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Social Science Research Fund: Harnessing social media to combat doping amongst young athletes

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Acknowledgements

Contents

1.0   Introduction

The World Anti-Doping Agency (WADA) was established in 1999 as an independent, non-governmental organisation with a core aim to 'promote and coordinate, at the international level, the fight against doping in all its forms' (WADA, 2002a). WADA recognises the importance of communicating with young people to educate and inform them about the risks of doping. Until relatively recently, sanctions and education had been the only major approaches employed to combat doping. Social marketing has received increased attention in recent years given the emergence of Internet applications that facilitate interactive information sharing (Web 2.0). WADA has recognised that anti-doping organisations need to become more conspicuous through utilising communication platforms which young people access at their leisure. This could include the Internet as well as text messaging (SMS).

Doping runs contrary to the spirit of sport characterised by values such as ethics, fair play and honesty; health; dedication and commitment; respect for rules and laws; and respect for both oneself and other participants. WADA is committed to tackling doping through education and awareness programs which include 'creating support material' and 'creating models to help stakeholders implement their own programs'. This aim of this project was to develop guidance for use by Regional and National Anti-Doping Organisations to inform their use of social media in communicating with young athletes. This report outlines the evidence base which contributed to the development of this guidance.

1.1   Project aims and objectives

The main aim of this project is to explore how social media platforms can be harnessed to promote anti-doping behaviour among young people and applied in various localities by anti-doping organisations worldwide.

More specific aims of the research contributing to the development of this guidance were to explore:
- How social media can be used to influence attitudes and behaviours of people toward social issues comparable to doping;
- The pros and cons of social marketing as compared to other approaches;
- When social marketing should be used and when alternatives should be considered;
- Specific methods of communicating online which are particularly successful in aiding behavioural/attitudinal change;
- Guiding principles which underpin successful or innovative social media campaigns.

1.2   Research methodology

To achieve the stated objectives we adopted a staged, mixed-method approach involving a review of existing literature supplemented with qualitative stakeholder interviews.

Stage One

The first stage involved a focussed literature review to identify research which would provide the theoretical basis for developing a set of key criteria to encourage positive behaviour change through communications. This incorporated identifying the potential role of social media within communications. A search of both published and 'grey' literature was conducted in June 2010.

Evidence identified through the literature review was entered into an analytical matrix and divided into key categories relating to various aspects of practical planning and delivering social media campaigns. Our approach necessitated judging the findings from the literature for reliability and validity to ensure that the conclusions were based on sound foundations. This enabled us to distil some 'key ingredients of success' that are likely to increase success in any campaign aimed at changing behaviour. These principles were used to evaluate the impact of past campaigns. These were also presented to expert stakeholders to validate their suitability for anti-doping campaigns.

Interviews were conducted with Dr. Brian Cugelman (AlterSpark) and Professor Susan Backhouse (Leeds Metropolitan University), two scholars specialising in social media and/or doping within sport. The interviews with these academics were aimed at verifying and further developing the guiding principles, as well as gathering their perspectives on successful international social media campaigns.

Stage Two

Interviews were conducted with representatives from five National Anti-Doping Organisations (NADOs) and two Regional Anti-Doping Organisations (RADOs)[1]. These interviews were conducted to explore:
- the context in which anti-doping organisations operate;
- the factors influencing doping amongst young athletes;
- existing and future communication activities
- current and anticipated use of social media;
- examples of successful social media campaigns;
- their needs in relation to social media guidance.

Stage Three

Following the development of draft guiding principles, a further stage of desk research was undertaken to identify examples of social media campaigns, which bore the hallmarks of effective interventions. Leads provided by stakeholders were followed up and additional searches were completed to identify innovative

[1] UK Anti-Doping Agency; US Anti-Doping Agency; Japan Anti-Doping Agency; Anti-Doping Norway; South African Institute of Drug-Free Sport; Gulf States RADO/Olympic Council of Asia; Oceania RADO

educational campaigns designed to change attitudes or behaviour on social issues in related fields (i.e. drug use, alcohol use, safe sex, healthy eating etc.).

Based on our own judgements of the extent to which these campaigns fitted with the guiding principles, we allocated star ratings to each campaign identified. A simple three-star system demonstrated the robustness of each campaign:

- Three stars indicated that a campaign/online intervention has been underpinned by a theory of behaviour change, and impacts have been evaluated using an appropriate methodology. It also has a sufficiently large sample size to be valid and reliable (taking into account each research method) and has been undertaken by a reputable organisation (or reputable individuals) independent of the commissioner.
- Two stars refers to campaigns/interventions underpinned by the key guiding principles but with little evidence of impact or measures for impact.
- One star is used for campaigns/interventions that are the least robust, yet are suitable for inclusion.
- Campaigns that were judged as unsuitable did not receive any stars and were not included in the analysis.

Interviews were also conducted with stakeholders responsible for the development (or management) of two innovative social media campaigns: Joe Conrad (Cactus Marketing) and Chris Cox (Rethink). These interviews were conducted to explore the development, marketing and management of the social media content, in addition to any monitoring and evaluation measures in place.

Stage Four
The final stage of the research involved interviews with six young athletes (aged 16-19) identified as having the potential to represent their country in their chosen sport. Young athletes were recruited from the following countries: Australia, Canada, France, Italy and the UK. Their sports included: cycling, rowing, inline-skating, mogul skiing, and fencing.

These young athletes were interviewed over the telephone in order to explore their use of the internet and social media, their perceptions of doping and experience of anti-doping education and communications, and how they would like anti-doping organisations to communicate with them. Interviewees were each sent the equivalent of £15 to thank them for their time.

During this stage of research the draft guidance was reviewed by those academic stakeholders and representatives of anti-doping organisations participating in this research.

2.0 Understanding what influences young athletes' behaviours in relation to doping

This chapter begins by identifying those factors that need to be considered when exploring influencers on behaviour. To reduce the use of doping in sport it is necessary to understand athletes' motivations for engaging in doping and those factors which influence their motivation. Having explored models of behaviour change, this chapter will go on to outline a behavioural model for doping using existing relevant models which have already engaged in some degree of systems thinking.

2.1 Models of behaviour

The behaviours of individuals and of societies are in constant change. Several disciplines, from economics and sociology to social psychology, seek to explain human behaviour within a community or a society. Given the complexity and diversity of human behaviour, academics agree that any theory of behaviour change requires some form of synthesis or generalisation, which has often taken the form of '*behavioural models*'. Behavioural models are designed to help us better understand behaviour and inform thinking around behaviour change.

There is a vast evidence base of research seeking to understand human behaviour across multiple disciplines. Most behavioural models identify factors determining change which operate at three levels:

- **Personal level factors** which are intrinsic to the individual (i.e. one's level of knowledge, belief system and self-efficacy)
- **Social level factors** which determine how people influence one another
- **Environmental level factors** which are concerned with the local setting where behaviour develops as well as the wider socio-economic factors that characterise that setting.[2]

While, in the past, most models have tended to focus on personal and social factors without considering the wider context, it is important that any attempt to steer behaviour in one area identifies key factors at all three levels. Ignoring environmental influence fails to recognise the complex and interrelated nature of the factors that shape what we do.

