

Institution: University of Stirling		
Unit of Assessment: 24. Sport and Exercise Sciences, Leisure and Tourism		
Title of case study: Transforming anti-doping policies in sport to improve fairness and protect athletes' rights		
Period when the underpinning research was undertaken: 2007-2018		
Details of staff conducting the underpinning research from the submitting unit:		
Name(s):	Role(s) (e.g. job title):	Period(s) employed by submitting HEI:
Paul Dimeo	Associate Professor	09/2002 to present
April Henning	Research Assistant; Lecturer	10/2016 to present
John Taylor	Lecturer	07/2004 to present
Period when the claimed impact occurred: 2016-December 2020		
Is this case study continued from a case study submitted in 2014? No		
1. Summary of the impact		
<p>Stirling research on anti-doping approaches, prevalence, and athlete experiences has been used by sport policy makers in the UK and USA to ensure fairness and the protection of rights for athletes during the entirety of their careers. This has led to athlete-centred changes in anti-doping policy and practice in two different national contexts, at the levels of a sport governing body, a national government, and UK Anti-doping (UKAD), the UK's national anti-doping organisation accredited by the World Anti-Doping Agency (WADA). This research has been instrumental in:</p> <p>Impact 1. Revamping and expanding the amateur anti-doping programme of the national sport governing body USA Cycling, with ~60,000 members.</p> <p>Impact 2. Informing the UK government's decision not to criminalise doping.</p> <p>Together, these have informed the ways anti-doping policies are shaped and implemented, improving efficiency, fairness, and protecting the rights of all athletes governed by these groups.</p>		
2. Underpinning research		
<p>The research underpinning this case is a body of published work that is both national and international in scope and revolves around the twin issues of anti-doping policy and athlete experiences of anti-doping in sport. The researchers, working both together and separately, undertook critical work to better understand how the system both benefits and harms athletes of varying competitive backgrounds, as well as to make recommendations on ways to change policy in favour of protecting athlete rights. This research focuses on performance enhancing drugs (PEDs) and methods (i.e. anabolic steroids) as well as other substances banned in sport (i.e. cannabis, heroin), as defined by the World Anti-Doping Agency (WADA). WADA is the global policy-making body for anti-doping and is supported by national and regional anti-doping organisations charged with implementing WADA policies.</p> <p>Dr Dimeo pioneered the University of Stirling's research in this field. He wrote the ground-breaking research monograph <i>A History of Drug Use in Sport, 1876-1976</i> (Routledge, 2007; R1). This book detailed the roots of the contemporary issue of doping in sport and the early responses seeking to regulate use of performance enhancing drugs and to control the narrative. Dimeo argued that doping cannot simply be understood as the opposite of a vague conception of universal sporting values, as it was widely accepted until the mid-1900s. His book was the first to detail the socio-historical factors that led to the development of early anti-doping efforts, demonstrating how much of the contemporary anti-doping movement is driven by the tension between a new sport ethic that sees enhancement as immoral and the scientific advancements that make such enhancement possible. Dr Dimeo's research on the topic expanded and included a collaboration with colleagues at the Stark Centre at the University of Texas, Austin, USA, as well as with researchers at the University of Aarhus, Denmark, having helped to establish and support the development of the International Network of Doping Research. During this period, Dr Dimeo co-authored an article</p>		

with Mr John Taylor (R2) on the effectiveness of anti-doping testing. The research showed that anti-doping testing detects doping at much lower rates than expected based on survey data and (non-test based) intelligence driven doping detection. Such a discrepancy was likely to disadvantage the relatively few athletes who did test positive for doping substances; a significant proportion of whom would likely have ingested these substances inadvertently (R6).

