondents also referred to making significant decisions with incomplete information. Team physicians were expected to liaise with senior management with regard to whether fixtures could proceed, the type of training, which training ground facilities could be used (eg, gym, changing room) and were central to the planning of preseason training camps. They were also required to consider difficult decisions with respect to ‘close contacts’ and the consequences of their actions had the potential to directly impact team performance (eg, negatively affect team selection). Several respondents described needing to take significant decisions with incomplete information and having to justify these decisions to wider stakeholders—many of whom had differing beliefs, perceptions and agendas.

**Logistical**

Logistical duties described by the participants included organising and implementing testing programmes, processing test results, arranging tests for returning international players, managing the arrangement of the ‘bubble’, monitoring COVID-19 questionnaires and ordering supplies (eg, personal protective equipment, PPE). Respondents also described the need to amend protocols (eg, Emergency Action Plans) to ensure that they were ‘COVID-compliant’. One respondent referred to the logistical challenge of arranging new-signing medicals for players based abroad.

**Public health**

Many respondents were appointed as the COVID-19 Medical Officer for their organisation, a role which extended to ensuring the suitable protocols were developed and adhered to. Team physicians were expected to assume overall stewardship of infection control and hygiene measures. Risk assessments, contact tracing, outbreak management and PPE management were some of the public health duties that team physicians implemented during the pandemic. More recently in the pandemic, stakeholder education with respect to COVID-19 vaccination was also undertaken. The safe assessment and management of positive COVID-19 cases was a core clinical duty of the team physicians surveyed, as was ensuring the safe return to play of players following a confirmed infection.

**DISCUSSION**

This pilot study explored the leadership experiences of elite team physicians during the COVID-19 pandemic through means of an electronic survey. All participants agreed that their work demands had increased during the COVID-19 pandemic.

**Increased demands and risk of burnout**

This pilot study is a novel investigation with no apparent direct comparative studies available for review in the literature. Several studies to date have examined the workload of physicians during the COVID-19 pandemic. A systematic review assessed the impact of COVID-19 on physicians during the pandemic and found that the pandemic has led to increased workloads which has a direct correlation with physician burnout. Although the pilot study reported here did not investigate burnout among elite team physicians, it may be hypothesised that the increased work demands may have placed them at greater risk.

**Ethical decision-making**

Acting with honesty and integrity is a cornerstone of good medical practice. There are many external factors which make practising medicine in an elite sporting context different from practising in primary or secondary care. External pressures (eg, from technical staff, supporters, media, agents, etc) may negatively influence clinical decision-making leading to poor clinical practice or unethical behaviours. Thirty-five percent of respondents’ surveyed reported that they felt under pressure to make decisions which were not in keeping with best practice during the COVID-19 pandemic. The ‘high stakes’ attached to some...
decisions made during the pandemic (eg, in the case of ‘close contacts’ impacting team selection) may have attracted interference from other stakeholders. It is important that other stakeholders do not interfere with medical decisions. Few studies have examined the impact of external pressures on clinical decision-making in a football environment. One study looking at concussion, surveyed elite team physicians in European football and found that 10% of the team physicians described feeling under pressure not to substitute a player with a potential concussion.13

The ethical difficulties experienced by doctors in football seem to reflect the common challenges and dilemmas (eg, confidentiality, conflicts of interest, consent, disclosure, working with vulnerable populations) that are evident in other medical specialties, though may manifest in different ways.14 The COVID-19 pandemic has exposed doctors to many ethical dilemmas, and has confronted doctors with extraordinary pressures. The high proportion of doctors examined in this pilot study who felt under pressure to make decisions not in keeping with best practice is a concern, and may highlight a need for more collaboration among team physicians to ensure high standards of medical ethics are maintained and that doctors do not feel isolated in their decision-making.