'We do not act in isolation, and most people are influenced to a very great extent by the people around them and the environment in which they live.'[3]

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[2] COI (2009) *Communication and behaviour change* p.11
[3] *Ibid*

Personal factors

Each individual is different and their behaviour will be determined by a unique combination of factors. Personal factors are constituted by the most intimate influencers that play a role in shaping behaviour and can be grouped as follows:

Knowledge and awareness: rational choice theory claims that there is a need to provide people with information which they can act on in such a way to maximise personal benefit and minimise costs. The assumption is that information will spark interest in that subject, which in turn will lead to considering change and eventually acting on it. While information provision is a necessary step for every behaviour model, it is hardly ever sufficient on its own. It can be used to increase self-efficacy and direct people to other communication channels that aim to change behaviour more directly.[4]

Attitudes: changing attitudes can lead to changing behaviour. However, evidence suggests that people can also hold attitudes which are inconsistent with their behaviour. This may result in a sense of internal conflict (or cognitive dissonance) which could serve as a prompt for changing behaviours (or attitudes)[5]. There are therefore opportunities for communications to create cognitive dissonance, for example by highlighting the inconsistency of believing in values of fair competition while acting contradictorily or by linking doping behaviour with a set of credible, relevant consequences.

Self-efficacy: influenced by past experiences and personal beliefs, people need to believe they are capable of achieving a particular goal. This can be even more important than whether or not it is actually possible at a given moment to achieve that goal. Communications can help by providing clear instructions that make a particular behaviour seem more achievable (e.g. through testimonials or helping teach relevant skills such as negotiation).[6]

While these factors are rooted in social psychology, behavioural economics can also be used to understand decision-making in relation to these factors. Decisions we make are often dependent on natural biases and mental shortcuts that lead to imperfect decisions.

- People take mental shortcuts every day through making educated guesses based on how easily they imagine something happening rather than rationally weighing up pros and cons
- People are loss-averse (so disincentives are more effective than incentives)
- People prioritise short-term reward over long term gain. The extent to which future gains are disregarded increases the more remote an issue appears to be[7]. Several interviewees confirmed that communicating the negative health effects of doping would not be an effective strategy for younger people.

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[4] COI (2009) *Communication and behaviour change* p.15
[5] *Ibid*, p.16
[6] *Ibid*, p.18
[7] *Ibid*, p.20-22

These heuristics explain why people may not always make the most rational decision or one that is in their best interest and, in consequence, the importance of how communications are framed.

Social factors

A second set of factors is determined by how people interact with each other and how interpersonal relationships affect attitudes and behaviour. As Andreasen highlights: *'an extremely important task during the formative stages of the strategic planning process is to gain an understanding of the extent to which interpersonal influences are likely to be important for one or more target groups.'*[8]

The values and behaviours of other people around us determine 'social norms', or what is deemed as acceptable behaviour. Understanding these relations is paramount for social marketing campaigns. Sometimes, while the target of an intervention may be a certain group, it can be more productive to target a campaign to a second group of people, who exercise strong influence on them. For example, in a situation when doping is tolerated or even encouraged by coaches and trainers, it may be more effective to target a campaign at them, even if the overall aim remains to change the athletes' behaviours.

'Choices will have to be made with testing young people and whether you can rely on a 12- or 14- year old to make that kind of decision (to dope or not) is hard to tell. You have to educate them, from something as broad as the public, to educating the parents. Your child is not (...) your way to realise your own dreams in some vicarious manner, and coaches and legislators and educators all have to know that.'[9]

Robert Cialdini, a social psychologist, makes a distinction between two different types of social norm:
- **Descriptive norms** are the perception of other people's behaviour that influences our own
- **Injunctive norms** are the rules and regulations that tell us what we should be doing[10]

While the two often overlap, in many cases they don't. This distinction is particularly important for anti-doping campaigns, which are trying to stop a phenomenon in which injunctive norms ('doping is illegal') and descriptive norms ('but everyone does it at my club') may conflict.

There are several ways in which communications can be effective in highlighting social norms and prompting people to act in accordance with them:

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[8] Andreasen, A. (1995) in COI (2009) *Communication and behaviour change* p.23
[9] Pound, R. (2004) in O'Reilly, N. and Madill, J. (2007) 'The World Anti-Doping Agency: The Role of Social Marketing' in *The Journal of Non-profit and Public Sector Marketing* Vol.17 (1) p.11
[10] COI (2009) *Communication and behaviour change* p.25

- **Peer-to-peer** online forums or communities where people can connect to others in similar circumstances can be helpful where social proof and reassurance can be provided in a safe/anonymous way (e.g. hosting forums where doping use is discussed);
- **Positive testimonials** from athletes who have adopted a particular behaviour (e.g. resisting doping) can help boost self-efficacy;
- Campaigns can be targeted at **opinion leaders** (e.g. coaches) who can be ambassadors for the behaviour.

Environmental factors

In order to understand people's behaviours, it is important to take account of the environment in which they live. Relatively few behavioural models include environmental factors, but it is important that efforts in communication are always accompanied by 'macro' changes. If, for instance, there is widespread corruption in the process of testing for the presence of prohibited substances in athletes' blood samples, any communication strategy is likely to fail, as the environmental factors for possible change are not in place. Research for WADA conducted in 2007 concluded that *'there are a multitude of complex and conflicting factors (…) that need to be considered as motivating the athlete. This (…), in combination with recognition that a group frequently makes anti-doping decision, points to the need to articulate a more detailed model that considers country, culture and context.'*[11]

2.2   Models of behaviour in relation to doping

WADA commissioned Professor Susan Backhouse and her colleagues to undertake an international literature review exploring: (i) predictors and precipitating factors in doping; (ii) attitudes and behaviours towards doping and (iii) anti-doping education or prevention programs.[12] This review incorporated evidence from studies conducted with athletes (professional and amateur), coaches, support staff and doctors, young people and the general public.

In their review of the international literature, Backhouse and colleagues identified a dearth of doping models in sport. Only two conceptual models were identified that attempted to provide a framework for understanding performance-enhancing drug use. These were the *Drugs in Sport Deterrence Model* and the *Drug Compliance in Sport* framework.

The *Drugs in Sport Deterrence Model*[13] is a sport specific modification of the Perceptual Deterrence Theory – people make rational decisions through weighing up

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[11] O'Reilly, N. and Madill, J. (2007) 'The World Anti-Doping Agency: The Role of Social Marketing' in *The Journal of Non-profit and Public Sector Marketing* Vol.17 (1) p.22

[12] Backhouse et al. (2007) *International Literature Review: Attitudes, Behaviours, Knowledge and Education – Drugs in Sport: Past, Present and Future.* Leeds Metropolitan University.

