

**Title:** Exercise on referral: Evidence and complexity at the nexus of public health and sport policy.

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## **Abstract**

Exercise on referral schemes (ERS) are recommended by the National Institute of Clinical Excellence (NICE 2014) for increasing physical activity in inactive patients with long-term health conditions. The current paper critiques a recent extension to ERS provision, specifically, schemes using sport as the primary delivery mechanism (sport-based ERS). We suggest attention should be given to how such schemes, that operate across sport and public health sectors, may have mismatched approaches to evidence and policy implementation.

Specifically, we highlight two current issues concerning ERS and consider the addition of sport-based schemes in respect to these. First, we argue that ERS-related public health policy and guidance is drawn from a limited evidence base, and is consequently vague. Whilst this leads to opportunities for local innovation, the subsequent design, implementation and evaluation of ERS is diverse. ‘Scaling-up’ of effective interventions, desired by Public Health England (PHE 2014a, 2014b), is therefore problematic, and likely to be further exacerbated by introducing sport-based ERS. Second, we contend that sport-based schemes are unlikely to overcome existing challenges concerning untargeted provision of ERS, and that funding would be better directed towards services for those who have complex barriers to successful engagement.

**Keywords:** *Exercise referral; physical activity; community-based; healthcare; sport.*

## **Introduction: The emergence of sport-based ERS**

Exercise on referral schemes (ERS) are one of the most widespread physical activity interventions in the United Kingdom, with a sustained rise in number initiated since the early 1990s (Pavey *et al.* 2011). Usually commissioned via public health, they involve referral of patients with long-term conditions from primary care to a third party (typically a leisure provider), where a programme is provided that aims to encourage participants to increase their physical activity levels. There is, however, a lack of clear evidence about ERS' effectiveness in terms of changing physical activity behaviour and for whom different types of scheme are most effective (NICE 2014). Accordingly, NICE guidance (2014) proposes broad restrictions on ERS funding and use, recommending that referral is not appropriate where individuals are inactive or sedentary but are otherwise healthy. Furthermore, when schemes are commissioned NICE recommends performance data be collected and made available to allow for assessment of effectiveness within population sub-groups.

Despite the cautious approach recommended for public health commissioning of ERS, new schemes have recently been implemented with support from Sport England's 'Get Healthy, Get Active' fund (Sport England 2014). One development of particular note has been the commissioning of ERS that use sport (as opposed to traditional gym or class-based activities) as the primary delivery mechanism, here called sport-based ERS. Funding sport pathways within established public health provision is a clear attempt to enact the recommendations of Cavill, Richardson, and Foster's (2012) review, funded by Sport England, for sport to be fully integrated in service offers for health.

Targeting public health objectives through sport is not novel in itself. From the 1960s, sport has repeatedly responded to political impetus to contribute to various social policy objectives (Houlihan and White 2002). Policy documents from the turn of the century through to the most recent government strategy for sport have repeatedly advocated and sought to evidence the health benefits of sport *as a form of physical activity* (e.g. DCMS / Strategy Unit 2002, Carter 2005, DCMS 2010, HM Government 2015). However, the extent to which the implementers of sport programmes are themselves deeply committed to, and capable of, delivering on health agendas has previously been questioned (Bloyce *et al.* 2008). Nevertheless, current policies for sport (HM Government 2015) and public health (PHE 2014a) are aligned in identifying a need for cross-sectoral approaches to address physical inactivity. ‘Everybody Active Every Day’ (PHE 2014a) acknowledges existing networks between stakeholders from sport, leisure, social care and health, for example, and highlights an opportunity for sport and fitness professionals to deliver targeted health-based programmes for those with complex health issues. Such policies provide a clear steer for Sport England’s funding for new programmes using sport to improve health.

Given this increasingly prominent overlap and co-working, exploring the potential for complementarity or conflict between sport and public health policy is both pertinent and topical. Here, we focus on the emerging use of sport-based ERS to highlight some of the difficulties in seeking a greater role for sport within public health. We briefly summarise existing problems with ERS policy, in terms of interpretation, delivery and evaluation, and consider implications for both sport and public health policy makers. First, we discuss how problems in evaluating ERS’ effectiveness have previously limited the scaling-up of good practice in order to

inform policy, and argue this also applies to sport-based ERS. Second, we consider whether current policy is appropriate in advocating a relatively untargeted approach to the prescription of ERS, and whether sport-based ERS will serve those neglected by or unable to access current schemes. We conclude by suggesting that these concerns represent a significant challenge for any continuing impetus towards sport-based ERS.