**Future directions—sporting organisations**

Future pandemics are predictable, and COVID-19 has taught us that pandemic preparedness is essential to minimising the impact caused.15 The pilot study reported here found that the demands of team physicians increased during this period and their relationship with those in managerial roles was enhanced. Within complex adaptive systems (eg, professional football clubs), the patterns of relationships between individual components determine the overall outcome.16 Professional sporting organisations should consider having a ‘pandemic policy’ in place, and this should be frequently updated. Deliberate efforts should be made to ensure that relationships with key stakeholders has been developed in advance of any issue arising. There is modest evidence to suggest that doctor-led health organisations have better health outcomes than those led by non-medical managers, which supports the importance of including doctors on organisational governing boards—and there may be a case to include medical personnel on the boards of sporting organisations.17

**Future directions—research agenda**

Understanding the influence of leadership style on outcomes in football medicine is an emerging area of interest.18 Through further investigating leadership traits of effective medical and multidisciplinary teams, there is the potential to improve clinical and performance outcomes in football medicine. It may also be useful for research to examine which training routes (if any) prepare team physicians most appropriately to cope with the demands of the job. Larger cohort studies are required to confirm whether the findings of this pilot study are applicable to a broader population.

**Future directions—clinical practice and training**

This pilot study identified an appetite among elite football team physicians for more specific training with respect to communication and leadership. It is envisaged that such training would allow team physicians to perform their role more effectively—irrespective of a pandemic or not. The nature of this training should be formulated with the specific needs of team physicians in mind.

**Strengths and limitations**

This is the first study investigating the leadership experiences of team physicians within elite football during the COVID-19 pandemic. Of the cohort studied, there were 14 different countries represented, with 81% of respondents’ working either in the highest national domestic league or for international teams.

Several methodological limitations should be acknowledged. First, this study was only a pilot study conducted to help with the design of future larger cohort studies. A quasi mixed-methods approach was used through the use of a ‘free-text’ option in the survey, however, a more detailed mixed-methods approach (eg, through the use of semistructured interviews) may have provided more balanced and informative research results. Only 16 of the participants were working full-time in professional football; extending the survey to other medical practitioners in professional football clubs (eg, physiotherapists) who work for the organisation full-time may have provided a more rounded impression. Finally, no official reporting guidelines were used for this study which may influence interpretation of the results.

**CONCLUSION**

The findings from this pilot study suggest that the way in which team physicians at professional football clubs operate has altered since the onset of the COVID-19 pandemic, with greater demands placed on leadership skills including decision-making, communication and ethical stewardship. This has potential implications for sporting organisations, clinical practice and research.

**Author affiliations**

1Amsterdam UMC location University of Amsterdam, Orthopedic Surgery and Sports Medicine, Meibergdreef 9, Amsterdam, The Netherlands
2Amsterdam Collaboration on Health & Safety in Sports (ACHSS), AMC/VUmc IOC Research Center, Amsterdam, The Netherlands
3Imperial College School of Medicine, Imperial College, London, UK
4Medical Department, Fédération Internationale de Football Association (FIFA), Zurich, Switzerland
5Technical Directorate, The Football Association, Burton-upon-Trent, UK
6The Centre for Sports and Exercise Medicine, Queen Mary University of London, London, UK
7Tottenham Hotspur Football Club, London, UK
8Section Sports Medicine, University of Pretoria, Pretoria, South Africa
9Football Players Worldwide (FIFPRO), Hoofddorp, The Netherlands
10Isokinetic Medical Group, FIFA Medical Centre of Excellence, 11 Harley Street, London, UK
11Football Research Group, Linköping, Sweden

**Contributors**

SC, GB and MD developed the survey used to collect the data for this research project. SC drafted the original manuscript, all coauthors reviewed the final manuscript.

**Funding**

The authors have not declared a specific grant for this research from any funding agency in the public, commercial or not-for-profit sectors.

**Competing interests**

None declared.

**Patient consent for publication**

Not required.

**Ethics approval**

This study involves human participants. Ethical approval was sought and approved via EthOis (Manchester Metropolitan University) in June 2021. Participants gave informed consent to participate in the study before taking part.

**Provenance and peer review**

Not commissioned; externally peer reviewed.