[13] Strelan, P. and Boeckmann, R. (2003) A new model for understanding performance-enhancing drug use by elite athletes. *Journal of Applied Sports Psychology* 15:176–83

the costs and benefits of doping. Costs include legal penalties, breaching self-imposed morals, social disapproval, and negative health consequences. The benefits are seen to include internal satisfaction, material outcomes and social gains. In weighing up costs and benefits there may also be specific situational factors which may impact in some way on the cost-benefit analysis of doping.

Research commissioned by the Australian Sports Drug Agency developed the *Drug Compliance in Sport*[14] framework from three existing behavioural science frameworks: social cognition models; threat appeals; and instrumental and normative approaches. The overall model comprises six components believed to influence an athlete's attitudes and intentions towards doping: threat appraisal, benefit appraisal, personality factors, personal morality, reference group influences and legitimacy.

A key characteristic of these models is the range of personal, social and cultural variables which potentially facilitated the use of performance-enhancing drugs. Motives broadly fall into three categories:
- Improving physical functioning (this can include solving weight problems, reducing pain, and improving performance)
- Coping with social or psychological pressures (this can include contact with other users and behavioural/conduct disorders)
- Striving for social or psychological goals (this can include supporting success and financial gain)

Research highlights that young athletes generally disapprove of doping but, as athletes begin to engage in a sport professionally, the pressures and possibilities of doping appear to increase. Research with college athletes indicates that the loss of social status, which could result from doping, was a stronger cost-factor than the physical and psychological side effects associated with drug use. Indeed, other research indicated that even many professional athletes lack knowledge around the potential side-effects of doping.[15]

Striving for success and improving performance are key aspects of competitive sport. Various methods can be used for improving performance – some legal and some not. Former President of WADA, Dick Pound, highlighted that the value placed upon sporting performance is not limited to elite athletes but it affects anyone who is on the track to high performance, including aspiring young athletes.[16] It is these young people who are especially vulnerable to engaging in doping, intentionally or not.

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[14] Donovan, R., Egger, G., Kapernick, V. and Mendoza, J. (2002) A conceptual framework for achieving performance enhancing drug compliance in sport. *Sports Medicine*. 32(4):269-84.
[15] Backhouse et al. (2007) *International Literature Review: Attitudes, Behaviours, Knowledge and Education – Drugs in Sport: Past, Present and Future.* Leeds Metropolitan University.
[16] O'Reilly and Madill (2007) *The World Anti-Doping Agency: The Role of Social Marketing.* The Haworth Press.

2.3   A behavioural model of doping among young people

With the above findings in mind, a specific behavioural model was developed to illustrate the various factors which might influence young athletes' decision-making process. We have incorporated evidence from both the behaviour change literature and doping-specific models of behaviour to highlight environmental, social and personal factors that will influence the doping potential of a young athlete. As these three aspects vary from country to country, it is important that they are taken into consideration when developing a country-specific behavioural model. This model of behaviour was used to inform discussions with anti-doping organisations, academic stakeholders and campaign managers. The model is based on existing empirical evidence that holds face validity, if not construct validity.
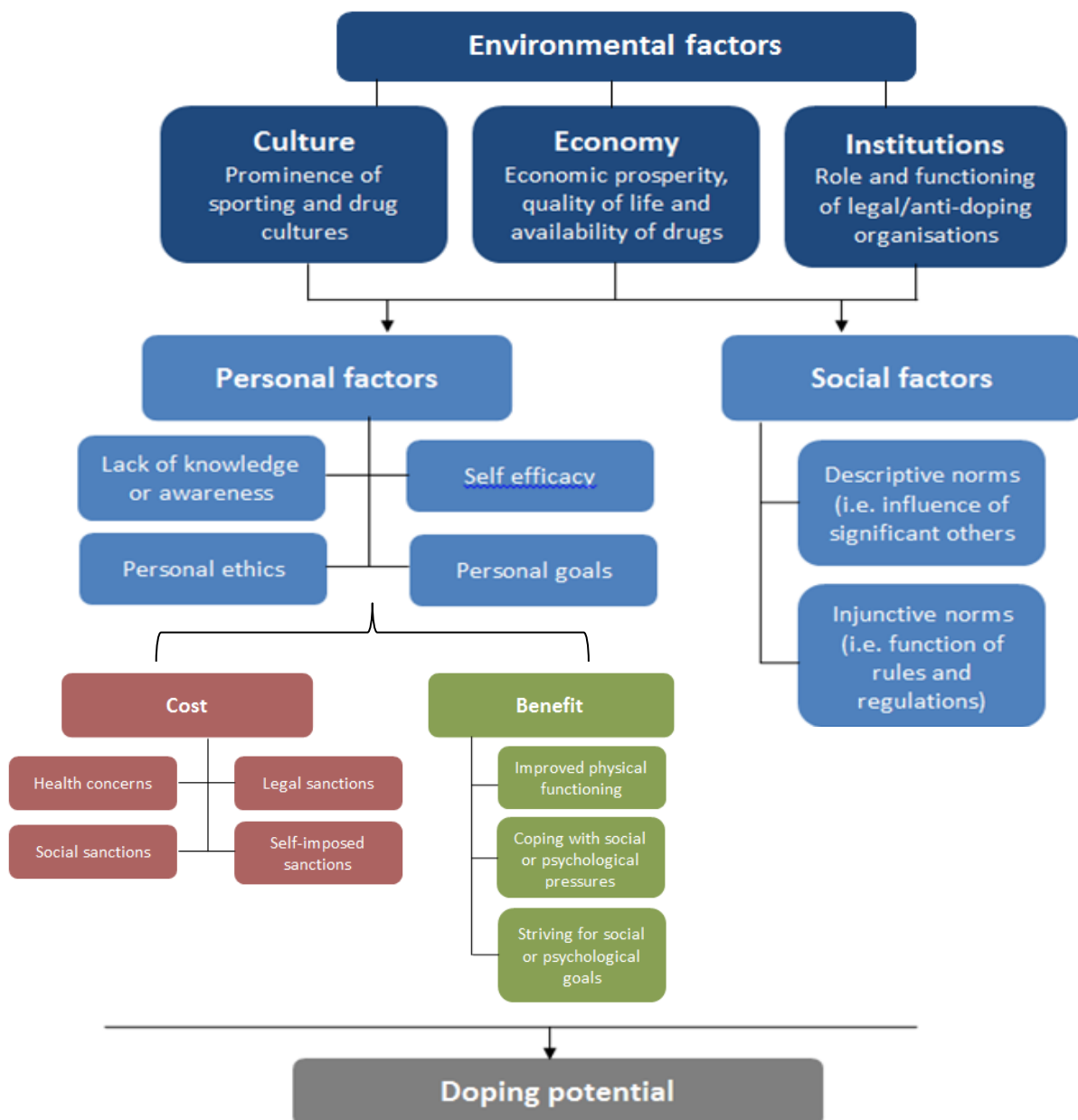
3.0 Developing a model of conduct for social media interventions

As of June 2010, approximately 2 billion people across the world use the Internet.[17] Increasingly, these users are engaging with social media: forms of digital communication that encourage users to communicate around areas of shared interest. However, notwithstanding the apparent potential, there is limited evidence on the impact of social media on the attitudes and behaviours of those that use them. Despite this, theories of human behaviour suggest that social media has the potential to profoundly affect socially influenced behaviours.

