

National
IPED INFO
Survey

CPH | CENTRE FOR
PUBLIC HEALTH
LIVERPOOL JOHN MOORES UNIVERSITY



Image and Performance Enhancing Drugs

2015 Survey Results

Geoff Bates and Jim McVeigh

July 2016

CPH, Faculty of Education, Health and Community, Liverpool John Moores University, Henry Cotton Campus, 15-21 Webster Street, Liverpool, L3 2ET
0151 231 4511 | g.bates@ljmu.ac.uk | www.cph.org.uk | ISBN: 978-1-910725-64-1 (web)

The National IPED Info Survey is an annual survey exploring image and performance drug use in Wales, England and Scotland. The survey is a Public Health Wales initiative working collaboratively with the Centre for Public Health at Liverpool John Moores University, NHS Scotland and Nine Zero Five. All partners contributed to the development and delivery of this survey. Further information about the National IPED Info Survey can be found by visiting <http://ipedinfo.co.uk>.

Introduction

The range of enhancement substances known as image and performance enhancing drugs (IPEDs) includes anabolic steroids, growth hormones, peptide hormones and other drugs to increase muscularity and modify appearance. The association between performance enhancing drugs and athletes has been long-established but over the past decade use of these substances – in particular anabolic steroids - has increased significantly amongst the general population in England and Wales (Home Office, 2015). Further, data from needle and syringe programmes indicate that use is likely to be increasing (Bates et al., 2014; McVeigh et al., 2003; McVeigh et al., 2007; National Institute for Health and Care Excellence, 2014).

This group of drug users, referred to as IPED users, present a number of specific challenges for healthcare services; they are injecting drug users who frequently employ very complex drug regimens with no evidential basis. In recent years we have witnessed a rapid expansion of substances used, with an array of prescription only medicines being used to combat side effects in tandem with peptide hormones for anabolic effect which are still at the early stages of development. The drugs are predominantly illicitly manufactured and sourced (Larance et al., 2008; Parkinson et al., 2006; Striegel et al., 2006), although legal to possess for personal use. They are of highly variable quality and sterility and pose a significant health risk to the user (Graham et al., 2009; Evans-Brown et al., 2009; Stensballe et al., 2015; Breindahl et al., 2015; Kimergård et al 2014a; Kimergård et al., 2014b).

Alongside use of IPEDs, there is also evidence of the concurrent use of psychoactive drugs, especially cocaine and cannabis (Hope et al., 2013; Sagoe et al., 2015). As well as these issues there are many adverse health conditions specifically associated with the use of IPEDs. Anabolic steroids alone have been linked with adverse effects from acne, accelerated balding, gynaecomastia, sexual dysfunction, mood and psychological effects to a growing body of evidence of serious chronic conditions, in particular those associated with cardiac physiology and function (Pope et al., 2014). As new drugs are added to the existing array of pharmacological substances, the potential for harm increases and becomes more diverse.

One of the most significant threats to this population lies in the risks associated with injecting. Historically, the issue of blood borne virus transmission has not been a major concern (Crampin et al., 1998), although risk behaviours for these infections have been reported amongst populations of IPED users (Midgeley et al., 2000; Kimergard & McVeigh, 2014c). Previously, cases of HIV have been largely confined to small scale studies and case reports (e.g. Scott & Scott, 1989; Sklarek et al., 1984). However, recent evidence indicates that HIV has been present in this population for some time (Hope

et al., 2016). Findings from the largest study of blood-borne viruses among IPED injectors, conducted across England and Wales in 2010-2011 (Hope et al., 2013) indicated that the HIV prevalence was similar to that among those injecting psychoactive drugs such as heroin and cocaine. These findings were confirmed in the unlinked anonymous monitoring survey of HIV and viral hepatitis among people who inject drugs in 2012-13. Of the 249 participants surveyed across England and Wales in 2012-13, 2.0% (95% CI, 0.74%-4.9%) had HIV, 2.8% (95% CI, 1.2%-5.9%) had antibodies to the hepatitis B core antigen (anti-HBc) which indicated that they had previously been infected and 3.6% (95% CI, 1.8%-7.9%) had antibodies to hepatitis C. Although the prevalence of antibodies to both hepatitis B and C were lower than levels observed amongst participants in the main unlinked anonymous monitoring survey, targeted at people who inject psychoactive drugs, the prevalence of HIV was similar in both of the surveys. The survey also identified a highly sexually active population with low rates of condom use (Public Health England, 2014). Additionally, injection site problems were common, being reported by over a third of participants in the study conducted in 2010-2011 (Hope et al., 2015).

