

# PolicyTalk

Your regular update on alcohol and other drug issues

## Workplace drug testing

Welcome to this edition of PolicyTalk from the Australian Drug Foundation. PolicyTalk provides an overview of topical debates to help senior policy makers find the right solutions for the community on alcohol and other drug issues.

No one objects to the breath testing of automobile drivers to ensure their performance is not impaired by high concentrations of alcohol. Similarly, people who are engaged in safety critical work in occupations such as transport, or by the use of heavy machinery, may also expect to undergo drug testing to reduce the risk of harm to themselves and others.

Yet in other contexts workplace drug testing is far more controversial. The debate about drug testing employees can involve considerations of individual privacy, the financial cost to employers of testing, the efficacy of testing, and the workforce's response to testing.

This latest edition of PolicyTalk by Donna Bull, consultant to the Australian Defence Force and the Australian and International Pilots Association, submits the issue of drug testing in the workplace to analysis. It reviews what is known of the prevalence of drug use by members of the workforce, (although such drug use does not necessarily occur in work time); it outlines the history of and the case for workplace testing; reports on problems encountered in testing of employees; and provides alternative ways of preventing drug related harm in the workplace.

I am confident that this PolicyTalk will be of great interest and benefit to everyone who is concerned to reduce alcohol and other drug problems in Australia and I hope you will let us know of your opinion.

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**Workplace drug testing****Introduction**

Alcohol and other drug (AOD) testing in Australian workplaces may have increased in recent years. While reliable data on the number of workplaces that test employees is not available, some media reports suggest workplace testing is increasing at the rate of 25-30% each year (Stark, 2010; Davey, 2012). Testing is promoted by companies that market drug testing equipment, and productivity and occupational health and safety concerns are often the justification for workplace testing. Substantial evidence on the capacity of workplace AOD testing to fulfil those aims is lacking, however, and the subject is a contentious and complex industrial issue (Holland, Pyman and Teicher, 2005).

**Prevalance**

The largest and most comprehensive survey of Australians' AOD use, knowledge, attitudes and behaviours is the National Drug Strategy Household Survey (NDSHS) which is conducted every three years by the Australian Institute of Health and Welfare (AIHW). The NDSHS provides the basis for much of the knowledge of AOD use in the Australian workforce, through secondary analyses of data collected in 2001, 2004 and 2007. These analyses found: a substantial proportion of the workforce consumed AOD; AOD use was more prevalent among employed Australians than among those not in paid employment; and AOD consumption patterns varied substantially between workforce groups (Pidd, Shtangey, & Roche, 2008a; Pidd, Shtangey, & Roche, 2008b).

A 2006 report by Pidd et al. drew on data from multiple sources including the 2001 NDSHS, information from hospital emergency departments, hospital separations data and the National Coroners' Information System. Around half of the NDSHS sample (n = 26,744) were in the paid workforce. Pidd et al. (2006) found that although the majority of employed people abstained or drank at low risk levels, around two out of five members of the workforce (43%) drank at risky or high risk levels: 18% did so at least yearly, 17% at least monthly and eight per cent at least weekly). Categories of risk were based on the *National Health and Medical Research Council Australian Alcohol Guidelines 2001*, (Table 1). Since Pidd et al. conducted their analyses a new version of the Guidelines has been released in which the advice provided to males regarding alcohol consumption now mirrors the advice provided to females: i.e. no more than two standard drinks on any day to reduce risk of long-term harm, and no more than four standard drinks on a single occasion to reduce risk of short-term harm (National Health and Medical Research Council, 2009).

Table 1 National Health and Medical Research Council Australian Alcohol Guidelines 2001

<b>Risk of short-term harm</b>	<b>Low risk</b>	<b>Risky</b>	<b>High risk</b>
	<b>Number of standard drinks</b>		
Males	Up to 6 on any one day, no more than 3 days per week	7-10 on any one day	11 or more on any one day
Females	Up to 4 on any one day, no more	5-6 on any one day	7 or more on any one day

than 3 days per week

<b>Risk of long-term harm</b>	<b>Low risk</b>	<b>Risky</b>	<b>High risk</b>
<b>Number of standard drinks</b>			
Males on average day	Up to 4 per day	5-6 per day	7 or more per day
Overall weekly level	Up to 28 per week	29-42 per week	43 or more per week
Females on average day	Up to 2 per day	3-4 per day	5 or more per day
Overall weekly level	Up to 14 per week	15-28 per week	29 or more per week