This chapter attempts to outline some of the key guiding principles which should underpin the development of online social media campaigns. It begins by exploring key aspects in the planning and delivery of online social media communications. At the end of this section we highlight four examples of social media campaigns identified as bearing the hallmarks of effectiveness based upon the factors highlighted below.

3.1 Planning social media interventions

The literature review unveiled valuable evidence on the considerations that planners should make when designing online interventions.

Use of behaviour theory

Evidence relating to online and offline interventions reveals that interventions planned using behavioural theories are more effective in achieving behaviour change than those not underpinned by theory. For instance, research that draws on injury prevention interventions tells us that theories and models are useful in planning, implementing and evaluating interventions.[18] Further, recent research that draws on health promotion finds that deep-rooted influences on health-related behaviour can bring about change, meaning that taking account of behavioural theory is imperative if an intervention is to change behaviour.[19] Allied to this is evidence from a wide-ranging review of health-based interventions that found that:

'Most important of all, interventions must be theory driven. Theories provide constructs, processes and hypotheses, and they point to procedures and

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[17] http://www.internetworldstats.com/stats.htm

[18] Trifiletti, L. et. al. (2005) *'Behavioural and social sciences theories and models: are they used in unintentional injury prevention research?'* in *Health Education Research* 20(3) pp.298-307

[19] Netto, G. et al. (2010) 'How can health promotion interventions be adapted for minority ethnic communities? Five principles for guiding the development of behavioural interventions' in *Health Promotion International* Vol. 25 (2) pp.248-257

methodologies for setting up interventions and testing their effectiveness. Without theory there is no framework or underpinning, and no progress or development.'[20]

Evidence also shows that theoretical elements are necessary specifically for online interventions. The results of a recent systematic review of internet-based behavioural change campaigns is seen as providing a rationale for investing in more intensive theory-based interventions that incorporate multiple behaviour change techniques.[21] A recent analysis by Dr Brian Cugelman suggested that the greater the number of behavioural tools used during an intervention, the greater the effect on behaviours. From this analysis, the author concluded that more psychologically sophisticated approaches produce stronger results.[22]

The use of theory-based behavioural change interventions does however have drawbacks in relation to what is practical. One expert in health social marketing suggests that theory should be used as a means to guide the understanding of complex behaviour, rather than a rigid model to be followed. It might be more realistic to focus on certain 'leverage points' that might provoke behavioural change, or two or three stages in a model, rather than attempt to plan and execute a design where every component is related to theory.

Integration with existing approaches
The model of doping behaviour proposed in Section 2.3 identifies a series of factors influencing behaviour choice. Rothshild identified social marketing as one of three ways in which social behavioural issues could be addressed, the others being through legislation and through education[23]. Research commissioned by WADA shows that *'sanctions and education are the major approaches employed to combat doping and that social marketing has not been used.'[24]*

Social media marketing – the use of social media as a communication or marketing tool - has the potential to complement the work done in education and legislation and positively influence behaviour change. Evidence suggests that social media marketing has been particularly successful when used to complement education and the law as part of comprehensive programs of behavioural change.[25] In the health communication community, for instance, *'there is a widespread assumption that recent advances in Internet technologies (Web 2.0), particularly the participative*

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[20] Rutter D. and Quine L. (2002) *Changing Health Behaviour: Intervention and Research with Social Cognition Models* Open University Press

[21] Webb et al. (2010) 'Using the Internet to Promote Health Behavior Change: A Systematic Review and Meta-analysis of the Impact of Theoretical Basis, Use of Behavior Change Techniques, and Mode of Delivery on Efficacy'. *The Journal of Medical Internet Research* 12(1) e4

[22] Cugelman, B. (2010) *Online Social Marketing: Website Factors in Behavioural Change.* PhD thesis, University of Wolverhampton

[23] Rothschild, M. (1999). 'Carrots, sticks and promises: A conceptual framework for the management of public health and social issue behaviours.' In *The Journal of Marketing* 63 (4) pp24-37

[24] O'Reilly and Madill (2007) *The World Anti-Doping Agency: The Role of Social Marketing.* The Haworth Press p2

[25] E.g. Own Your C

Internet, known as social media, have transformed the pattern of communication, including health-related communication.'[26]

In exploring when and where to use social marketing interventions, Rothschild presented a framework based on individuals' motivations, opportunities and abilities to perform a particular behaviour. This model attributed a role to social marketing only where there is motivation to engage with an issue (e.g. doping). Online behaviour is driven primarily by an individuals' interest in an issue, where there is no interest an issue there will be no motivation to engage in social media communications. Based on Rothschild's model there are two opportunities for social media marketing: (i) information provision to those who are motivated, have the ability and opportunity to change, and (ii) more elaborate campaigns for those who are motivated but do not have the opportunity or ability.

The existing approach to combat doping (education and sanctions) are particularly effective for older and more professional athletes who have a vested interest in the anti-doping information available. The Elaboration Likelihood Model[27] proposes that people have two ways of processing information: where an argument concerns an issue with which people are motivated to engage, the information will be processed through a central processing route. Conversely, low motivation will result in information being processed peripherally. Communications processed centrally will influence attitudes via the strength of the content, whereas communications processed peripherally will influence attitudes via collateral impressions. '*Attitude changes via the central route appear to be more persistent, resistant, and predictive of behaviour than changes induced via the peripheral route'.*[28]

When planning online interventions with young athletes, anti-doping organisations should consider access to social media and athletes' motivation to engage with the doping issue. While it is important to maintain a presence across multiple social media platforms, these can be used to engage different audiences for different purposes. Research conducted by the International Association of Athletics Federations highlighted a gap between how athletes would like to receive information, and how they currently receive it.[29] In particular the report highlighted that '*it is inadequate for an organisation to use the same method of contact with the athletes each and every time, and for each different subject.'*[30] What is important is to communicate across a range of platforms, in an athlete's native language, and concentrating on the core mediums of emails and the organisations website.

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[26] Chou, W. et al (2009) 'Social Media use in the United States: Implications for Health Communication' in *Journal of Medical Research* Vol.11(4)

[27] Petty, R. E. and Cacioppo, J. T. (1984) 'The effects of involvement on responses to argument quantity and quality: Central and peripheral routes to persuasion' in *Journal of Personality and Social Psychology* (46) 69-81.

[28] *Ibid p. 191*

[29] Butler, C. (2009) *Determining the best e-tools for the IAAF and its Member Federations to communicate with elite track and field athletes*. MEMOS XII 2008-2009

[30] *Ibid p. 46*

3.2 Principles of online interventions

Social media can be a highly effective way of engaging in both one-way and two-way communications. Its flexibility allows for individually focussed and mass media campaigns, as well as campaigns which are focussed on communication or interaction. The available evidence presents one prominent model for the conduct of effective online interventions. This model, developed by Dr Brian Cugelman, is called the *'Communication-Based Influence Components Model'*. It aims to integrate a number of influence systems and components into a package that describes online intervention psychology and is rooted in behavioural theories. It draws on evidence from health-related interventions, and persuasive technologies. It is an adaptation of Osgood and Schramm's 1954 model of circular communication and hence emphasises the ongoing nature of communications in place of traditional linear models.