### **The problematic relationship between ERS evidence and policy.**

Rigorous systematic reviews encompassing extensive literature are required to inform NICE guidelines, including those applicable to ERS. For physical activity-based interventions sensitive to complex individual behavioural and social influences, this approach may limit broader understanding of what works, for whom, and in what circumstances (Pawson *et al.* 2005). This is further exacerbated as PHE's (2014b) application of rigorous quantitative Nesta standards has resulted in criticisms of the ERS evidence-base in terms of sparse use of randomised control trials (RCTs), failure to establish causality (e.g., PHE 2014c), and considerable variation in data collection, analysis and reporting quality between schemes. Responding to these criticisms is a challenge for those involved in the delivery of ERS given the pragmatic nature of schemes and service expectations of referrers. Similar constraints commonly apply to community-based physical activity interventions more broadly, and indeed also to sport-based interventions. Although some reviews attempt to adopt a balanced and inclusive approach to interpreting the diverse evidence base for sport-based interventions (e.g., Taylor *et al.* 2015), determining the effectiveness of sport-based ERS may be problematic when

examples and expertise of methodologies, such as RCTs, prioritised by public health policy makers are found even more rarely within the sport sector (Cavill *et al.* 2012).

With trial-based evidence taken to be the gold standard, assessments have indicated that the evidence-base for public health-based physical activity schemes is weak. This is reflected in PHE's (2014b) findings that from 952 programmes, only 34 were sufficiently rigorous to be classified according to Nesta standards of evidence. No ERS interventions met standards for proven practice, or promising practice; only six of the 28 programmes classed as emerging practice were ERS-based. Since ERS are generally tailored to the requirements of the community in which they are based, scalability is a problem (PHE 2014b).

Given this, it is perhaps unsurprising that national policy and best-practice guidelines that attempt to draw from the evidence base are somewhat vague; for example NICE (2014) are unable to define discrete sub-populations for whom an ERS pathway may be more effective, nor provide a single 'gold standard' in terms of programme structure. Such ambiguous policy, or guidance that lacks specificity, enables a myriad of interpretations in practice (Matland 1995). In the case of ERS we suggest that one consequence has been continued diversity in terms of scheme delivery and evaluation quality (PHE, 2014b). Whilst this might well be construed as positive in terms of allowing for local innovations in service provision, perhaps including the development of sport-based ERS, it does little to resolve uncertainties concerning the relative effectiveness of schemes or their components. In turn, this has impeded progress in terms of identifying, communicating, and scaling up achieving the desired scaling-up (PHE, 2014b) of best practice models for ERS. Recognition that there is insufficient understanding as to how national policies may effectively contribute to improving sport participation (Nicholson, Hoyer and

Houlihan 2011) suggests that the addition of sport-based ERS will exacerbate rather than clarify these problems. As such, while there is strong political impetus for linking sport and ERS, diversifying ERS delivery in this way may raise additional problems when seeking to summarise the evidence.

### **Broad or narrow: should policy advocate the more targeted delivery of ERS?**

At present NICE (2014) offer only a broad recommendation for ERS' eligibility criteria, namely individuals are inactive or sedentary and have existing medical conditions. This approach fails to acknowledge emerging evidence suggesting schemes may be more, or only, effective or engaging for particular groups. While this does not yet reach a consensus (Campbell *et al.* 2015), extending the range of evidence considered by public health reviews may offer guidance for more targeted policy. For example, some ERS have been identified as more successful at engaging older individuals (Isaacs *et al.* 2007; Hanson *et al.* 2013), those living in a less deprived area (Gidlow *et al.* 2007), or those referred from specific disease pathways (Sowden 2008; Dugdill 2005; Hanson *et al.* 2013). At the least, guidelines should encourage attention to sub-group effects in both evaluations and by evidence users.

