

NUFFIELD COUNCIL ON BIOETHICS

Forward Look 2014 13 May

Sports science, medicine and ethics

Introduction

The forward look session on sports science and medicine began with presentations from invited speakers and respondents, followed by a debate among other assembled guests, including Council members and secretariat. This note summarises themes that emerged during the meeting, then lists ethical and policy questions raised by participants. Views expressed are those of individuals and are not necessarily shared by others present, or the Council.

Emerging themes from presentations and discussions

Context, terminology and technological developments

Terminology

- 1 'Sports science' might be defined as the application of science into sporting contexts. However, as it also concerns an awareness of how performance (both of individual sportspeople, and teams) can be improved through the application of technologies, it might therefore be better referred to as 'sports technology'.

Historical context

- 2 The use of doping is not a new phenomenon; however, the watershed moment for public recognition of doping came in the men's 100m final at the 1988 Summer Olympics in Seoul. In that particular race, six out of eight competitors were subsequently found to have used drugs to enhance their performance. As a result, the World Anti-Doping Agency (WADA) was founded.

International context

- 3 The fact that sport is an international endeavour, and regulated as such by a wide range of governing bodies, may be problematic. For example, although there are international regulations for the rules of sport, the international regulation of sports *medicine* and doping is much less clear. In the UK, there is arguably an overreliance on the GMC for support of the governance of

sports medicine. One participant noted “sport at an elite level is highly international, but the regulation doesn’t follow an international focus.”

- 4 The spread of regulatory authorities in sport may also lead to situations where governance is inconsistent and/or incoherent; in the context of doping, national bodies that govern anti-doping at a national level do not all adhere to the same standards. An example of this can be seen in the recent resignation of all board members of the Jamaican Anti-Doping Commission, following concerns that the Commission did not test Jamaican athletes with enough rigour.¹

Technological developments

- 5 Participants drew attention to a number of developments that are emerging as potential methods by which a performance advantage might be gained:²
 - Xenon gas, which reportedly increases levels of EPO³
 - Hypoxic tents
 - Gene doping

Dual purpose and ongoing challenges

- 6 Some drugs that are used to enhance athletic performance can have a dual purpose rooted in medical practice, where they are used legitimately.⁴ It might therefore be the case that athletes and their advisors may monitor closely advances in medical science that could have a non-therapeutic crossover role in enhancing performance. Anti-doping organisations therefore have an ongoing, and perhaps increasingly difficult, task to keep up with these developments, and to monitor athletes’ use of therapeutic exemption forms (TUEs), which allow them to take a banned substance if they have a legitimate medical need. One participant noted that “athletes will forever look at developments to see if they can be used to enhance performance.”
- 7 Doping in elite sport is therefore an ongoing problem, and one that will not disappear. A key aim of each national anti-doping authority is to ‘level the playing field’. However, it might be argued that the question of whether, and to what extent, a level playing field *should* be sought must first be examined. In beginning to address this question, it might be prudent to consider whether levelling an elite sporting field has a tangible influence on society generally.

¹ BBC Sport (23 November 2013) *Jamaica anti-doping board resigns over drug-testing crisis*, available at: <http://www.bbc.co.uk/sport/0/athletics/25062310>.

² Further details about methods of enhancement are available in the background paper produced in advance of the Forward Look meeting. See: <http://nuffieldbioethics.org/future-work/future-work-forward-look-meetings>.

³ The Economist (8 February 2014) *Athletic enhancement: breathe it in*, available at: <http://www.economist.com/news/science-and-technology/21595890-obscure-gas-improves-athletes-performance-breathe-it>.

⁴ It was noted, for example, that water might be seen as a substance that enhances performance; however anti-doping organisations are concerned with substance that *significantly* enhance the athlete’s ability to perform.

