

Position Statement of the Hong Kong College of Psychiatrists on School-based Drug Tests in Hong Kong: a Review of Its Effectiveness and Our Recommendations

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Introduction

In response to the significant increase in the number of young people (aged under 21 years) abusing psychotropic substances over 3 consecutive years, a Task Force for Youth Drug Abuse was formed in October 2007. Their report was released in November 2008. Among the recommendations, the assertion that "...the Administration should undertake a more in-depth study (on school-based drug tests)...tailored to the local school setting, identify success factors, suggest a promotion scheme for voluntary adoption by local schools, and address the various issues of concern..."¹ has caught most public attention.

It was initially planned that the study be implemented in the 2009-2010 school year, with preliminary results and recommendations expected in the following school year. However, repeated instances of secondary school students being sent to the accident and emergency departments for management of intoxication with psychoactive substances while in schools or on public beaches sparked demands for early implementation of school-based drug testing in mid-2009. As a result, the secondary schools in Tai Po District were chosen to implement the Hong Kong SAR school-based drug-testing programme in late 2009.

The decision to implement drug testing at schools has precipitated heated discussion in the community. Issues related to confidentiality, consent, and the availability of resources for intervention to students with positive test results have been raised. There is a dearth of data on the effectiveness of school-based drug testing as a means of combating psychoactive substance abuse and its potential harm. To address public concern, the Clinical Division on Substance Misuse and Addiction Psychiatry of the Hong Kong College of Psychiatrists embarked on a literature

review of the current evidence on the effectiveness of school-based drug testing.

Overseas Experience

In the United States, government agencies and private employers have adopted drug-testing programmes since 1981. Their reasons for having drug-testing programmes were largely: (1) pre-employment checks; (2) drug detection for specific reasons, i.e. when there is reasonable suspicion of alcohol and drug use following an accident or bizarre behaviour; and (3) routine or random drug screening in the workplace for occupational health, safety concerns and productivity issues.

The recent rise in illicit substance abuse among young people has led to a demand for drug screening in schools. The aims are to: (1) deter students from using illicit substances; (2) allow detection of young substance abusers to enable earlier multidisciplinary interventions that could lead to better outcomes.

Following the 1995 US Supreme Court ruling (*Vernonia School District v. Acton* [515 US 646]) that random drug testing of high school athletes is constitutional and the 2002 US Supreme Court ruling that public schools have the authority to perform random drug tests on all middle and high school students participating in extracurricular activities (*Board of Education v. Earls* [536 US 822, 122 S Ct 2559, 153 L Ed 2d 735 {2002}]), the President's Office of National Drug Control Policy published a guidebook designed to encourage schools to incorporate drug-testing policies for all students.

Many reports evaluating the effectiveness of these programmes for school-aged children have subsequently been published. Most rely on anecdotal evidence and journalistic comment with a lack of an evidence-based approach.

Effectiveness of Drug Testing for Deterring Drug Use

The majority of studies adopted a cross-sectional approach to determine the point prevalence of drug use as their outcome indicator after the implementation of drug-testing programmes.²⁻⁶ In the Hunterdon study,⁷ a change in the self-reported frequency of drug use before and after the implementation of drug-testing programmes was

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demonstrated, but the effect of other confounding factors (e.g. other drug-prevention programmes implemented during the same period) was not controlled for, thus preventing readers from reaching any conclusions about the true effectiveness of the drug-testing programme.

McKinney² also compared various parameters, such as attitude towards school and the frequency of drug use after the implementation of the drug-testing programme, in 2 schools with and without drug-testing programmes and found favourable outcomes for the school with drug-testing programmes. However, their conclusions might have been premature because factors like age, sex, ethnicity, and the socioeconomic background of the students being studied were not controlled for, and no baseline data before the implementation of the drug-testing programme were taken for comparison. Their inclusion of school principals' views of drug-testing programmes as an outcome indicator also made their conclusions about the effectiveness of the drug-testing programme less convincing.^{2,8-10}

The SATURN study,⁴ which has been widely cited to support drug testing in schools, was also criticised for having a high drop-out rate (141 out of 276 student athletes), a small sample size (only 135 out of 276 student athletes were tested) and baseline data measured after the subjects were aware of the possibility of being tested.¹¹

A large national study (the Michigan study) involving 75,000 children in grades 8, 10 and 12 from 1998 to 2001⁶ using data from the Monitoring the Future (MTF) study¹² showed that the presence of a drug-testing programme was not associated with the prevalence or frequency of drug use in schools (grades 8, 10 and 12) nor in athletes or experienced cannabis users.