While increasingly large numbers of IPED users attend NSPs in the UK (Advisory Council on the Misuse of Drugs, 2010; Kimergard & McVeigh., 2014c), the public health concerns related to this population are exacerbated by an apparent reluctance of many IPED users to engage with health and support services, in particular primary care. IPED users who inject drugs experiencing injecting related injuries are most likely to self-treat conditions as they arise, resorting to attendance at Accident & Emergency Departments in the event of increasing severity (Hope et al., 2015). During in-depth interviews IPED injectors have cited a lack of trust and confidence in the treatment that they would expect within primary care settings (Kimergard & McVeigh, 2014d).

In order to better understand and evidence the public health issues acknowledged above, Public Health Wales initiated the National IPED Info survey (previously known as the *steroid and image enhancing drugs* (SIED) survey) in collaboration with colleagues at the Centre for Public Health, Liverpool John Moores University; NHS Scotland; and Nine Zero Five. This document summarises key findings from the third year of this survey.

Findings from the previous waves of this survey are available at:

2013 Survey (Chandler & McVeigh, 2014):

<http://www.cph.org.uk/wp-content/uploads/2014/06/Steroids-and-Image-Steroid-Image-Enhancing-Drugs-2013-Survey-Results-FINAL.pdf>

2014 survey (McVeigh, Bates & Chandler, 2015):

http://www.drugs.ie/resourcesfiles/ResearchDocs/Europe/Research/2015/Steroids_and_Image_Enhancing_Drugs_2015.pdf

Survey Methods

2013/2014 survey waves

The original survey, conducted in 2013, comprised 51 questions exploring the use of IPEDs with a further six questions added for the 2014 survey. This online survey was disseminated via the most popular UK-based online forums dedicated to weight training and/or the use of IPEDs (UK-Muscle, Testosterone Muscle, Muscle Talk and Underground Muscle) and via needle and syringe programmes (NSPs) engaging with IPED users. Paper versions of the survey for participants to complete when visiting NSPs were also provided.

2015 survey

The methodology was modified for the 2015 survey to increase participant recruitment. Additionally a greater emphasis was placed on recruiting IPED users who do not use online forums.

Predominantly, recruitment was led by researchers who operated in drug and health services and/or visited gyms and sports settings across 16 locations in Wales, England and Scotland. These individuals were responsible for recruiting study participants, who were identified through service attendance or through a snowball approach in outreach settings (predominantly gym and sports settings). Additionally the online survey was promoted in NSPs and on online forums. As in previous years, anyone who had ever used image or performance enhancing drugs were eligible to participate, and could do so through completing the survey with a researcher or by accessing the online survey.

The survey was drafted by the Centre for Public Health at Liverpool John Moores University and subsequently refined following feedback from research partners. The survey was constructed using the Bristol Online Survey Tool (BOS). This is an online resource made available to Universities across the UK and widely used in research (<http://www.survey.bris.ac.uk>). Ethical approval for the survey was obtained via the Liverpool John Moores University Research Ethics Committee. The survey was open from August-December 2015.

Key findings

Description of the sample

The survey was completed by 663 participants, the majority of whom were males (96%) and described their ethnicity as White British (70%¹). Following White British, the second most common reported ethnicity was Pakistani (3%). The mean age of the sample was 30 years (median 29 years) and ranged from 16 to 68 years. The vast majority were recruited in a NSP or outreach setting by a researcher (98%). Only 16 (2%) participants completed the survey themselves online in comparison to the sample from the 2013 & 2014 surveys where participants were recruited predominantly through online forums. The locations across Wales, England and Scotland where participants in the 2015 survey were recruited from are detailed in table 1.

Table 1: Number of completed surveys by researcher location

Site	Completed surveys (n=647)
Bradford	24
Bristol	5
Cardiff	43
Devon	39
Glasgow	31
Kirklees	67
Manchester	21
Middlesbrough	52
North East England	120
North Wales	65
Sheffield	24
Shrewsbury	21
Merthyr	93
Swansea	2
Wakefield	5
West Wales	35

N=16 participants completed the online survey themselves, rather than with a researcher.

IPED use

Participants were asked to describe their primary purpose and other motivations for using IPEDs (table 2). The most commonly reported motivation was to gain muscle, which was the primary goal of IPED use for over half of participants (62%). Nearly two thirds reported gaining strength and nearly half (49%) reported losing fat as motivations, but these were each primary goals for a minority of the sample only. Superficially, these primary motivations have remained largely unchanged from the early exploratory research of the 1990s. A total of 386 anabolic steroid users interviewed in the North West

¹ This is likely to be an underestimation of the proportion of the sample that was White British. A minority of participants selected the 'other ethnicity' answer option and described ethnicity in a variety of ways including 'English', 'Scottish', 'Welsh' and 'White'.

of England stated their main purposes of use as *improve bodybuilding* and *increase muscle* (Lenehan et al., 1996).