Dr Henning developed a new collaboration with Dr Dimeo to examine anti-doping issues in American cycling in 2014. This innovative research critically addressed the challenges in expanding testing to non-elite athletes and led to three journal articles on this topic. The first article (R3) examined all known cases of doping by USA cycling over a ten-year period to develop a typology of doping across the competitive spectrum. This article addressed the complexities of doping cases occurring outside elite cycling and argued that non-elite cyclists need a separate system for testing and adjudication of anti-doping cases at these lower competitive levels. The second article (R4) considered cases of 'collateral damage' wherein non-elite cyclists are held to the same high standard as professionals, but with different lifestyles and support systems. This piece argued in favour of localised education, testing, and sanctioning of amateurs rather than harsher punishments. Dr Henning was appointed to a lecturing position at University of Stirling upon the successful awarding of two successive research grants from WADA (G1, G2). Following this appointment, a third collaborative article (R5) analysed the implications of criminalising doping for amateur athletes, focusing specifically on the UK's parliamentary proposal to do so. This article showed the likely implications of such a policy, in particular for non-elite athletes, and argued against national level policies that criminalise doping.

3. References to the research

R1. Dimeo, P. (2007). *A history of drug use in sport: 1876–1976: Beyond good and evil*. Routledge.

- This peer-reviewed book won the Lord Aberdare Literary Prize for best book in sports history, presented by the British Society for Sports History in 2008.

R2. Dimeo, P., & Taylor, J. (2013). Monitoring drug use in sport: The contrast between official statistics and other evidence. *Drugs: education, prevention and policy*, 20(1), 40-47. <https://doi.org/10.3109/09687637.2012.713412>

R3. Henning, A. D., & Dimeo, P. (2014). The complexities of anti-doping violations: A case study of sanctioned cases in all performance levels of USA cycling. *Performance enhancement & health*, 3(3-4), 159-166. <https://dx.doi.org/10.1016%2Fj.peh.2015.08.001>

R4. Henning, A. D., & Dimeo, P. (2015). Questions of fairness and anti-doping in US cycling: The contrasting experiences of professionals and amateurs. *Drugs: education, prevention and policy*, 22(5), 400-409. <https://dx.doi.org/10.3109%2F09687637.2015.1029872>

R5. Henning, A. D., & Dimeo, P. (2018). The new front in the war on doping: Amateur athletes. *International Journal of Drug Policy*, 51, 128-136. <https://doi.org/10.1016/j.drugpo.2017.05.036>

R6. Dimeo, P. (2016). The myth of clean sport and its unintended consequences. *Performance Enhancement & Health*, 4(3-4), 103-110. <https://doi.org/10.1016/j.peh.2016.04.001>

Grants:

G1. Dimeo, P. (2016-2018). "Perceptions of legitimacy, attitudes and buy-in among athlete groups: a cross-national qualitative investigation providing practical solutions." Project funded by the World Anti-Doping Agency, Social Sciences Research Program, USD67,891.

G2. Henning, A. & Dimeo P. (2016-2019). "Social Change and doping decision-making: building a conceptual framework and survey development." Project funded by the World Anti-Doping Agency, Social Sciences Research Program, GBP42,583.

4. Details of the impact

Impact 1: USA Cycling sport governing body

In November 2015 the incoming CEO of USA Cycling, Derek Bouchard-Hall, publicly referred to research showing doping was occurring in amateur cycling authored by Drs Henning and Dimeo (R3; R4).

“The conclusion [of the research] was that the highest incidence of reported doping wasn’t at the elite end, because they are tested a fair amount — there is a credible threat — or at the low end, the beginners, because they’re just getting into the sport. The highest incidence was in the lower competitive category levels (i.e. Categories 2-4) They start to get really passionate about the sport and want to do well, but there was zero perceived threat of being tested.” (S1)

Following this, Dr Dimeo began discussions with USA Cycling and agreed to set up an anti-doping advisory committee. Dr Henning was invited to the committee as a founding member based on i) her research on non-elite runners and cyclists, ii) her status as a US citizen, and iii) her co-authorship on the underpinning research. As a member of this committee, Dr Henning’s research and input has underpinned the **development of a new amateur cyclist-focused strategy** (S3) that addresses several key anti-doping areas: education, testing, sustainability, and evaluation (S2). This strategy **benefits all of USA Cycling’s ~60,000 members**.