Research suggests there are a number of factors that must be considered when using social media as a means of communication. These factors include those related to the message source, the medium, the messaging itself, and the audience.
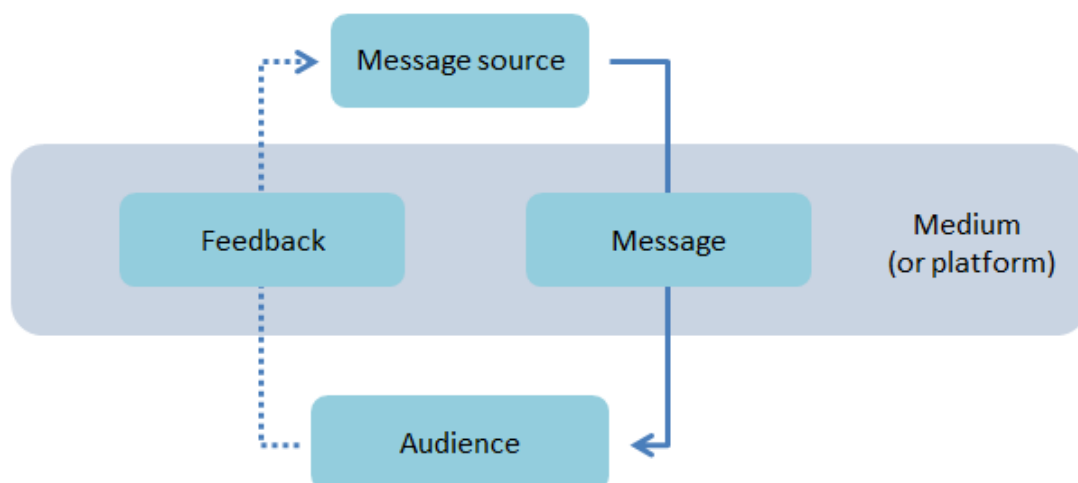
The **message source** will be the anti-doping organisation, a national sporting body or an intermediary (e.g. an ambassador or company). It is important that the message source is seen as credible, reputable and trustworthy. It is also important for it to be relevant and engaging for young people. This relates to how it is perceived as a brand in itself. Anti-doping organisations, whilst credible and trusted may not be the most engaging sources of information by young athletes. So, messages around anti-doping delivered via a third party (e.g. a sporting body) are likely to be more effective than one delivered via a NADO directly.

The **medium** is the platform on which social media communications are delivered (e.g. via social networks, video sharing, SMS etc.). Social media offer opportunities for mass interpersonal (two-way) communications that are unique to online approaches and shown to be the most powerful for affecting behavioural change. Social media offer the opportunity for interpersonal dialogue which has implications for how audiences (i.e. young people) relate to the platform and the communication.

Research indicates that users often make emotional judgments when interacting with a website, as they would during face-to-face communication. This means that users tend instinctively to treat websites as if they were people as a result of a site's perceived social presence. While irrational, it is an important consideration in website design.[31]

Website users make rapid judgments on the visual appeal of websites, or so concluded a recent Canadian study aimed to understand the speed with which people reach conclusions on visual appeal. It asked participants to make aesthetic judgments on 100 screen shots of unfamiliar websites in fractions of a second. The researchers drew the conclusion that 50 milliseconds, or 0.05 seconds, was sufficient time to draw a reliable and persistent conclusion on visual appeal. The researchers saw these judgments on visual appeal as being related to design layout and colour, although they felt more research on the components of visual appeal was necessary.[32] Engaging content, attractive and interactive website design are important features of platforms used to communicate messages; these features will determine whether, and how often, young people will access the platform and, consequently, receive the anti-doping messaging.

Messages and feedback are the content of the communications between the source and the audience. The potential for messages to be sent from the audience back to the source, as well as from the original source to the audience, is a powerful advantage of online approaches.

Recent research into online interventions specifically hypothesised that online interventions were powerful as they could use feedback to tailor messages to individuals. While the study did not identify empirical evidence showing that tailoring messages encourages effectiveness, the authors predicted that tailored interventions would be proven more effective than 'one size fits all' interventions.[33] Becker's work on motivation in reducing domestic energy consumption from the 1970s (and hence not exploring online interventions specifically) also found that the motivational effect of an intervention was influenced by the combination of setting difficult goals and giving appropriate feedback[34]. This finding on goal-setting supports the idea that behavioural change theory which emphasises goals should underpin interventions. Dr Cugelman's work on online communications found that effective interventions encouraged people to set goals, plan and track progress towards their objectives.[35]

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[31] Fogg (2003) *Persuasive Technology: Using computers to change what we think and do*, Chapter 5: Computers and Persuasive Social Actors, p89

[32] Lindgaard et al. (2006) 'Attention web designers: You have 50 milliseconds to make a good first impression!', in *Behaviour and Information Technology* Vol. 25 (2) pp115-126

[33] Portnoy, D. et al. (2008) 'Computer-Delivered Interventions for Health Promotion and Behavioral Risk Reduction: A Meta-Analysis of 75 Randomized Controlled Trials, 1988 – 2007' in *The American Journal of Preventative Medicine* 47(1) pp3-16

[34] Becker, L. (1978) 'Joint Effect of Feedback and Goal Setting on Performance: A Field Study of Residential Energy Conservation' in *Journal of Applied Psychology* Vol. 6 (4), 428-433

[35] Cugelman, B. (2010) *Online Social Marketing: Website Factors in Behavioural Change* PhD thesis, University of Wolverhampton

There is also evidence to suggest that social networks can help to reinforce behavioural change. Research into the social dynamics of smoking in large groups found a person-to-person spread of smoking behaviour that led to people quitting together. Smoking behaviour therefore spreads through close as well as distant social ties. Groups of interconnected people stop smoking concurrently and increasingly socially marginalise those that continue to smoke.[36] Evidence that measured users' perceptions of the efficacy of a particular online approach supports this finding. In a recent scoping study on how the social networking aspects of Facebook might reinforce behaviour change, users were found to perceive an effect on their behaviours. In this specific case, the participants concluded that revealing other people's energy usage data would lead to competition and peer influence to reduce consumption.[37] Other studies have also found that the impacts of web-based approaches, when compared to offline approaches, are greater when they incorporate chat rooms.[38] This is supported by Cugelman's finding that effective online campaigns tend to use a variety of online feedback channels, such as forums, emails, and social networking.[39]

Another recent academic study from the United States supports the idea that the level of engagement among participants in at least one smoking cessation intervention was affected by the depth and the level of tailoring in feedback. Highly tailored messages improved the level of engagement among users, and hence efficacy. The authors also thought it possible that a more empathetic message source conveyed greater trustworthiness, leading to greater interest, particularly when messages came from organisations perceived as distant or lacking in accountability by users. In this sense, 'personable' messages come from identifiable individuals rather than from the organisation itself. The researchers also found that highly tailored messages that promoted self-efficacy and coping strategies might inspire confidence, hence greater program engagement and greater behavioural effect[40].