While only a minority of individuals highlighted motivations of IPED use to increase sex drive (8.6%), to get a tan (4.5%), and to reduce wrinkles (4.5%), this reflects the complex drivers related to this broad category of drug use and the issue of polypharmacy. The issue of polypharmacy, both in terms of enhancement drugs (see tables 4 and 5) and recreational or psychoactive substance use (see table 6), is not restricted to the United Kingdom and is seen as a growing global public health concern (Sagoe et al., 2015). Additionally, there is indication that there may be confusion about the purpose of substances. For example, of 39 participants who reported they had used melanotan I or II in the past 12 months (see table 5), only 16 (44%) reported that one of the motivations for their IPED use was to get a tan. It is unclear what the purpose of melanotan use was amongst participants for whom a tan was not a motivating factor for. Equally, for those participants who did not report having used melanotan, but did highlight a tan as a motivation for their IPED use, the IPEDs that they believe are likely to achieve this result are unknown. Further research is required with participants to explore these anomalies in the data.

Table 2: Motivations for IPED use (n=613)

Motivation	Motivation n (%) n=663	Main goal n (%) n=613
To gain muscle	588 (89)	377 (62)
To get stronger	426 (64)	68 (11)
To lose fat	323 (49)	55 (9.0)
To get fitter	205 (31)	36 (5.9)
To improve endurance or stamina	144 (22)	13 (2.1)
To get faster	90 (14)	2 (0.3)
To increase sex drive	57 (8.6)	5 (0.8)
To get a tan	30 (4.5)	0
To reduce wrinkles	30 (4.5)	0
Other	-	57 (9.3)

Participants used IPEDs orally (n=505, 76%), or through an injection (n=572, 86%), but 429 (65%) had used both oral and injectable IPEDs. There were some differences in reported age of first IPED use, depending on method of use (table 3) with findings suggesting that onset of oral consumption of IPEDs is likely to be slightly earlier than the onset of the use of injectable substances. Initiation of IPED use is typically reported to occur before the age of 30 years, and may be as early as 14 (Sagoe et al., 2014). In this survey, initiation before the age of 18 was reported by 31 participants (6.1%) regarding oral IPEDs and 21 participants (3.7%) regarding injectable IPEDs. Initiation of any IPED use before the age of 16 was rare and reported by just 6 participants (0.9%).

Table 3: Age of IPED initiation by method of use

Age, years	Injection n (%) n=572	Oral n (%) n=505
19 and under	85 (15)	113 (22)
20-25	265 (46)	220 (44)
26-30	110 (19)	80 (16)
31-35	53 (9.3)	40 (7.9)
36-40	21 (3.7)	14 (2.7)
41 and over	18 (3.1)	8 (1.6)
Did not answer	20 (3.5)	30 (5.9)

Substances used

People who use IPEDs commonly report use of a range of other substances typically used to enhance the impact of their steroid use, to counter side effects, for recreational or relaxation and sexual enhancement (Sagoe et al., 2015). Additional substances used by people who use anabolic steroids have been classified into 13 groups: analgesics/non-steroidal anti-inflammatory drugs/opioids, anti-oestrogens, cardiovascular drugs, central nervous system depressants, central nervous system stimulants, cosmetic drugs, dietary/ nutritional supplements, diuretics, fat burning/weight loss drugs, muscle/strength-enhancement hormones, non-hormone muscle/strength-enhancement drugs, recreational substances/drugs and sexual enhancement drugs (Sagoe et al., 2015).

Table 4: Recent and lifetime use of oral IPEDs (n=505)²

Substance	Past year n (%)
Anabolic steroids	317 (63)
Oestrogen control and post-cycle drugs	
Aromatase Inhibitor	71 (14)
Tamoxifen citrate (Nolvadex)	228 (45)
Clomiphene citrate (Clomid)	112 (22)
Fat loss and others drugs	
Clenbuterol	111 (22)
Diuretics	19 (3.8)
Dinitrophenol (DNP)	9 (1.8)
Ephedrine	70 (14)
Prohormones/ designer steroids	38 (7.5)
Thyroid hormones	65 (13)
Viagra/ Cialis	99 (20)

² Oral IPEDs are reported here as detailed in survey responses. Responses provided to this question indicate that there may have been confusion amongst participants regarding some of the substances that they have used.