According to the 2004 NDSHS, approximately one in ten employed respondents (9.3 %) abstained from alcohol, whereas 25% of respondents not in the paid workforce did so (Pidd et al., 2008a). The authors found drinking at risky or high risk levels for short-term harm, on at least a weekly basis, was reported by 9.3% of employed respondents, compared with 5.8% of respondents not in the paid workforce. Amongst employed respondents, males were significantly more likely than females to drink alcohol in patterns associated with short- and long-term harm, with the exception of long-term risky drinking patterns which were found to be more prevalent among females. Across all occupations males were more likely than females to drink at short-term risky or high-risk levels. Bywood, Pidd and Roche (2006) and Pidd, Shtangey and Roche (2008b) analysed the 2004 NDSHS data to understand prevalence and patterns of illicit drug use in the workforce. They found workers were more likely to have used illicit drugs in the previous 12 months than people who were not in the paid workforce (17% and 12% respectively). Male workers were more likely to have used all the different types of illicit drugs than female workers with the exception of non-prescribed painkillers/analgesics. Moreover, one in

40 (2.5%) Australians reported going to work under the influence of illicit drugs.

Prevalence patterns for AOD use vary significantly across industries and occupation-groups (Pidd et al., 2008a; Pidd et al., 2008b). Secondary analysis of the 2004 NDSHS data by Pidd et al. (2008a) revealed the hospitality industry had the largest proportion of workers who drank at risky or high-risk levels for short term harm (both weekly and monthly) and at risky or high-risk levels for long term harm. Workers in administration or mining were also likely to drink at risky or high-risk levels for short-term harm, at least occasionally. Analysis of drinking among occupation-groups showed the 'tradesperson' occupation-group had the largest proportion of workers who reported drinking at risky or high-risk levels for both short term harm and long-term harm. In relation to other drugs, Pidd et al. (2008b) found the greatest proportion of drug use by workers occurred in the hospitality industry, as they were more likely than other workers to use cannabis, ecstasy and methamphetamine/amphetamine. The lowest proportion of drug use was amongst people employed in the education industry. Amongst occupation-groups, tradespersons were more likely than all other occupation-groups to report drug use.

More recent research by Pidd, Roche and Buisman-Pijlman (2011) based on secondary analysis of the 2007 NDSHS, revealed even when statistically controlling for demographic factors known to be associated with AOD use (i.e. age, gender, income, education) differential patterns were identified by drug type, worker characteristics and occupational setting. Hospitality industry workers were found to be 3.5 times more likely than workers in other industries to consume alcohol at work and two to three times more likely to use drugs at work or attend work under the influence of AOD. Other high-risk industries and occupations identified by Pidd et al. included construction, financial services, tradespersons and unskilled workers (2011).

## **Brief history of workplace drug testing**

Workplace AOD testing in Australia emerged following the experience in the United States of America (US), where the initial introduction of testing had occurred in the 1960s among military veterans returning from Viet Nam (Zwerling, 1993). The initial program in the US military was expanded throughout the following decades, largely in

response to negative publicity attributing AOD use as a possible factor in a major accident aboard a US aircraft carrier, and in accordance with technological advances in analyses. In 1986, US President Ronald Reagan introduced the *Drug Free Federal Workplace Executive Order*, which significantly extended the reach of workplace testing by requiring all federal agencies to establish a program of testing for the use of illegal drugs. By 1988, the Drug Free Workplace Act was signed and the scope was broadened to include contractors and the staff of all organisations in receipt of grants from the US government which must agree to a range of conditions that maintain a 'drug-free' workplace (US Department of Labor, 2012). In the US, workplace drug testing is now the most commonly used mechanism for addressing the issue of substance use in the workplace (Holland, Pyman and Teicher, 2005).

## **Workplace testing in Australia**

One of the earliest examples of workplace drug testing in Australia was undertaken by the NSW State Rail Authority under the provisions of Schedule 4 of the *Transport Administration Act 1988*. In 1990 the Australian Federal Police (AFP) and the NSW Police Service were reported to have proposed drug testing for their respective workforces, although it was some years later before either program commenced (Privacy Committee of NSW, 1992). In 1991, workplace drug testing policies were introduced in the mining sector in NSW, with provision for breath and urine testing of employees in safety-sensitive positions (Privacy Committee of NSW, 1992).

The Australian Defence Force (ADF) has had authority to require serving members to undergo targeted testing since 1999 when the *Defence Act 1903* was amended to include provisions allowing for urinalysis to detect illicit drugs (Boyd, 2003). No testing was undertaken, however, until the program was expanded in 2003 and random testing was introduced (Boyd, 2003).