- 8 Once the question of whether levelling the playing field is a desirable aim is raised, the next question to consider might be whether performance-enhancing substances that are currently on WADA's banned list might be endorsed rather than reviled. Participants argued that the moment these substances are no longer banned, drug-taking will become legitimised for everyone who plays sport, whether amateur or professional; taking performance-enhancing substance might therefore become a prerequisite for everyone who takes part in sporting competition. The involvement of the criminal underworld in supplying these substances might also form a secondary concern if currently-banned substances are legitimised.

The spirit of sport

- 9 WADA sets three criteria for substances or processes that should be added to its banned list:
- a. The substance or process has the potential to enhance, or does enhance, sport performance
 - b. There is an actual or potential risk to the competitor
 - c. It violates the spirit of sport

The third criterion was felt to be key to understanding the uniqueness of sport in an ethical context. The concept of 'the spirit of sport' should thus be explored further by focusing on the question of what *distinguishes* sport from other pursuits (such as playing a musical instrument) and why sport has such an important role in our society. This might be explored in terms of virtues that can be identified in sporting contexts. For example, it could be suggested that coaching young people to play sport aims to instil courage or patience into their approach to other aspects of their life.

- 10 If the conceptual vagaries of the spirit of sport are further explored, it might add a defined purpose and clarity to rules currently imposed on elite competitors (for example, the rule that substances with a potential to harm must not be taken). However, whether ethicists are the best-placed group of people to clarify the concept might be questioned, in light of the suggestions that athletes are best placed to define the concept, given their 'exceptional' status.

Athletes as an 'exceptional case'

- 11 One of the aims of standard medical treatment might be to "return to species typical functioning". However, in the context of elite sport, medical professionals are tasked with treating very different type of people; in some cases, they might even be described as 'extraordinary'. A further issue might therefore be raised as to how states of exception for sportspeople licenses morally exceptional behaviours. An example of such behaviour might be that offered by one participant, who recalled a case where a wheelchair athlete requested an amputation of a limb so that their bodyweight decreased for competitive purposes. This supports the observation of another participant: "if

you assume that athletes are the same [as those who do not compete professionally, or indeed at all], then you'll be wrong."

- 12 The 'exceptional case' argument led to the suggestion that athletes should be able to make informed choices about medical interventions that they will expose themselves to, in order to return to the field of play faster than would be recommended by a medical professional. This recognises that many elite athletes' mission in life is to perform to their best ability; often this mission is contrary to team or medical advice to withdraw from the field of play, or not to return to play too quickly.

Financial value of athletes

- 13 An athlete might equally be considered an 'exceptional case' because of their monetary value.⁵ Medical professionals may be dubious about treating athletes who are valuable club assets; this may be particularly relevant in cases where medical defence unions refuse to insure medical professionals who treat particular athletes (for example, Premier League footballers). A question might be raised as to whether hyper-expensive elite athletes might constitute a vulnerable population.

The role of medical professionals and advisors

- 14 Participants noted the case of a Serbian skier who was 'patched up' by team doctors following a severe fall in training, and then went on to win a bronze medal the next day. A question was raised as to whether the skier's medical team acted appropriately in enabling her to compete, despite the fact that she had suffered a serious injury.
- 15 Another argument in reference to the Serbian skier is that the mettle of elite athletes exceeds that of the man on the Clapham Omnibus; their drive to compete, and the extent to which they will push their bodies to perform in order to win marks them out as 'different'. For many, athletes are heroes, and medical professionals who treat a professional sportsperson need to be aware of this fact; in 'patching up' the Serbian skier, the doctor in question allowed her to maintain her heroic status.
- 16 However, there is also an obligation on medical professionals to consider damage to athletes which may not manifest until many years after they retire from their sport. An example of this may be found in long-term head injury cases in NFL players, and an associated concern that rugby players may be subject to very similar risks.
- 17 The level of influence exerted by sports managers, agents, and coaches also remains an issue. In order for any governance of sports medicine to be meaningful and effective, the role played by the 'entourage' involved in elite sport needs further examination, as well as how the entourage could be

⁵ See, for example, the £85.3m transfer deal agreed between Tottenham Hotspur and Real Madrid for Gareth Bale: <http://www.bbc.co.uk/sport/0/football/23903470>.

governed by the principles adhered to by medical professionals. The task of devising an appropriate governance framework between medical professionals and other members of the athlete's team support network thus arises.