Oral IPEDs

Use of IPEDs amongst 505 participants who consumed their IPEDs orally is reported in table 4. The most commonly used substances taken orally in the past year were anabolic steroids (63%), Tamoxifen citrate (45%), Clomiphene citrate (22%), Clenbuterol (22%) and Viagra/Cialis (20%).

Injectable IPEDs

Amongst participants who injected IPEDs (n=572, 86%), a range of anabolic steroids were reported with the highest proportions of participants reporting injecting Deca-Durabolin (38%), Testosterone Enanthate (38%) and Sustanon (34%) in the past year. Smaller proportions reported injecting other anabolic steroids and other IPEDs (table 5) including one fifth of participants who reported past year use of Human Growth Hormone (22%).

Table 5: Recent and lifetime use of injectable IPEDs (n=572)

Substance	Past year n (%)
Injectable steroids	
Boldenone (Equipose)	80 (14)
Nandrolone Decanoate (Deca-Durabolin)	218 (38)
Masteron (Drostanolone)	96 (17)
Stanozolol (Winstrol)	72 (13)
Sustanon	196 (34)
Testosterone Enanthate	216 (38)
Testosterone Cypionate	119 (21)
Testosterone Suspension	35 (6.1)
Testosterone propionate	132 (23)
Trenbolone Acetate	105 (18)
Trenbolone Enanthate	133 (23)
Underground lab blend ³	135 (24)
Peptides and other hormones	
GHRP	36 (6.3)
Human growth hormone	124 (22)
IGF	18 (3.1)
Insulin	26 (4.5)
Melanotan I or II	39 (6.8)
MGF	22 (3.8)
Oestrogen control and post cycle drugs	
hCG	96 (17)

³ A combination of more than one steroid produced in a laboratory

Other substance use

People who use IPEDs report lifetime use of a range of other recreational substances, prominently including alcohol, cannabis, cocaine and amphetamines and they frequently report use of a variety of these substances alongside their IPED use (Sagoe et al., 2015).

Participants were asked about their use of psychoactive drugs (table 6) and alcohol consumption. While substantial proportions of participants reported lifetime use of a range of psychoactive drugs, less than one third of the sample (32%) reported use of any psychoactive drug in the previous year; the most commonly reported substances being cannabis (24%) and cocaine (22%). This is a considerably lower level of cocaine use compared to other studies of psychoactive drug use amongst users of IPEDs. In Hope *et al's* study (2013), 46% of the 395 male IPED users had snorted cocaine in the previous 12 months. Past year use of other psychoactive substances was reported by smaller proportions of the sample, including 10% who reported using ecstasy. A small minority reported injecting any psychoactive drug in the past year (4.2%) or in their lifetime (6.4%).

On average, alcohol consumption was relatively low in this sample with 60% reporting that they consumed alcohol on a monthly or less frequent basis, and one quarter (27%) reporting that they never consume alcohol. Heavier drinking, including consumption of over eight units of alcohol on a typical drinking day and eight or more units of alcohol on a weekly or more frequent basis during the past year was reported by a minority of the sample (9.2% and 17% respectively).

Similar to findings from the two previous years of this survey, a minority of participants appear to be using alcohol to potentially harmful levels and/or using illicit substances and therefore increasing the risks associated with both IPEDs and drugs and alcohol. For example, the use of alcohol (Rehm et al., 2010) and oral anabolic steroids (Pope et al., 2014) are associated with adverse effects within the liver and both psychoactive drugs (Fletcher et al., 2010) and anabolic steroids (Pope et al., 2014) are associated with the onset of mental health issues, although the evidence for this relationship between anabolic steroids and psychological issues is inconclusive.

Table 6: Recent and lifetime use of psychoactive substances (n=663)

Substance	Past month n (%)	Past year n (%)
Cannabis	103 (16)	158 (24)
Cocaine	74 (11)	147 (22)
Ecstasy	21 (3.2)	69 (10)
GHB	14 (2.1)	26 (3.9)
Amphetamine	10 (1.5)	47 (7.1)
Poppers	8 (1.2)	19 (2.9)
Synthetic Cannabinoids	8 (1.2)	19 (2.9)
Ketamine	7 (1.1)	24 (3.7)
Mephedrone	7 (1.1)	30 (4.6)
Heroin	3 (0.5)	4 (0.7)
Crack	2 (0.3)	4 (0.6)