In 1995, the first Australian Standard (AS-4308) to guide urine drug testing was developed (Standards Australia, 1995). The AS provided recommended practice guidelines for the collection and analysis of urine samples for the purpose of detecting 'drugs of abuse', and set a framework of quality control and standardisation. Soon after the release of the AS, BHP Iron Ore Mines in Western Australia introduced voluntary testing programs at its sites in the Pilbara district. In 1997 the organisation sought to commence mandatory testing, although this was not implemented until 1998 following a lengthy industrial

dispute on the issue (Holland, Pyman and Teicher, 2005). A little over a decade after the release of AS-4308, Australian Standard 4760 (AS-4760) was developed to provide similar guidelines for oral fluid samples (Standards Australia, 2006). That development seems to have inspired more activity in the Australian workplace and large sectors such as aviation have implemented wide-ranging testing programs.

In Australia there is no comparable national legislation to the *Drug Free Workplace Act* of the US, although industry-specific regulation provides for AOD testing in several sectors (i.e. aviation, mining, and rail transport.) Australian attempts to introduce workplace drug testing have not been without challenge, and have frequently resulted in matters being brought before the various Commonwealth and State Industrial Relations Commissions for ruling (e.g. *BHP Iron Ore Pty Ltd v Construction, Mining, Energy, Timberyards Sawmills and Woodworkers Union of Australia Western Australian Branch* [1998] WAIRComm 130, 19 June 1998; *Pasminco Broken Hill Pty Ltd v Construction, Forestry, Mining and Energy Union (NSW Branch)* (1997) 92 IR 179, 5 February, 1999; *Australian Workers Union, New South Wales v BHP Steel (AIS) Pty Limited* [2003] NSWIRComm 461, 18 December 2003; *Shell Refining (Australia) Pty Ltd, Clyde Refinery v Construction, Forestry, Mining and Energy Union* [2008] AIRC 510, 25 August 2008; *Endeavour Energy v CEPUA & Ors* [2012] FWA 4998, 14 August 2012).

## **Workplace AOD testing program example: the Australian aviation sector**

Individuals working, or available to work, in safety-sensitive locations or roles in the Australian aviation sector are subject to a mandatory workplace AOD testing regime under federal regulations which provide sanctions for a laboratory-confirmed presence of a number of targeted drugs (Civil Aviation Safety Authority, 2008a). The testing initiative is a part of a broader AOD program administered by the Australian aviation safety regulator, the Civil Aviation Safety Authority (CASA) with the aim of minimising AOD-related risks associated with the performance of safety-sensitive activities (Bull et al., 2010).

The CASA program was introduced following a series of reports on the safety benefit of testing (Department of Transport and Regional Services & Civil Aviation Safety Authority, 2006); the cost benefit of AOD testing (Allen Consulting Group, 2006) and the prevalence and nature of AOD-related events in Australian civil aviation (Newman, 2006). These reports were commissioned by the Commonwealth Government

in response to a fatal aviation accident that occurred at Hamilton Island in September 2002, in which the coroner noted possible recent use of cannabis and alcohol by the pilot could not be discounted as contributing factors (Department of Transport and Regional Services & Civil Aviation Safety Authority, 2006).

The safety benefit report provided the broad framework for the introduction of the AOD testing program in the aviation sector, establishing preliminary definitions of the population to be covered by the program, the organisational responsibility for delivery of the program, the nature and frequency of testing, supplementary activities, and indicative costs to industry. In the subsequent cost benefit analysis report, a range of AOD testing scenarios were considered with the authors advising the Government that all options would result in a multi-million dollar net cost benefit to the community (Allen Consulting Group, 2006). Much of the promised benefit rested on an assumption of the 'deterrent effect': that the possibility of being required to provide a biological sample for testing would deter individuals in the aviation sector from using AOD.

In parallel with the safety benefit review, an investigation of all accidents and incidents involving AOD in Australian civil aviation during the period 1975-2006 (31 years) was undertaken for the Australian Transport Safety Bureau (Newman, 2006). A comprehensive search of the ATSB accident and incident database found a total of 36 AOD-related events (31 accidents and five incidents) during the 31 year period. This represented 0.02% of all occurrences on the database, and 0.4% of accidents. Private flying operations accounted for 22 (61%) of all occurrences recorded, with zero AOD occurrences recorded in the commercial airline operations category. The majority of occurrences were related to alcohol (22, or 61%), and both legal drugs (i.e. analgesics, decongestants, antihistamines, cardiovascular drugs) and illegal drugs (cannabis, amphetamines) were identified in the remainder (Newman, 2006).