Special attention should also be given to the length and frequency of exposure to an intervention. Greater intervention dose (a more frequent use of or increased exposure to an intervention) was found to strengthen the impact of interventions on attitudes towards the sampled health behaviours: tobacco use and substance use

[36] Christakis N. and Fowler,J. (2008)'*The Collective Dynamics of Smoking in a Large Social Network*' in *New England Journal of Medicine* Vol.358 (21) pp. 2249-2258

[37] Foster D. et al. (20090 *Social networking sites as platforms to persuade behaviour change in domestic energy consumption* The Society for the Study of Artificial Intelligence and Simulation of Behaviour: Edinburgh

[38] Wantland et. al., (2004) 'The Effectiveness of Web-Based vs. Non-Web-Based Interventions: A Meta-Analysis of Behavioral Change Outcomes' in *Journal of Medical Internet Research* 2004 Oct–Dec; 6(4): e40

[39] Cugelman, B. (2010) *Online Social Marketing: Website Factors in Behavioural Change* PhD thesis, University of Wolverhampton

[40] Strecher et al. (2008) 'The Role of Engagement in a Tailored Web-Based Smoking Cessation Program: Randomized Controlled Trial' in *Journal of Medical Internet Research* 10(5) e36

reduction.[41] This is supported by research by Cugelman into the effectiveness of online interventions that found people who had more exposure to an intervention, or used it more often, generally achieved greater behavioural outcomes.[42]

A further body of evidence demonstrates that shorter interventions are more effective than longer ones. Cugelman's study shows that relatively short online interventions achieved larger impacts, and as the length of an intervention increased, its impact decreased.[43]

In combination, this evidence suggests that relatively short interventions that encourage the users to engage many times and offer some degree of personalization are likely to be most effective. This also relates to the making of sequential requests, also known as the foot-in-the-door technique. This technique, most commonly associated with sales and marketing, involves small requests which can increase the likelihood of larger requests being consented to (by reducing the likelihood of cognitive dissonance).

The **audience** are the people who are the target of the sender's messages. Consideration of the specific needs of the audience to be targeted is a vital aspect of designing an effective online intervention. Research suggests that the effective design and execution of online interventions demands careful consideration of the target audiences. Age, gender, educational attainment, ethnicity and prevailing social norms are all shown to have an impact in the effectiveness of online interventions.

As one example, research into the differences between methods of persuasion in the US and Japan found that approaches closely mirrored prevailing social norms. For example, persuasive messages on Mixi (a Japanese social networking service) were communitarian and gentle. On the American Facebook, they were more individualistic and direct. Facebook therefore was seen to better reflect the persuasion dynamics common in American culture, while Mixi was rooted in Japanese sensibilities.[44]

Young athletes will come from diverse social groups, but share a number of commonalities which could be used as the basis for engagement: their age and a love of sport (in particular a love of their sport).

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[41] Portnoy, D. et al. (2008) 'Computer-Delivered Interventions for Health Promotion and Behavioral Risk Reduction: A Meta-Analysis of 75 Randomized Controlled Trials, 1988 – 2007' in *The American Journal of Preventative Medicine* 47(1) pp3-16

[42] Cugelman, B. (2010) *Online Social Marketing: Website Factors in Behavioural Change* PhD thesis, University of Wolverhampton) p.71

[43] *Ibid*

[44] Fogg, B. & Iizawa,D. (2008) *Online Persuasion in Facebook and Mixi: A Cross-Cultural Comparison* in Persuasive 2008, LNCS 5033, pp. 35-46,

3.3 Examples of social media campaigns with hallmarks of effectiveness

Key features of online interventions which appear to influence success in changing attitudes and behaviour relate to source, the medium, the message and the audience. Through consultation with stakeholders and Internet searches, a number of campaigns were identified which incorporate factors associated with effectiveness (i.e. reputation, trust, credibility, visual appeal, usability, personalisation, dose, and sequential requests). While many of these campaigns had no evaluations which drew causal links between elements of the campaign and behavioural outcomes, we have made assessments based upon the relative strengths of these campaigns in light of the factors identified above.

United States Anti-Doping Agency[45]

'I compete clean because…' is the fourth campaign by the US Anti-Doping Authority (USADA) addressing anti-doping and builds on the previous year's 'My Victory' campaign. USADA used ambassadors, in the form of seven Olympic athletes, to explore the depth of clean sport commitment, and find out why athletes compete clean. The multi-media campaign was launched in the run-up to the 2010 Vancouver Olympic and Paralympic Games, and incorporated video messages, posters, public service announcements, and online elements. Using high-profile ambassadors increases the motivation for young people to engage with the campaign and process the doping message it contains centrally.

The biggest online element of the campaign was a microsite for athletes and coaches to pledge to compete clean. Athletes were invited on the site to pledge support to the following beliefs:
1. I compete clean for the love of my sport, respect of my competitors, honour of my country, and respect of myself.
2. I know sports make me a better person.
3. I believe that a victory obtained by cheating is a counterfeit and hollow win.
4. The only sport I believe in is clean sport, sport that is free of all cheating, including doping.

The pledge idea is intended to resonate with young people and also comprises actions which athletes can make pledges to undertake. These include talking with others about their commitment, acting as a role model and making ethical decisions in relation to the choices open to them. People pledging can also enter their own personal reasons for their pledge. The pledge page holds a searchable list of each person pledging with their names, sports, locations and comments. By utilising a pledge, the site enables USADA to collect information on athletes who have responded to a small request. This information can then be used to engage them in larger requests in the future (e.g. joining a social network, reading email communications). This approach is supported by the social cognitive behavioural theory.

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[45] http://www.usada.org/icompeteclean/

1,100 athletes have pledged to compete clean since the campaign was launched. USADA have not specifically investigated the effectiveness of their social media campaign, however there is a belief that social media can have the power to change social behaviour and attitudes.

Time to Change[46]

The UK mental health charities Mind and Rethink are partners in the *Time to Change* campaign, which aims to end the stigma and discrimination that still have a huge impact on the lives of people with mental health problems. The campaign includes local community projects, a high-profile anti-stigma campaign, a mass-participation activity week, legal challenges, training for student doctors and teachers, and a network of grassroots activists combating discrimination.

Rethink manage the *Time to Change* pledge site which enables people to pledge to act to end mental health prejudice. Individuals can upload photos alongside their pledge. The idea is that by making a positive commitment to a pledge around future behaviour, that attitudes and behaviours can be influenced. The pledge started on the *Time to Change* Facebook page which has over 31,000 members and moved across to a standalone site in 2010 in order to capture a wider audience. The campaign has received coverage across a variety of national media and has gained almost 9,000 individual pledges over a six month period.