Adverse effects from IPED use

A range of harmful physiological and psychological effects have been linked to use of anabolic steroids and associated drugs. Anabolic steroid use may be associated with increased risk of cardiovascular effects, including cardiomyopathy, myocardial infarction and other harms such as metabolic, neurologic, renal and musculoskeletal disorders (Pope et al., 2014). Use of steroids amongst younger people may have long-term harms due to their impact on patterns of growth and maturation. Amongst females there is also an increased risk of a range of significant and potentially permanent physical effects including the development of male characteristics, such as deepening of the voice and abnormal hair growth (Advisory Council on the Misuse of Drugs, 2010). Steroid use has additionally been linked with psychological impacts, including aggression, depression and mania (Advisory Council on the Misuse of Drugs, 2010). While studies suggest that individuals using steroids may display a range of symptoms relating to mood disorders, these vary greatly by individual cases and symptoms are rarely severe (Pope et al., 2014).

Table 7: Injuries and adverse effects associated with IPED use (n=663*)

Injury/ adverse effect	Past Year n (%)	
	Males (n=638)*	Females (n=25)*
Pain at injection site* (males n=561; females n=11)	174 (31)	1 (9.1)
Mood swings	164 (26)	8 (32)
Testicular atrophy	162 (25)	-
Increased aggression	110 (17)	2 (8.0)
Raised blood pressure	91 (14)	5 (20)
Swelling, redness or heat at injection site*	91 (16)	2 (18)
Gynaecomastia	81 (13)	-
Unwanted facial or body hair	37 (5.8)	5 (20)
Hair loss	35 (5.3)	2 (8.0)
Nausea	37 (5.8)	1 (4.0)
Deepening of voice	27 (4.1)	3 (12)
Acne	15 (2.4)	1 (4.0)
Abscess, sore or open wound at injection site*	12 (2.1)	0

*Frequency of 'pain at injection site', 'swelling, redness or heat at injection site', and 'Abscess, sore or open wound at injection site' options are provided for responses from injectors only (total n=572; males n=561, females n=11).

Survey participants described injuries and adverse effects⁴ that they attributed to their IPED use (table 7). The most commonly reported adverse effects in the past year amongst males were pain at injection site (31%), mood swings (26%) and testicular atrophy (25%). Smaller proportions of males reported a range of other side-effects including increased aggression (17%). Although based upon a small sample

⁴ It is recognised that participants may perceive some of these as 'benefits' rather than 'adverse' effects, for example increased aggression may be beneficial to training.

only (n=25), the adverse effects most commonly experienced amongst females were mood swings (32%), raised blood pressure and unwanted hair growth (both 20%)⁵.

When asked how they responded to these injuries and adverse effects, 467 (70%) participants described the actions that they took during the past year. The most common response was that these participants waited for symptoms to go away on their own (69%), with over half the participants who answered this question (54%) indicating this was the only action they took during the past year. Approximately one third reported that they treated their symptoms themselves (31%) with treatment seeking from a health professional for an injury or adverse effect in the past year was reported by a minority of participants. Where treatment was sought this was most commonly by a general practitioner (9.4%) with less than 10 participants reporting use of facilities including accident and emergency departments, needle and syringe programmes, NHS drop in centres and hospitals for treatment relating to their IPED use.

Injecting behaviours and blood borne viruses

Table 8: Frequency of injecting IPEDs by injection method (n=572)

Frequency	Intramuscular injection n (%)	Subcutaneous injection n (%)
More than once per day	7 (1.2)	31 (5.4)
Daily	19 (3.3)	62 (11)
Every other day	196 (34)	37 (6.5)
Twice per week	227 (40)	15 (2.6)
Once per week	63 (11)	3 (0.5)
Less than once per week	2 (0.3)	2 (0.3)
Never	58 (10)	422 (74)

Frequency of injecting IPEDs is reported in table 8. Participants were most likely to inject intramuscularly on approximately 2-4 days per week with very small numbers injecting on a daily basis or greater. Three quarters (74%) of those injecting IPEDs reported that they did not inject subcutaneously, but 16% stated that they did so on a daily basis or greater. Place of injection is reported in Table 9; the most frequently reported places to inject intramuscularly were the gluteus, quadriceps and deltoid sites, and for subcutaneous injection the abdomen⁶.

Participants were asked about their blood borne virus (BBV) testing history, with 38% or less reporting that they had ever undergone testing for each BBV (table 10). Additionally, only just over one quarter (28%) had received vaccinations for Hepatitis B. Evidence from a study in England and Wales suggests

⁵ It should be noted that a smaller proportion of females (44.0%) had ever injected IPEDs than males (87.9%) and therefore it would be anticipated that injection related injuries would be less likely to be reported. Rate of oral IPED use was similar across genders.