**Supplemental material**

This content has been supplied by the author(s). It has not been vetted by BMJ Publishing Group Limited (BMJ) and may not have been peer-reviewed. Any opinions or recommendations discussed are solely those of the author(s) and are not endorsed by BMJ. BMJ disclaims all liability and responsibility arising from any reliance placed on the content. Where the content includes any translated material, BMJ does not warrant the accuracy and reliability of the translations (including but not limited to local regulations, clinical guidelines, terminology, drug names and drug dosages), and is not responsible for any error and/or omissions arising from translation and adaptation or otherwise.
REFERENCES

Leadership experiences of elite football club physicians during the COVID-19 pandemic

Start of Block: Introduction

Leadership experiences of elite football club physicians during the COVID-19 Pandemic

Principal Investigator: Dr Sean Carmody
Co-investigators: Gurneet Brar, Mike Davison

Dear Participant,
You are being invited to take part in a research study on leadership experiences during the COVID-19 pandemic. Before doing so, it is important for you to understand the purpose of the study, what will be asked from you and how your information will be used. Please take the time to read the text below and if you have any further questions or queries, do not hesitate to get in contact with: Dr Sean Carmody at seanocearmaide@gmail.com.

Purpose of the Study
The aim of this investigation is to analyse the leadership experiences of elite football club physicians during the COVID-19 pandemic. The unprecedented nature of the pandemic has seen fundamental changes in the role played by physicians, placing extra emphasis on the need for effective communication, crisis leadership and rapid decision making, which has never been seen before. These demands that have come suddenly with the swift resumption of elite football are likely to pose a significant burden on top of physician's usual duties. This study aims to evaluate these factors and how they have formulated specific experiences for physicians within the field of elite football.

Why have I been invited?
You have been asked to take part in this study so that we can gather information regarding your personal experiences of leadership during the COVID-19 as an experienced physician within elite football.

Do I have to take part?
Participation in this study is completely voluntary. If you decide that you wish to participate, we will ask you to agree via a short consent form below.

What do I have to do if I choose to take part?
Please answer the questions openly. The survey is designed to last 10 minutes. Based upon the
results of this survey, you may be asked to interview for further elaboration on the points mentioned in your survey.

**What will happen with my information?**
All information shared with us will remain confidential and shared only amongst the investigators of this study. You may withdraw at any point during the questionnaire.

**What are the possible disadvantages and risks of taking part?**
There are no associated disadvantages or risks of partaking in this survey, apart from the time taken to complete it. The questions of this survey will not be of a sensitive nature.

**What are the possible benefits of taking part?**
We cannot ensure that there will be any direct benefits of taking part in this study. However, your responses will be used to analyse different leadership experiences during the COVID-19 pandemic, and suggest tools that can be put in place to better equip physicians in the event of future crises within elite football.

**What if I have concerns?**
If you have any concerns about the survey or its content, then please inform the principal investigator at your earliest convenience using the contact details stated above.

**Who is organising and funding this research?**
This study is being undertaken as part of the principal investigator's research project for the Masters in Sporting Directorship at Manchester Metropolitan University. No funding has been provided for this study.

**Ethical Approval**
Ethical Approval for this study has been granted by Manchester Metropolitan University.

**Consent Form**
1. I confirm that I have read and understood the information stated above
2. I confirm that I have had the chance to ask any questions and these have been answered fully
3. I understand that my participation is voluntary and I am free to withdraw at any point whilst completing the survey
4. I agree to have the investigator's request an interview following the results of my questionnaire for further details about my experience
5. I consent to take part in the above study.

By clicking onto the next page, you provide consent to take part in the study. Otherwise we thank you for your time and you may close this tab without continuing.
Start of Block: Block 1

Q1 Full Name
Should you wish to remain anonymous, please leave the box blank

Q2 Age

Age ()

Q3 To which gender identity do you most identify?

- Female (1)
- Male (2)
- Transgender Female (3)
- Transgender Male (4)
- Gender variant / non-conforming (5)
- Option not listed (6)
- Prefer not to say (7)
Q4 Number of years qualified as a doctor

- Under 5 (1)
- 6-10 (2)
- 11-15 (3)
- 16-20 (4)
- 21-25 (5)
- 26-30 (6)
- 31+ (7)

Q5 Highest level of Postgraduate Training

- Foundation training (1)
- Sport and Exercise Medicine (CCT via training) (2)
- Sport and Exercise Medicine (awaiting CCT) (3)
- Sport and Exercise Medicine (via Article 14) (4)
- General Practice (5)
- Acute Care Common Stem / Emergency Medicine (6)
- Core Medical Training / Internal Medical Training (7)
- Other (8)

Display This Question:
If Highest level of Postgraduate Training = Other
Q6 If you answered "other" to the question above, please state your highest level of qualification below

________________________________________________________________

Q7 Have you successfully completed the two-part Membership of the Faculty of Sport and Exercise Medicine (MFSEM) exam?