Exploring *why* sub-groups do not initially engage with, or continue to attend, ERS will have value for informing more effective practice as well as future policy through enhancing understanding of the complex socio-demographic, environmental, economic, and cultural barriers that may inhibit behaviour change. For example, previous work has linked factors such as age, employment status, family type, household income, and habitual location to physical activity (e.g., Borodulin *et al.* 2015; Pan *et al.* 2009; Bergman *et al.* 2008). Mixed methods approaches can

highlight not only groups who may be poorly served by interventions, but also provide detail on how these barriers and interventions are experienced from the perspective of the individual. For example, qualitative data (Hanson 2015) identifies serious psychological barriers (e.g., low self-esteem, fear of change, body image disorders), impaired social circumstances (ranging from a lack of active peer role models to co-dependent or restrictive interpersonal relationships), or chronic negative experiences of exercise often commencing in childhood, as factors influencing participants' ERS experiences.

For individuals who are affected by severe or multiple barriers, we argue that it is unrealistic to expect ERS to result in sustained change of habitual behaviours. Such participants may require a different or more intensive approach before change at the individual level can occur (e.g., therapeutic approaches, support from multiple agencies, or broader system change). These arguments, focusing on how we can empower individuals for change, have begun to inform community sport interventions (e.g., Mansfield *et al.* 2015); they are also clearly relevant to the delivery of ERS. Although considering scheme inclusion and exclusion criteria at the point of referral would enable more effective provision, targeted towards individuals likely to benefit, we must be mindful that this approach would require alternative intervention pathways for those unlikely to engage with and adhere to current ERS provision. Of key relevance here, we must ask whether sport-based ERS are likely to present an attractive alternative for those who do not currently engage with or benefit from schemes, and if not, whether they are really an appropriate way of extending ERS provision.



In this last regard, there has been longstanding recognition (e.g., Collins with Kay 2003) that identified groups who are more likely (e.g., older adults, women) or less likely to engage (e.g., individuals from deprived backgrounds) in ERS are all amongst those less likely to engage with sport. More recent data from Sport England's (n.d.) Active People Survey reinforces the continuation and currency of these trends. It can be argued that the former groups are unlikely to be further engaged by the option of sport-based ERS and there can be little expectation of success for the latter when significant, if somewhat inconsistent, policy impetus and sport-based interventions have previously failed to significantly increase participation amongst those living in deprivation (Bloyce & Smith 2009). Further, sport-based schemes that *have* shown greater promise in engaging individuals from deprived backgrounds have tended to be those that adopt locally-driven, bottom-up approaches to implementation (e.g. Walpole and Collins, 2010), a direct conflict with the centralised guidance-driven approach favoured by the public health guidelines.

## **Conclusions**

We have argued that (i) enhanced quality and consideration of a broader range of evidence concerning ERS' effectiveness is needed before we can establish how they can best be delivered and developed, and (ii) provision for those who are not able to benefit from existing schemes is necessary. On the one hand, the limitations of evidence on public health ERS and the associated ambiguity in policy could be viewed as an opening for adding sport-based ERS to the diversity of current practices. On the other hand, and moving beyond such policy opportunism, there are

a number of reasons for concern as to the long-term appropriateness of promoting sport-based ERS as interventions at the nexus of sport and public health policy.

Critically, allocating funding to sport-based ERS is unlikely to address either of the problems identified in this paper. First, the type of evidence desired in the public health sector to scale up interventions is not and has not been widely collected for sport-based interventions. Perceived weaknesses in the evidence base for ERS are likely to also apply to sport-based ERS trials, resulting in continued ambiguity in national policy guidance. Second, there is little to suggest that sport-based ERS would offer an alternative well-suited to engaging those underserved by current schemes.

More generally, the complexity of issues that can be identified at the nexus of sport and public health requires greater recognition and more nuanced approaches on behalf of policy makers. Some groups which ERS do not currently engage (e.g., younger adults) *are* more likely to participate in sport (Sport England, no date), and offering sport-based ERS may have a role to play in attracting and retaining such individuals. Critically, however, we propose that the more pressing issue is to identify and develop schemes that will work for those who are most in need and least likely to benefit from traditional ERS, that is, those with poor health and complex barriers to engagement.

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