⁶ There appears to be some confusion regarding injection sites with a minority (3.0%) participants indicating that they injected intramuscularly in the abdomen.

a similar prevalence rate for HIV (2.0%) amongst individuals injecting IPEDs to those injecting psychoactive drugs (Public Health England, 2014a). Findings also suggest that less than half of IPED users may have undergone testing for HIV (41%), or hepatitis C (32%), or reported uptake of the hepatitis B vaccine (40%).

Table 9: Injection sites by injection method (n=572)

Injection site	Intramuscular injection n (%)	Subcutaneous injection n (%)
Gluteus	465 (81)	6 (1.0)
Quadriceps	270 (47)	2 (0.3)
Deltoid	184 (32)	0
Abdomen	17 (3.0)	132 (23)
Triceps	40 (7.0)	2 (0.3)
Biceps	28 (4.9)	5 (0.9)
Pectoral	16 (2.8)	2 (0.3)
Latissimus dorsi	5 (0.9)	1 (0.2)
Calf	3 (0.5)	2 (0.3)

Table 10: Blood borne virus vaccination and testing status

Status	Ever tested n (%)
Ever vaccinated Hep B (n=635)	182 (28)
Ever tested Hep B (n=610)	232 (38)
Ever tested Hep C (n=612)	226 (37)
Ever tested HIV (n=619)	234 (38)

Of 572 participants who had ever injected IPEDs, the majority reported ever using a needle and syringe programme to obtain injecting equipment (79%) with two thirds having done so in the past year (65%). The most common alternative sources for obtaining injecting equipment reported were from a friend (16%), the internet (10%) or an IPED supplier (8.4%). A small minority reported that someone else collects their equipment for them at a NSP (3.8%), but a higher proportion (17%) reported collecting equipment themselves for other people, including 60 participants who reported collecting for multiple injectors⁷.

Of participants who had ever injected IPEDs, only a very small minority reported that they had ever used equipment used by another individual (0.9%) or given someone else equipment that they had used for them to inject with (1.5%). A higher proportion reported sharing a multi-dose vial with another individual (12%), although the actual risk related to this remains uncertain. Additionally, one in ten (10%) participants had re-used injecting equipment, which is associated with risk of bacterial

⁷ With recruitment sites including needle and syringe programmes, the proportion of participants obtaining their injecting equipment from this setting is likely to be higher than amongst all IPED users.

and fungal infection. With recruitment sites for this survey including needle and syringe programmes, it is possible however that sharing of injecting equipment amongst survey participants is lower than amongst IPED users who do not access services. However, the low rate of sharing equipment is in line with other research with IPED users, for example findings of previous years of this survey. Findings from PHE's unlinked anonymous survey suggest lifetime injection equipment sharing at 13% (Public Health England, 2014b) and previous studies suggest rates of sharing amongst this population are between 0 and 20% (Advisory Council on the Misuse of Drugs, 2010).

Conclusion

The findings from this survey build upon the results described in the 2013 and 2014 survey reports (Chandler & McVeigh, 2014; McVeigh, Bates & Chandler, 2015). Due to the changing nature of the sample from participants recruited via online forums in 2013 & 2014 to included NSPs and outreach settings in 2015 it is not possible to examine at this stage any changes in the patterns of IPED use or associated outcomes identified through this survey. There remains a clear need to routinely investigate the drug use and related behaviours and health outcomes amongst IPED using populations. The IPEDs market is dynamic and fast moving, with the practices and preferences of the population constantly changing along with the associated risks to health. Evidence from this survey in 2013-2015 suggests that IPED users form a heterogeneous population, with different motivations, needs and drug use behaviours, for example as highlighted by the range of IPEDs injected and taken orally reported here. Further research and increased understanding of the sub groups that make up the IPED using population is essential for the development of effective prevention, harm reduction and treatment interventions. For example, the findings reported here suggest that it is important to understand how to better engage IPED users with health services for the treatment of adverse health effects associated with their IPED use, and to identify effective approaches to increase testing for blood borne viruses amongst this population. Evidence from the findings from this survey in 2015 and in previous years will be built upon through the 2016 survey.

Next steps

This report describes key findings from the 2015 survey. Further analysis is planned to examine these findings in more depth and to identify and explore emerging patterns in the data. Findings from these analyses will be presented in future outputs.