The CASA program was formally enacted through legislation in September 2008, with a target population of approximately 120,000 workers in the aviation sector. Prohibited substances under the program are cannabis, opiates, amphetamine-type substances, cocaine and alcohol at or above 0.02% blood alcohol concentration (BAC). Testing is conducted using breath samples for alcohol, and oral fluid samples for other drugs. In the 42 months to March 2012 the regulator had conducted more than 51,000 AOD tests (29,197 alcohol tests and 22,448 other drug tests). Of those tests, 45 samples were originally regarded as positive for the presence of prohibited substances or alcohol at or above 0.02% BAC, and of the 45, 18 were subsequently overturned. Ultimately, after 42 months and more than 51,000 tests, 27 samples were proven positive

(Civil Aviation Safety Authority, 2012).

## **Evidence on claimed workplace AOD-testing benefits**

The evidence base for workplace AOD testing is far from conclusive. Pidd et al. (2006) pointed out that repeated reviews have concluded most of the research into workplace drug testing is methodologically flawed and evidence of effectiveness is weak. Further, Loxley et al. (2004) found “no scientific evidence of improvements to either workplace productivity or workplace safety from the implementation of urine testing programs, although there are numerous anecdotal reports of weak, poorly or uncontrolled evaluations reporting benefits” (p. 173). Likewise, in a large, independent, 18-month investigation conducted in the United Kingdom, The Independent Inquiry into Drug Testing at Work (2004) found no clear evidence on the deterrent effects of drug testing.

Research on deterrence suggests the key is individuals need to believe they might be apprehended, or in the case of drug testing, they might be tested, at any time (Homel, 2002; Watling, Palk, Freeman, & Davey, 2010). Adherence to the appropriate behaviour is more likely if people believe there is a high chance of being apprehended (approximately 30-40%) and if the consequences of being apprehended are certain and swift (Tittle, 1980). CASA’s AOD testing regime is applied to five to ten per cent of the aviation workforce annually and despite the deterrent effect’s ranking as a major cost-saver in the cost benefit analysis (Allen Consulting Group, 2006), the regulator has stated the testing regime is an audit mechanism (for the purpose of auditing the application of the broader AOD program) rather than a means of deterrence (CASA, 2008).

## **Potential costs, unsupported assumptions and unintended consequences**

Workplace AOD testing programs are costly. In the aviation sector, CASA spent \$9 million over three years on establishing its program and it estimated the initiative would cost industry \$123 million over a 20 year period, with a set-up cost of \$23 million and an annual recurrent cost of \$7 million (CASA, 2008b). As stated earlier, during the first three and a half years of the CASA program 27 positive tests were returned, leaving a questionable return on investment. In the US, where workplace drug testing is mandated by Federal law, costs to

employers amount to six billion dollars per year (Constantinou, 2001). In a widely-cited paper, the American Civil Liberties Union (ACLU) pointed out workplace testing is expensive and most likely to identify 'recreational' users of substances rather than chronic use. The ACLU quoted the case of the US federal government which in 1990 expended \$11.7 million on testing selected workers in 38 federal agencies (ACLU, 1999). Only 153 positive cases were identified from nearly 29,000 tests, a positive rate of .5%. In that case the cost of identifying a single drug user was estimated at \$77,000.

## **Drug substitution**

One of the potential unintended consequences of workplace drug testing is the shift from use of drugs with a long biological half-life (e.g. cannabis) to drugs with a shorter half-life (e.g. amphetamines). They may be less easily detected but associated with greater risks. This issue was discussed in the British Army Report (MCM Research Ltd, 1998) with evidence that some soldiers switched from cannabis to LSD following the introduction of urine testing. Locally, the Maritime Union of Australia has also reported a rise in the use of methamphetamine by miners in Western Australia after urine drug testing was introduced, because the more rapidly metabolised methamphetamine was less likely to be detected than cannabis (Duffy, 2012).

Similarly, use of emerging drugs, with potentially unpredictable effects and hazards, can follow workplace drug testing. Synthetic cannabis products, which were not included in testing panels, have been used by miners and other workers in Australia to avoid returning a positive sample (Dixon, 2011). Since becoming the focus of media attention in mid-2011, largely due to their reported popularity in the mining and resources sector, the States and Commonwealth governments have progressively prohibited eight broad categories of synthetic cannabinoids and other drugs that are developed to mimic cannabis (Bright & Barratt, 2012).