Effectiveness for Early Identification

It is believed that early identification of, and intervention for, a drug use problem should lead to a better outcome. However, there is little evidence showing that a voluntary, random, and unobserved school drug-testing programme can achieve early identification. Because it is a voluntary programme, active drug abusers may simply refuse to be tested. Secondly, it is well established that the window for detecting most drugs of abuse is 72 hours or less. Even in those who have given consent, temporarily withholding their consent if they have abused drugs within the last few days before testing could easily allow active drug users to avoid detection. Thirdly, the collection of urine specimens without direct observation runs significant risks of defeating the purpose of drug testing. Given the above, it is conceivable that negative drug-testing results from this programme would be difficult to interpret and may engender a false sense of security.

Potential Adverse Outcomes

Coombs¹³ found that around 30% of athletes tested felt stressed, embarrassed, humiliated, or upset about having drug tests. Some feared the consequences of possible false-positive results, others reported a change in their profile

of drug use to avoid detection. Therefore, drug-testing programmes in schools may inadvertently encourage students to abuse other substances, e.g. alcohol or volatile organic solvents, which cannot be detected by urine testing. The adverse consequences of abusing these undetectable substances are equally, if not more, serious than the substances detectable by urine testing.

When compared with their peers in schools with no drug-testing programmes, student athletes who needed to have drug testing had poorer attitudes towards the school.⁴

Other potential adverse outcomes from implementing drug-testing programmes, including increased incidence of truancy to avoid the test; breakdown of the relationship between the child, parents and the school; and the potential psychological effects caused by invasion of the child's privacy, have not been properly evaluated.

Recommendations

From the available literature, there is insufficient evidence to support the notion that school-based drug-testing programmes are an effective means of tackling the problem of substance abuse by students. Therefore, further research using more stringent methodology is urgently needed.

As one of the stakeholders in the anti-drugs community, the Hong Kong College of Psychiatrists would also like to highlight several areas of concern for the Government and policy-makers to consider in the future development of anti-drugs campaigns and measures.

Size of the Problem

In the past, service planning has always been based on past demand or utilisation and as a result, previous inadequacies in the service tend to be repeated. In contrast to this 'demand-based' model, a 'system-based' model projects what should be provided based on the latest research data.¹⁴ In Hong Kong, we do not have a clear picture of the magnitude of our substance abuse problems. The limitation of the Central Registry of Drug Abuse (CRDA) system is well known because it is based on voluntary reporting by certain service agencies so it can only show the trend rather than the prevalence.¹⁵ There is an urgent need to conduct a population-based epidemiological study to determine the prevalence of each type of substance abuse and the characteristics of abusers. This need has also been expressed in the fifth 3-year (2009-2011) plan on treatment and rehabilitation services in Hong Kong,¹⁶ but there has been no concrete plan or timeline for addressing it.

Government Drug Policy

In the UK, a clear government drug policy or strategy to tackle drug abuse is developed every 10 years^{17,18} and includes explicit measurable targets, e.g. the initiative to double the number of people (from 100,000 in 1998 to 200,000 in 2008) accessing drug treatment. This was achieved 2 years earlier. Other targets include that by 2006, every young person with a substance abuse problem in all

areas of the UK should have a comprehensive assessment of substance abuse needs within 5 days upon referral to a specialist agency and care-planned interventions within 10 days of assessment. Drug-related harm is measured by the Drug Harm Index, which fell by 28.4% between 2002 and 2005. Ten key policy principles based on the Children's Act and the United Nations Convention on the Rights of the Child have been set.¹⁹ Although we have a 3-year plan produced by the Narcotics Division of the Security Bureau, it focuses mainly on treatment and rehabilitation. Prevention strategies should be emphasised more strongly. It is essential that the Government develop an overarching policy on drug abuse in Hong Kong to indicate the overall strategy, commitment as well as resources needed to tackle this problem.

Treatment Model

Apart from having an overarching policy, there is a clear service model in the UK. The 4-tiered model of drug and alcohol interventions outlined in 'The substance of young needs'²⁰ provides a framework for the different service components of an integrated and comprehensive substance abuse service. This 4-tiered model is also used in adult drug abuse services.²¹ Tier 1 interventions include provision of drug-related information and advice, screening and referral to specialised drug treatment. Tier 2 services include brief psychosocial interventions and harm reduction interventions. Tier 3 interventions provide community-based specialised drug assessment, treatment, and drug specialist liaison. Tier 4 services include provision of inpatient specialist drug treatment and residential rehabilitation units.