The 2016 wave of the National IPED Info Survey is running from May-December 2016. The survey now also incorporates the Public Health England's Unlinked Anonymous survey of people who inject IPEDs. Following consultation with those involved with data collections in 2015, the survey has been refreshed with one section 'Your most recent cycle' removed and other questions modified, removed or added for 2016. There is an increased emphasis on recruitment of IPED users who may not be engaged with health and drug related services through increased efforts to collect data in gym and fitness settings, and on recruitment in geographical areas underrepresented in the 2015 survey.

References

- Advisory Council on the Misuse of Drugs. (2010) Consideration of the Anabolic Steroids. The Stationery Office, London
- Bates G, Jones L, McVeigh J. (2014) Update of NICE Guidance PH18 Needle and Syringe Programmes (PIED Review). Centre for Public Health, Liverpool
- Breindahl T, Evans-Brown M, Hindersson P, McVeigh J, Bellis MA, Stensballe A, Kimergard A. (2015) Identification and characterization by LC-UV-MS/MS of melanotan II skin-tanning products sold illegally on the Internet. *Drug Testing and Analysis*; 7(2): 164-172. doi:10.1002/dta.1655
- Chandler M, McVeigh J. (2014) Steroid and Image Enhancing drugs. 2013 Survey Results. Liverpool: Centre for Public Health, Liverpool John Moores University
- Crampin AC, Lamagni TL, Hope VD, Newham JA, Lewis KM, Parry JV, Gill ON. (1998) The risk of infection with HIV and hepatitis B in individuals who inject steroids in England and Wales. *Epidemiology and Infection*; 121(2): 381–386
- Evans-Brown M, Kimergard A, McVeigh J. (2009) Elephant in the room? The methodological implications for public health research of performance-enhancing drugs derived from the illicit market. *Drug testing and analysis*; 1(7-8): 323-326. doi:10.1002/dta.74
- Fletcher A, Calafat A, Pirona A, Olszewski D. (2010) 'Young people, recreational drug use and harm reduction', in European Monitoring Centre for Drugs and Drug Addiction (EMCDDA), Harm reduction: evidence, impacts and challenges, Rhodes, T. & Hedrich, D. (eds), Scientific Monograph Series No. 10, Publications Office of the European Union, Luxembourg
- Graham MR, Ryan P, Baker JS, Davies B, Thomas NE, Cooper SM, Evans P, Easmon S, Walker CJ, Kickman AT. (2009) Counterfeiting in performance and image enhancing drugs. *Drug Testing and Analysis*: 135-142. Doi: 10.1002/dta.30
- Home Office. (2015) Drug misuse: Findings from the 2014/15 crime survey for England and Wales. Home Office Statistics, London
- Hope VD, Harris R, McVeigh J, Cullen K, Smith J, Parry JV, DeAngelis D, Ncube F. (2016) Risk of HIV and Hepatitis B and C over time among men who inject image and performance enhancing drugs in England and Wales: Results from cross-sectional prevalence surveys, 1992-2013. *Journal of Acquired Immune Deficiency Syndromes*, 71(3): 331-337
- Hope VD, McVeigh J, Marongiu A, Evans-Brown M, Smith J, Kimergård A, Croxford S, Beynon CM, Parry JV, Bellis MA, Ncube F. (2013) Prevalence of, and risk factors for, HIV, hepatitis B and C infections among men who inject image and performance enhancing drugs: a cross-sectional study. *BMJ Open*; 3:e003207
- Hope VD, McVeigh J, Marongiu A, Evans-Brown M, Smith J, Kimergard A, Ncube F. (2015) Injection site infections and injuries in men who inject image- and performance-enhancing drugs: prevalence, risks factors, and healthcare seeking. *Epidemiology and Infection*; 143(1): 132-140 doi:10.1017/S0950268814000727

Kimergård A, McVeigh J, Knutsson S, Breindahl T, Stensballe A. (2014a) Online marketing of synthetic peptide hormones: Poor manufacturing, user safety, and challenges to public health. *Drug Testing and Analysis*; 6(4): 396-398. doi:10.1002/dta.1636

Kimergard A, Breindahl T, Hindersson P, McVeigh J. (2014b) The composition of anabolic steroids from the illicit market is largely unknown: implications for clinical case reports. *QJM-An International Journal of Medicine*; 107(7): 597-598. doi:10.1093/qjmed/hcu101

Kimergard A, McVeigh J. (2014c) Environments, risk and health harms: a qualitative investigation into the illicit use of anabolic steroids among people using harm reduction services in the UK. *BMJ Open*; 4(6): 7. doi:10.1136/bmjopen-2014-005275