The strategy of signing a pledge and sharing experiences of mental health problems with other people supports the behavioural theory of the social cognitive approach. Making a pledge to do something shows a commitment. By sharing this pledge and inviting others to do so, young people lead by example and more peers may follow their behaviour. The pledge sits within a campaign-specific website with clear links to credible charities and supporters. The site is simple and clear in its presentation, keeping the focus on the message.

The site incorporates high-profile celebrity pledges, as well as those from members of the general public. These represent credible voices from personal experience as opposed to simply presenting mental health problems out of a personal context. People's names appear at the top of their pledge, alongside photos (if uploaded) which reinforces its authenticity. This sends a message to the user that these people are just like them and/or those in their life with mental health problems. The use of celebrities offers further credibility to the site, reassuring users and motivating their engagement.

Own Your C[47]

The Own Your C (Choices) campaign was developed by Cactus Media and the Colorado State Tobacco Education and Prevention Partnership to support tobacco

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[46] www.time-to-change.org.uk/
[47] http://www.ownyourc.com/

prevention amongst young people aged 13-18. The campaign, which incorporated education outreach activities, mass media and viral advertisements, offline and online cessation tools and an experiential website (C-Ville), began running in 2005. Rather than focus solely on smoking, the Own Your C campaign aimed to empower young people to make educated choices and to own the consequences of those choices (both good and bad).

The original C-Ville website was developed so that young people would interact with the site like they would with a game. The site helped establish the Own Your C brand, making it cool and 'youth' with videos and social media content. Recognising peer pressure as a key influencer on young people's choices Cactus Media built a new website, Own Your C, which incorporates a polling tool that allows people to create profiles, express their choices around anything from boyfriends to fast food, upload supporting content, and connect all these choices.

Joe Conrad, CEO of Cactus Media, explained the reasoning behind harnessing social norms to create a movement with a focus on decision making and ethics that ran wider messages than just smoking-related ones:

"Smoking isn't an isolated incident, and this campaign could help teenagers make the right choices in general. We wanted 'Own Your C' to be part of youth culture. It isn't about pointing fingers, it's saying that 'you are in control…If you preach to teenagers, they will naturally resist it. If you give them the power to choose, have them influence one another, and create a social norm of the healthy choice being the norm, we felt that that was going to be the positive choice. It wasn't going to be preachy, it was an empowerment campaign."

Own Your C has been particularly well evaluated because it is a government programme. The impacts of the campaign upon young people have been subject to various short-term, mid-term and long-term measures. These include campaign metrics as well as attitudes and behaviour towards smoking.

Campaign representatives have conducted over 640 events in each of Colorado's 64 counties reaching more than 90,000 students. 57% of students targeted at the events became registered users on Own Your C[48]. The site has now received over 70,000 unique visitors from 176 countries, and over 11,000 profiles have been created since it launched.[49] Research conducted with young people in Colorado showed that at-risk students were 21% more likely to have heard of Own Your C, and 65% more likely to have visited the website compared to never-smoking, non-susceptible students. While the research did not control for confounding variables, Colorado now has the lowest teen smoking rates in the USA nation at 11.9%, well below the current national average, and 5% below the teenage smoking rate in 2005[50]. Whilst this cannot be attributed to Own Your C alone, the campaign can be seen to be an important contributor to this success.

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[48] Own Your C case study provided by Cactus Media
[49] Interview with Mr Joe Conrad (Cactus Media)
[50] Own Your C case study provided by Cactus Media

Choose a different ending[51]

The Drop the Weapons campaign was launched in 2009 by the Metropolitan Police Service in London, UK. The campaign, which involved both print and online media, aims to help break the circle of youth violence and stop knife and gun crime. The campaign website[52] aims to show how real people can turn away from violent crime. 'Choose a different ending' is an interactive film, hosted on YouTube, about the consequences of carrying a knife that allows the viewer to decide what happens next. The viewer can interact with the website, choose what to do and decide how it ends. The film aims to show young people the consequences of carrying a knife – the loss of control, death and prison sentences.

The film was promoted during the school summer holidays to create intrigue and curiosity which would drive people to YouTube. This included television advertisements on MTV, radio spots, trailer links sent via Bluetooth to mobile phones in cinema foyers and online bloggers. The primary form of social interaction occurred via the YouTube comments page on which people debated the message.

The campaign is underpinned by two broad theories of behavioural change; cognitive behavioural theory and the social cognitive approach. The clips at the heart of the campaign work together as an interactive thread of consequences. The users are asked to engage with a series of choices and make decisions on courses of action. This structure demands that the user reflects on their choices and considers how a decision at one stage impacts on their circumstances in the next. Each chain of outcomes offers a decisively positive or negative outcome. One chain of decisions results in a death and the user's arrest. Another rewards responsible choices with attendance at a virtual party and an exclusive music video. The approach therefore highlights the benefits of not getting involved with knife culture.

The opportunity for the user to go back and try different endings allows them to see all scenarios and the consequences of different decisions in contrast to their earlier decisions. The power of choosing each step allows the users to understand by themself what the key message is for accepted behaviour.

Through the comments-board users can question, challenge or reinforce the credibility of the message. In this way, the message has more power, as it is based on real-life case studies rather than a wholly composed scenario. It is assumed that those commenting on the film are other users who are speaking from their own personal experiences rather than from the objective of relaying the message. The comments-board allowed for direct comment and feedback from the users, while at the same time the Met Police could add their own response to a comment as well as moderate any inappropriate content.

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[51] www.youtube.com/watch?v=JFVkzYDNJqo
[52] www.droptheweapons.org

Sitting in the context of YouTube, the site acts as a trusted presenter of real films online. Initially, there are no indications of the source of the message. YouTube is an environment that the target audience are already familiar and feel comfortable with. Further, the options for comment/engagement are already in place. The profile created to post the film on YouTube – 'a different ending' is unbranded as is the film until the end frame. The message therefore remains the most important aspect rather than the sender.

The YouTube video has received over 588,000 plays since it was uploaded in July 2009. Furthermore, over 200 people have commented on the video and responded to other user comments enabling the site to utilise social norms.

4.0 Developing guidelines

In developing guidance for anti-doping organisations we undertook a number of interviews with National and Regional Anti-Doping Organisations, young athletes and academics. This enabled us to produce guidance which was grounded in the existing evidence base but also provided the necessary information in an accessible format.

4.1 Feedback from anti-doping stakeholders

We spoke with representatives from seven anti-doping organisations representing countries and regions across Europe, North America, Africa, Asia and Oceania. These organisations tend to be relatively small in size and have been established within the past 5-10 years. Anti-doping organisations hold responsibility for detecting and deterring doping through the management of testing procedures and the delivery of education. Organisations varied considerably in their contact with athletes and coaches. Some undertook direct work with athletes via outreach methods (e.g. lectures within schools or during events) and e-learning whilst others concentrated on training coaches around anti-doping directly or indirectly (e.g. via coaching bodies). All organisations we spoke with had strong links with National Sport Governing Bodies, in particular those representing sports identified as being at high-risk of doping.