One of the assumptions underlying the case for workplace testing is improved workplace safety because the testing will detect impairment (Roche et al., 2008). Yet, with the exception of alcohol, drug testing does not identify impairment due to drug use. Drug tests identify the presence of a targeted substance or metabolite in a sample (of, for instance, urine or oral fluid) which may indicate the 'donor' has consumed a drug in the relatively recent past. The donor may or may not have been impaired by the drug when they provided the sample, or

at any previous time, in or out of the workplace (National Health Service National Treatment Agency for Substance Misuse, 2004). Nor do AOD tests detect impairment that results from the hangover, or residual, effects of drug use, or effects experienced as a result of withdrawal from the drug. These conditions can have a significant impact on the capability of a worker to work in a safe and competent manner (Australian Safety and Compensation Council, 2007).

## **Alternative strategies to prevent and manage AOD related harm in workplaces**

Considering the length of time people spend at work, the workplace is an ideal environment within which to change attitudes and behaviour relating to AOD use (Allsop & Pidd, 2001; Calogero, Midford, & Towers, 2001; Pidd & Roche, 2008). The workplace is an advantageous setting for interventions aimed at reducing AOD-related harm: it provides access to large numbers of people who may engage in risky use; there is ample opportunity for exposure to intervention strategies; employers hold a degree of leverage to motivate employees to seek help for AOD-related problems; and messages to reduce AOD-related harm delivered in workplaces are likely to be taken beyond the workplace by employees and may benefit the employees' family, friends and other community members (Pidd et al., (2006).

Based on the results of a critical literature review and other research, ten key ingredients of quality practice in addressing workplace AOD issues have been identified (Duffy & Ask, 2001). Each is described briefly below.

### **1. Consultation**

An effective program requires consultation with key stakeholders including management, unions and other employee representative organisations, occupational health and safety representatives, supervisors and other employees. Consultation during the development and implementation phases is often crucial for program credibility and acceptance.

### **2. Universal Application**

Universal coverage of the program aids acceptance of the program. The universal application of the program should be unambiguously stated in policy documents relating to the program.

### **3. Organisation specific**

The effectiveness of an AOD program is likely to be influenced by organisational, social and environmental factors specific to individual workplaces. AOD programs should take into account the nature of the workplace, the character of the workforce, and the particular conditions and environments within the organisation that is implementing the program.

### **4. Comprehensiveness**

A program should outline policy on all drug related safety issues in the workplace, not only matters related to AOD consumption. . Good practice programs also include policy on manufacture, possession, use, sale and distribution on any worksite or organisation's premises. It should also articulate the circumstances, in which alcohol consumption can occur on-site (e.g. workplace social functions).

### **5. Instructions and procedures**

An effective program should include procedures for managing personnel with AOD-related problems. Clear guidelines for the management of intoxicated persons, information on treatment services and counselling procedures, and the details of any disciplinary action that may be taken as a result of problematic AOD use will benefit supervisors and staff.

### **6. Drug testing considerations**

Drug testing of staff is a complex option and should not be considered without a full understanding of its limitations. Independent, expert advice should be sought to ensure the organisation's expectations of the effect of drug testing is realistic. Testing is unlikely to be effective unless it is one element in a comprehensive, evidence-based

AOD program.

## **7. Gradual and informed change**

Effective implementation of a program is more likely when the changes in policy or conditions are introduced gradually to an informed workforce. Changes that appear rushed, or that have not been articulated clearly, are more likely to be resisted. Introduction of an effective AOD program requires organisations to employ effective change management techniques, including clear and timely communication.

## **8. Publicity**

Effective communication with all staff is essential for successful implementation of AOD policies. It is the responsibility of management to ensure that employees understand the rationale, the nature, and the practical implications of policies. Good practice generally recommends that a variety of communication strategies are used.

## **9. Information dissemination, education and training**

The roles and responsibilities of each employee covered by any policy should be clearly defined. Education and training can raise awareness about the policy and program and enhance the capacity of supervisors and other staff to implement the program.

## **10. Evaluation**

It is good practice to evaluate the implementation of a health and safety program to gauge if the objectives are met. This aids compliance and accountability and can provide feedback to improve the program.

The ten key ingredients identified by Duffy and Ask (2001) provide a sound framework upon which to design a workplace AOD program. Consideration of each of the ingredients during design of the program, and accounting for the unique conditions and circumstances of the

organisation and its workforce, will contribute considerably to the delivery of a good quality program.

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