Confidentiality

- 18 Confidentiality pertaining to the health of sportspeople is often disregarded in professional sports. This can be observed by the extensive coverage of sportspeople's injuries in the sporting media. In the United States, for example, NFL players sign contracts which state that information about their health needs to be available in the public domain.
- 19 A conflict of interest may also occur where medical professionals are in the paid employment of a sports club, rather than the player whom they treat. In such situations, it might be argued that it would be reasonable for clubs to expect medical professionals to make them aware of any concerns they have with a player's health.

Future questions

- 20 During discussions, a question was raised as to whether the topic of sports science and medicine was a 'boutique' issue, and therefore perhaps less important than other topics. In addressing this point, the following suggestions were made as to the policy and ethical questions that the Council may be well-placed to address.

Policy questions

Sports medicine

- Should future risks for athletes (for example, the risk of long-term effects of impacts to the head in NFL, boxing and rugby) be taken into consideration by sports regulators? Should better guidance, or new standards, be put in place to reduce the risk of such injuries continuing to occur?
- How should sports medicine professionals use evidence bases when they treat 'extraordinary populations'?
- How should sports-related policy respond, or continue to respond, to public health threats (e.g. obesity)?

Performance-enhancement

- How might substances and processes that sit in a 'grey area' – i.e. those that may have a dual purpose, or those that sit on the margins of 'enhancing' technologies – be addressed by anti-doping authorities?
- If a level playing field is felt to be paramount to sporting competition, how might this be ensured in emerging policy decisions?
- Should tighter regulations be introduced for food supplements that, although marketed as a nutritional product, can also contain small levels of banned substances?
- Can athletes become scapegoats in circumstances where doping is a team effort rather than the action of a single competitor? If so, should the approach

of governance be amended to take the whole team into account to a larger extent than as at present?

Ethical questions

Definitions

- How might the 'spirit of sport' be defined? How might it be preserved, if at all?
- Should there be a re-evaluation of research ethics – and the associated ethical values of privacy, autonomy and informed consent – as they apply to sports medicine? Are athletes 'guinea pigs' when substances or processes are used to enhance their performance (i.e. do athletes sit outside the protection enjoyed by other participants in clinical research?)?
- How do values differ in elite versus amateur sporting endeavour, and between different forms of elite sport?

Sports medicine

- What factors should be taken into account in deciding whether an injured athlete should return to the field of play?
- Do 'high value' athletes (e.g. Premiership footballers) represent a vulnerable population for medical professionals? How might governance structures better support the treatment of these athletes, and the medical professionals who treat them?
- Are athletes' privacy rights adequately protected? (i.e. where injuries occur, and become public knowledge)
- How do the goals of medicine alter when they're applied to sport?

Enhancement

- Is enhancement a morally positive goal?
- How are technologies that support elite sport valued? E.g. in a Paralympic context, technologies are essential for performance, but they also *enhance* performance. Is there a point where enabling technologies become enhancing technologies?
- Is there a point where enabling technologies become enhancing technologies? Will the distinction between Paralympic and Olympic sport be blurred?
- Should the use of genetic technologies to enhance performance remain prohibited? Might it be argued that modifying a person's genes equates to a change to equipment?
- How might unfair advantage that is natural (such as high levels of male sex hormones in female athletes) be treated by regulatory authorities? How should biological difference be approached?
- How might enhancing technologies be used to 'blur the line' between Paralympic and Olympic competitors (e.g. noting Oscar Pistorius' move to compete in the Olympic Games)?