This strategy, for which Dr Henning was a co-author, was delivered in a report to USA Cycling in 2017 (S3). **Upon taking the advice outlined in the strategy, USA Cycling increased the number of amateur tests carried out from 0 in 2015 to 185 in 2017**. More specifically, she advised on differential Therapeutic Use Exemptions (TUEs) for age-group athletes (the first of its kind globally), allowing amateur athletes to have better access to TUEs and allowing them to remain within anti-doping rules (R3, R4). Dr Henning also helped ensure sanction lengths and types were consistent with the World Anti-Doping Agency’s policies. John Gleaves, who is a fellow member of the USA Cycling anti-doping advisory committee, Professor of Kinesiology at California State University, Fullerton, and Co-director of the International Network for Doping Research describes how Dr Henning’s research is viewed within the field:

“I think she has a lot of really good research in this area and in a lot of ways, she was the most knowledgeable from a data collection stand point, that more than any, other people might have been more senior than her, in that they had just been around longer, but I think that most of the people on the committee respected that her research in this area was deeper than any of us had gone.” (S4)

Most crucially, she **advocated against a proposal to give lifetime bans to cyclists for a first-time doping offence within the USA Cycling organisation**. Such a ban would have exceeded the global standard laid out by WADA and only apply to athletes governed by USA Cycling, holding them to a different standard from athletes in other countries and athletes in other sports. The Committee ultimately agreed with Dr Henning and declined to recommend lifetime bans. Two members of this committee have specifically expressed how important Dr Henning’s research was to this proposal not being passed. When talking about the impact Dr Henning’s research had on convincing other committee members, one former anti-doping committee member stated:

“Oh quite big, I think it was good research in my experience.” (S5)

John Gleaves reiterated this when he stated:

“I mean as confident as I can say without, you know re-writing history, I would say if [Dr Henning] hadn’t spoken up the committee would have adopted it [lifetime bans], and it would have been a bad policy and so, yeah I think that was definitely a really well evidence informed policy change.” (S4)

This position was based on her previous research with Dr Dimeo detailing the risks such harsh penalties can have for athletes - including stigma and mental health impacts - especially those at lower competitive levels (R5). **Up to December 2020, approximately 20 cyclists would have potentially received lifetime bans from USA Cycling.**

Further, new educational initiatives in partnership with United States Anti-Doping are underway to reach a broader range of amateur cyclists. As recommended by Henning and Dimeo (R3, R4), these are being approached at a more grass-roots level to reflect the range of experiences and competitive backgrounds of the athletes included. These new approaches improve the engagement with athletes across the competitive spectrum and improve the overall fairness with which anti-doping is carried out. Anti-doping education for this group is important due to the increasing sensitivity of anti-doping tests and the risks of inadvertently ingesting prohibited substances in ways that are common in everyday life. As John Gleaves explains:

“We’re realising that the testing is getting so sophisticated that environmental, what they call environmental contaminants are coming in and I’ll give an example. Is that like, if you were at the pharmacy to get a cold medicine, and the pharmacist had just counted out uh, which is perfectly therapeutic dose of something like clomiphene, which many women will use for fertility treatments, um previously, just enough of that residue on your um antibiotics erm would cause you to test positive, even though it has no performance enhancing benefit.” (S4)

This means that even a very small trace of a banned substance could be detected despite the athlete not being aware they had consumed it. If Dr Henning hadn’t expressed her reservations and presented her research to the committee, in all probability, USA Cycling would have begun issuing lifetime bans from the sport for instances just like this. This was important timing as it coincided with USA Cycling taking the committee’s further recommendations on increasing testing among amateur cyclists.