- Yes (1)
- No (2)
- Not Applicable (4)

Q8 Nature of involvement with professional football

- Part time (1)
- Full time (2)
- Ad-hoc Voluntary (3)
Q9 Highest playing level of organisation that you work primarily for

- International (Womens Senior) (1)
- International (Mens Senior) (2)
- International (Womens Youth) (3)
- International (Mens Youth) (4)
- Highest National Level League (Women) (5)
- Highest National Level League (Men) (6)
- Second highest National Level League (Women) (7)
- Second highest National Level League (Men) (8)
- Academy Football (Girls) (9)
- Academy Football (Boys) (10)
- Other (11)

Display This Question:

If Highest playing level of organisation that you work primarily for = Other

Q10 If you answered "other" to the previous question, please specify the organisation below

__________________________________________________________________
Q11 In which country is the organisation you primarily work with based?

- England (4)
- Scotland (5)
- Ireland (6)
- Wales (7)
- Spain (8)
- Germany (9)
- Italy (10)
- USA (11)
- Other (12)

Display This Question:

If In which country is the organisation you primarily work with based? = Other

Q12 If you answered “other” to the previous question, please specify the country below

End of Block: Block 1

Start of Block: Block 2

Q13 Do you have any formal leadership qualifications?

- Yes (1)
- No (2)

Display This Question:

If Do you have any formal leadership qualifications? = Yes
Q14 If you answered "yes", to the question above, please specify the qualifications below
________________________________________________________________

Q15 Please provide short details on any previous leadership experience either in a medical context and/or a football context
________________________________________________________________
________________________________________________________________
________________________________________________________________
________________________________________________________________
________________________________________________________________

Q16 Do you feel the demands of your role increased during the COVID-19 pandemic?

- Definitely true  (1)
- Somewhat true  (2)
- Neither true nor false  (3)
- Somewhat false  (4)
- Definitely false  (5)
Q17 Do you feel your communication skills were enhanced during the COVID-19 pandemic through your work in football?

- Definitely true (1)
- Somewhat true (2)
- Neither true nor false (3)
- Somewhat false (4)
- Definitely false (5)

Q18 Do you feel you were expected to take on more of a leadership role during the COVID-19 pandemic?

- Definitely true (1)
- Somewhat true (2)
- Neither true nor false (3)
- Somewhat false (4)
- Definitely false (5)

Display This Question:
If Do you feel you were expected to take on more of a leadership role during the COVID-19 pandemic? = Somewhat true
Or Do you feel you were expected to take on more of a leadership role during the COVID-19 pandemic? = Definitely true
Q19 If you answered "definitely true" or "somewhat true" to the question above, do you feel you were adequately prepared in your training, to take on this increased leadership role during the COVID-19 pandemic?

- Extremely prepared (1)
- Somewhat prepared (2)
- Neither prepared nor unprepared (3)
- Somewhat unprepared (4)
- Extremely unprepared (5)

Q20 Please specify any particular leadership skills / duties / demands that were required of you during the COVID-19 pandemic that you would never have anticipated beforehand.

____________________________________________________________________

Q21 Did you feel under pressure to make clinical decisions which were not in keeping with best medical practice during the COVID-19 pandemic?

- Definitely yes (1)
- Probably yes (2)
- Unsure (3)
- Probably not (4)
- Definitely not (5)
Q22 Do you feel your relationship with those holding managerial roles within the club has enhanced as a result of the COVID-19 pandemic?

- Definitely yes (1)
- Probably yes (2)
- Unsure (3)
- Probably not (4)
- Definitely not (5)

End of Block: Block 2

Start of Block: Block 4

Q23 Do you feel team physicians would benefit from more formal leadership training to better equip them for the demands posed by the role?

- Definitely yes (1)
- Probably yes (2)
- Unsure (3)
- Probably not (4)
- Definitely not (5)
Q24 Do you feel training for team physicians should include specific training on communication skills?

- Definitely yes (1)
- Probably yes (2)
- Unsure (3)
- Probably not (4)
- Definitely not (5)

End of Block: Block 4