In Hong Kong, different types of substance abuse services are available but we do not have a clear service model for achieving better coordination and addressing any service gaps. There is a need to enhance community-based specialised services. In the UK, most of these interventions are provided or supported by community drug teams (CDT). The functions of CDT include providing training and support for other drug workers (social workers, health professionals at general hospitals, and general practitioners), shared care with general practitioners, liaison with agencies that provide services for drug abusers, and specialist assessment and treatment in the community. A study on use of the shared care approach between general practitioners and community drug teams in Edinburgh demonstrated a significant reduction in injecting and criminal behaviour.²²

Consent to Treatment

It is expected that more and more young people under the age of 18 will seek treatment for their substance abuse problems, and most of them do not want to involve their parents. Can we offer them treatment without parental consent? The National Treatment Agency for Substance Misuse in the UK²³ has provided clear guidance on this: young people over 16 years should usually be able to consent to treatment and confidentiality, and those under 16 years can also consent to confidential medical advice and

treatment if they satisfy conditions set out by the Fraser guidelines²⁴: (1) they understand the nature of the treatment; (2) the treatment is in their best interest; (3) their physical or mental health will suffer if they do not have advice and treatment; (4) they will continue to put themselves at risk of harm if they do not have advice and treatment; and (5) they cannot be persuaded to allow the doctor to inform their parent. Treatment guidelines applicable to the local context should be developed in Hong Kong to help frontline drug workers manage young substance abusers.

Medical Training

One of the key elements needed to sustain a good local drug treatment system is a cohort of doctors providing treatment for drug abusers, ranging from those able to provide general medical services to those with specialist competencies in treating drug dependence.²⁵ There is limited training on drug abuse in the Hong Kong medical undergraduate curriculum. Primary care medical practitioners have to receive formal training to gain appropriate competence to help drug abusers. The 2 medical schools in Hong Kong should enhance the drug abuse component in their undergraduate curriculum and organise postgraduate courses for health professionals. Although psychiatrists usually receive more training on drug abuse, the Hong Kong College of Psychiatrists should enhance the drug abuse education of our trainees. It should emphasise the need for more training posts in this subspecialty, so that more psychiatrists with specialist competence are available to manage substance abusers and support their carers.

Evidence-based Services

Services and programmes used to manage substance abuse should be evidence-based. School-based prevention programmes are frequently launched as a reaction to severe drug problems among school students. In the US, such programmes have been extensively evaluated over the past 25 years. Five types of programme have been reviewed: those relying on information dissemination providing facts about drugs; those with a focus on improving self-knowledge and relationships with other people; those providing alternatives to drug use such as sports and community service; those using a psychosocial approach such as specific skills of refusal, problem-solving and decision-making; and those using a comprehensive approach with a wider lifestyle focus and greater involvement of family and local community over an extended period. Although the first 3 approaches are popular, the evidence shows they had little or no effect on preventing the use of alcohol, tobacco, or drugs. In contrast, the last 2 approaches have shown promising results.²⁶ The Government should ensure that local policy development on combating youth substance abuse is adequately informed by scientific evidence.

Public education using the mass media is an attractive approach as it is a relatively efficient way to get a message across to large populations. However, few mass media efforts aimed at drug abuse have been thoroughly evaluated. One

study that evaluated a mass media education campaign on amphetamine abuse in Australia found that there was little or no change in the patterns of amphetamine abuse although people were more aware of the dangers of amphetamine.²⁶

In recent years, there have been pressing demands for short-term residential rehabilitation programmes for young substance abusers in Hong Kong. There is a new 14-day residential programme starting up soon but there is little evidence that this 14-day period is optimal for rendering such residential programmes effective. Gossop²⁷ reviewed the effectiveness of substance misuse treatment and concluded that a longer period of treatment was associated with better treatment outcomes. Simpson et al²⁸ found that treatment outcomes tend to improve as retention increases from 3 months to 12-24 months or more. Such findings have been used to support the concept of ‘minimum retention thresholds’ for effective treatment, often defined as 90 days for residential care. Unfortunately, the decision about duration of treatment is often not based on evidence.²⁹ It would be self-defeating if services were to be cut back below effective levels of functioning.

Conclusion and Recommendations

1. The College recommends that school-based drug testing should not be implemented until its efficacy and safety are proven, based on scientific evidence.
2. The College supports further scientific study of both the efficacy and safety of various methods (e.g. voluntary or compulsory, random or selective) of school-based drug testing.
3. The College recommends that in order to tackle the problem of youth substance abuse effectively, the Government should address promptly some important and fundamental issues such as determining the prevalence of drug abuse, developing an overarching drug-abuse policy which encompasses a consensus on treatment models, consent of young drug abusers, medical training, as well as evaluation of current preventive strategies and services.

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