The former anti-doping committee member adds some clarity on just how many cases this would affect:

“My estimation was that 40%, so four zero percent, of all anti-doping cases, there’s some degree of erm a lesser guilt than you would normally think so and they get a less severe punishment than a standard punishment, which at the time was 2 years of ineligibility so the risk of running into a lifetime ban even though you were just completely of good faith eh was just too big in my eyes.” (S5)

Impact 2: Preventing the criminalisation of doping in the UK

Dr Dimeo’s research underpinned the UK Government decision to not criminalise doping within UK sports. A criminal policy for doping would have impacted all athletes in the UK competing in organised sport, as the national level policy would have included both elite and non-elite/amateur athletes. For 2017-18, UKAD reported details of 23 anti-doping rule violations and of 24 in 2018-19 (S8, S9). Each of these would have potentially become a criminal case under the proposed criminal policy.

Dr Dimeo’s work (R1; R2; R6) informed a Westminster Hall Debate speech by MP Steven Patterson in 2016 on the topic of funding for anti-doping efforts, and was directly referenced in Mr Patterson’s press release (S5). Dr Dimeo further received a personal invitation in 2016 to meet and brief Ms Tracey Crouch, the UK Sports Minister and member of WADA Education Committee. Then in 2017, the UK Government commissioned a report on the utility of allowing athletes found to have doped to face criminal penalties. This was at the same time UK Anti-Doping were expanding to include amateur athletes into their testing remit, as they had previously focused almost exclusively at the elite level. The subsequent 2017 report (S6) cited research by Dr Dimeo and Mr Taylor (R2) on the likely prevalence of doping in sport and the ineffectiveness of anti-doping testing:

“The scale of doping varies by sport. International testing data, published by the World Anti-Doping Agency (WADA), which is the global anti-doping policy making body for Olympic sports, shows that 1.5-2% of drug tests are positive for doping substances. Academic research, echoed in several of the interviews conducted, suggests, ‘we only catch the dopey dopers’. This is borne out with non-analytic detections of dopers using intelligence, many cases of which show that dopers have cheated drug tests.” (DCMS, 2017; p4; S7)

The report’s final recommendation was that the Government should not seek criminal penalties for athletes at any level who are using doping substances. The Government heeded this recommendation by declining to further consider the criminalisation of doping. It detailed this decision in the Digital, Culture, Media and Sport (DCMS) Committee (the governmental committee responsible for overseeing UK Anti-Doping) Second Special Report on ‘Combatting doping in sport’ (S7). There are several benefits of not criminalising doping: it saves resources in prosecuting athletes; it avoids criminal proceedings and punishment for the high proportion of athletes who return a positive test through inadvertent use of a doping substance; and it protects amateur athletes who may be unaware of anti-doping rules from criminalisation.

In summary, this combined body of research has provided an evidence base from which national anti-doping groups, sport governing bodies, and national governments have drawn when creating policies affecting various athlete populations (Impacts 1 and 2). The impact has gone beyond citations or inclusion in literature - this research and the researchers behind it have directly driven decision-making in the organisations and bodies that govern athletes’ experiences, careers, and livelihoods, with the ultimate impact of ensuring fairness and the protection of rights for those athletes.

5. Sources to corroborate the impact

- S1.** VelvoNews: Anti-doping is coming to masters and amateur racing - <http://stir.ac.uk/4qf> paragraph 8
- S2.** The Wall Street Journal: Doping Cops Take Aim at Amateur Athletes - <http://stir.ac.uk/37g>
- S3.** USA Cycling Report Advisory Committee (2017) Summary Report for Race Clean Program
- S4.** Interview with John Gleaves, USA Cycling Anti-doping Advisory Committee, Professor of Kinesiology at California State University, Fullerton, and Co-director of the International Network for Doping Research (Lines 111, 206 & 230)
- S5.** Interview with Former anti-doping committee member, (Lines 201 & 247)
- S6.** MP Steven Paterson’s speech draft (via email exchange with Paul Dimeo), Paul’s comments, the additions of those comments in the final press release from the MP’s office.
- S7.** Department for Digital, Culture, Media and Sport: Review of Criminalisation of Doping in Sport (October 2017) - <http://stir.ac.uk/37h> page 4, paragraph 5.
- S8.** UKAD Annual Report 2017-18 (page 7).
- S9.** UKAD Annual Report 2018-19 (page 9).