Kimergard A, McVeigh J. (2014d) Variability and dilemmas in harm reduction for anabolic steroid users in the UK: a multi-area interview study. *Harm Reduction Journal*; 11: doi:10.1186/1477-7517-11-19

Larance B, Degenhardt L, Dillon P, Copeland J, Larance B, Degenhardt L, Copeland J, Dillon P. (2008) 686 Injecting risk behaviour and related harm among men who use performance- and image-enhancing drugs. *Drug and Alcohol Review*; 27:679-686

Lenehan P, McVeigh J, Bellis MA. (1996) A study of anabolic steroid use in the North West of England. *Journal of Performance Enhancing Drugs*; 1(2): 57–70

Lenehan P, McVeigh J. (1998) *Anabolic Steroids: A Guide for Professionals*. The Drugs and Sport Information Service. Liverpool, University of Liverpool. ISBN 1-902051-03-3

McVeigh J, Beynon C, Bellis MA. (2003) New challenges for agency based syringe exchange schemes: analysis of 11 years of data (1991 to 2001) in Merseyside and Cheshire, UK. *International Journal of Drug Policy*; 14(5-6): 353–357

McVeigh J, Chandler M, Beynon C, Evans-Brown MJ, Bellis MA. (2007, May 13–17) The injectors that harm reduction forgot. 18th International Conference on the Reduction of Drug Related Harm, Warsaw

McVeigh J, Bates G, Chandler M. (2015) Steroid and image enhancing drugs. 2014 Survey Results. Centre for Public Health, Liverpool

Midgley S, Heather N, Best D, Henderson D, McCarthy S, Davies J. (2000) Risk behaviours for HIV and hepatitis infection among anabolic-androgenic steroid users. *AIDS Care*; 12(2): 163–170

National Institute for Health and Care Excellence. (2014) Needle and syringe programmes: NICE public health guidance 52. NICE, London

Parkinson B, Evans A. (2006) Anabolic androgenic steroids: a survey of 500 users. *Medicine and Science in Sports and Exercise*; 38(4): 644–651

Pope HG, Wood RI, Rogol A, Nyberg F, Bowers L, Bhasin S. (2014) Adverse Health Consequences of Performance-Enhancing Drugs: An Endocrine Society Scientific Statement. *Endocrine Reviews* 35: 341-375

Public Health England, Health Protection Scotland, Public Health Wales, and Public Health Agency Northern Ireland. (2014a) Shooting Up: Infections among people who inject drugs in the United Kingdom 2013. London: Public Health England

Public Health England. (2014b) Unlinked anonymous HIV and viral hepatitis monitoring among PWID: 2014 report Infection reports Volume 8 Number 26
https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/341008/hpr2614_hivUAM.pdf

Rehm J, Taylor B, Mohapatra S, Irving H, Baliunas D, Patra J, Roerecke M. (2010). Alcohol as a risk factor for liver cirrhosis: A systematic review and meta-analysis. *Drug and Alcohol Review* 29(4): 437-445

Sagoe D, Andreassen CS, Pallesen S. (2014) The aetiology and trajectory of anabolic androgenic steroid use initiation: a systematic review and synthesis of qualitative research. *Substance Abuse Treatment, Prevention & Policy*; 9(27)

Sagoe D, McVeigh J, Bjørnebekk A, Essilfie MS, Andreassen CS, Pallesen S. (2015) Polypharmacy among anabolic androgenic steroid users: a descriptive metasynthesis. *Substance Use, Treatment, Prevention & Policy*; 10(12)

Scott MJ, Scott MJ Jr. HIV infection associated with anabolic steroids. (1989) *JAMA*; 262: 207-208

Sklarek HM, Mantovani RP, Erens E, Heisler D, Niederman MS, Fein AM. (1984) AIDS in a bodybuilder using anabolic steroids. *New England Journal of Medicine*; 311 (26): 1701.

Striegel H, Simon P, Frisch S, Roecker K, Dietz K, Dickhuth H, Ulrich R (2006) Anabolic ergogenic substance users in fitness-sports: a distinct group supported by the health care system. *Drug and Alcohol Dependence*; 81: 11

Stensballe A, McVeigh J, Breindahl T, Kimergard A. (2015) Synthetic growth hormone releasers detected in seized drugs: new trends in the use of drugs for performance enhancement. *Addiction*; 110(2): 368-369. doi:10.1111/add.12785

National
IPED INFO
Survey

CPH | CENTRE FOR
PUBLIC HEALTH
LIVERPOOL JOHN MOORES UNIVERSITY