Doping was felt to be a relatively minor issue in many of the countries represented by anti-doping stakeholders. The use of drugs was largely seen to be a cultural issue. In those countries in which sporting success was equated with greater material rewards and celebrity status, typically western-countries, the risk of doping was much higher. Within these contexts there was a greater use of nutritional supplements at a younger age to enhance performance (legally and illegally). The challenge in these cases was communicating the intrinsic benefits of sport and supporting ethical decision making amongst younger athletes.

"We are particularly focused on the Olympics and Paralympics, but if you include the basketball, baseball etc., it's highly prevalent. There's a greater awareness in some sports than others, but it's certainly one of the biggest issues facing sport today. Sport, by its nature, has rules. Doping goes against those rules and creates a culture of cheating, both in the participants, but in the competitors and spectators. It's a huge issue." (US Anti-Doping Agency)

Social media was a relatively new development for the majority of stakeholders. Whilst most respondents had some degree of familiarity with social media, this tended to be through personal rather than professional use. There were however some notable exceptions, for example both US Anti-Doping Agency and UK Anti-Doping have used social media for several years to engage various audiences. There was a high degree of support for the use of social media to engage athletes directly and the majority of stakeholders were in the process of developing a social media strategy to complement existing marketing, communications and education

activities. In the majority of cases these strategies were developed for implementation by the existing staff as an addition to their current work.

Whilst many of the stakeholders we spoke with recognised that social media use amongst young athletes was high, there was often a limited understanding of this audience or the opportunities for engaging them using social media. Research into the communication preferences or needs of young athletes was notably lacking. Existing methods of communication tended to be one-way with limited opportunities for two-way dialogue. Social media was seen as a means of engaging in this form of interaction in a cost-effective manner.

Guidelines to support anti-doping organisations in using social media would be welcomed and stakeholders were grateful to WADA for commissioning this research. Nevertheless, the needs of stakeholders in terms of guidance varied considerably from a beginners guide to detailed advice on utilising individual platforms. In particular, many stakeholders expressed concerns over the potential risks of engaging in social media and how to mitigate these.

There was consensus amongst anti-doping stakeholders that social media communications to younger athletes needed to focus upon addressing the ethical issue of doping. Many of the stakeholders we spoke with reported that existing campaigns focussed upon fair play and felt that this offered the strongest opportunity to engage younger people who just wouldn't pay attention to cost-related messages. When asked to provide examples of health-related social media campaigns that they felt had been interesting or successful, stakeholders struggled to identify any. Australia Anti-Doping was mentioned several times though no-one could recall the campaign.

4.2 Feedback from young athletes

We spoke with young athletes from five countries representing cycling, rowing, in-line skating, mogul skiing and fencing. The majority had home access to the internet and used social media daily, typically to access Facebook and, in some cases, YouTube.

Websites specific to their sports were extremely popular, especially for the older young athletes who were more involved in professional competitions. These were typically the websites of their local clubs or their National Sports Governing Body. These websites were typically used to access information about sporting fixtures, results and to view videos of competitive action. Only two young people we spoke with had joined Facebook pages specific to their sport; these were the young athletes who were more heavily involved in their sport.

"Usually I look at British rowing, and that's just to do with looking at races. It's not really to find out about my sport it's more to do with when the next races are."
(Young athlete)

Young athletes reported receiving varying levels of anti-doping communications or education. Where they were involved more professionally in their sport there was a higher likelihood of having received information directly from their national anti-doping organisation, or indirectly via sporting institutions. For older athletes, more engaged in professional competitions there was a higher perceived need for anti-doping information and communications. These young athletes had a greater awareness of doping issues and where to seek information.

"For like anti-doping and those sort of things, the only times I look on those sort of websites I go directly to ASADA to check my substances, but that is the only place I go currently." (Young athlete)

Younger athletes who were in the process of professionalising in their sport reported that anti-doping communications were more informal and ad-hoc. There was a perception that coaches had not provided detailed information as there was a general expectation that they would not engage in doping. In several countries young people reported that they had received more information about doping from their PE and PSHE-type subjects than from their coaches. One young person actively sought this information out themselves via a web search and others also reported that they would use Google to search for information as an initial activity. As young athletes become more professional there was a stronger reported need for information.

"We've been told about the dangers of it, and how it is illegal. But we've never been given any information about the different types." (Young athlete)

"Definitely because I don't really know much about doping. I've never done it so I think it would be useful to get more. Like, the substance that some people might take, the effects they have on you and the bad effects they could have." (Young athlete)

Young athletes were all extremely positive about engaging with the anti-doping issue via social media however there was a mixed opinion on whether Facebook or YouTube were appropriate platforms.

For younger athletes, Facebook was seen to be an excellent platform for communications around anti-doping.

"I think having a group on Facebook is a really good idea because I know I'd join it and I could invite all my friends to join it to make sure we're all against it and I definitely think Facebook is the place to target that because it's for people my age, and younger and above." (Young athlete)

However, for older young athletes there was a greater concern over the validity of information contained on Facebook. They still supported the idea of peer to peer communication using social media, but felt that this would be more appropriate and more trustworthy if contained within the site of an anti-doping organisation or

National Sports Governing Body. Younger athletes, in contrast, felt that these sites were less accessible to them and more for professional athletes.

"No I don't think so because there is a lot of stuff on Facebook that is not true and a lot of junk on there. So that is why I wouldn't trust too much on Facebook about that sort of thing." (Young athlete)

"I think that'd be pretty good as you can find stuff there from other people your age and there perspective rather than hearing it in complicated doctor terms so I think it would be a good source of information for someone like me." (Young athlete)

Campaigns on Facebook or YouTube could come from WADA, national anti-doping organisations or National Sports Governing Bodies directly to provide some gravitas and highlight its importance. Using sport-specific 'champions' or role models could also ensure that any social media campaign gains presence and attracts the attention of young people.

Communications need to be clear and simple. Many of the young athletes reported feeling overwhelmed by the complexity of information they were faced with around anti-doping. This is another reason why some young athletes reported they would value engaging with the topic through social media.

"The simpler it is the better. When you're reading it there often all this scientific jargon that you don't really understand. So you're less likely to read it or you just get confused. You're more likely to go on the internet and type it in." (Young athlete)

Support for an online pledge was mixed. Some young athletes felt it was a great idea whilst others were concerned about the potential for inappropriate comments. Some young people reported that they would be happy to provide their name and a comment whilst others were happy to upload photos and more personal information.

"I'd definitely go and sign it because I want all sport to be fair. I don't want to go into a sport and have someone beat me because they've used performance enhancing drugs. I'd be all for signing it." (Young athlete)

Regardless of the social media approach taken, a face-to-face element of education was also considered to be important particularly as young athletes become more professional in their sport.

In talking with young athletes who were opposed to doping within sport it became apparent that there ethical standpoint had, to some extent, reduced their interest in anti-doping education. One key challenge for anti-doping organisations will be to demonstrate to young athletes the relevance and importance of their engagement in these communications.

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