Information & Data Sheet 4

Drug Testing as a response to Alcohol and Other Drug Issues in the Workplace

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One option for dealing with alcohol- and other drug-related harm in the workplace is workplace drug testing. The core function of testing is to identify employees who use drugs and therefore are likely to pose a risk to safety or productivity. There is a range of different types of drug tests that workplaces can utilise including breath, urine, saliva, hair, and sweat testing. The main advantages and disadvantages of each of these tests are outlined in Table 1.

Table 1. Types of tests: advantages and disadvantages

Types of Tests	Advantages	Disadvantages
Breath Testing	Onsite test that does not require subsequent lab testing • Non-intrusive • Can detect very recent use and alcohol intoxication/ impairment levels	• Can only detect alcohol use • Relatively expensive and requires on-going maintenance • Cannot detect "hangover" effects*
Oral Fluid Testing	• Relatively non-intrusive – requires swab wipe only • Can detect recent use (use within last 24 hours)	• While sample can be collected onsite, requires subsequent laboratory analysis • Can often be difficult to collect sufficient fluid for reliable analysis • Cannot detect intoxication/impairment levels
Urinalysis	• Least expensive of all testing	• Extremely intrusive (effective collection process needs to involve collector physically observing the specimen passing from the donor into specimen container) • While sample can be collected onsite, requires subsequent laboratory analysis • Cannot detect very recent use or intoxication/impairment levels (window of detection days/weeks)
Hair testing	• Relatively non-intrusive (however, large number of hair strands may be required)	• While sample can be collected onsite, requires subsequent laboratory analysis • Easily evaded (shave head and body hair) • Cannot detect recent use or intoxication/ impairment levels (window of detection months/years)
Sweat testing	• Relatively non-intrusive	• Requires laboratory analysis • Highly unreliable • Cannot detect recent use or intoxication/ impairment levels (window of detection days/weeks)

The most common forms of workplace testing are urinalysis, saliva/oral fluid analysis, and breath analysis. Of these, only breath analysis can accurately determine (alcohol) intoxication/ impairment levels.

The other types of tests listed in Table 1 merely indicate that the drug detected was consumed some time in the past. In the case of urinalysis, for example, consumption may have occurred days, or even weeks, prior to the test. Urinalysis is particularly problematic as it is the most common form of testing despite having a limited ability to detect drug use that has occurred immediately (0-2 hours) prior to the test.

* "hangover" effects can continue to negatively impact on workplace safety and productivity after blood alcohol concentrate levels have returned to zero.

Onsite testing and laboratory analysis

In addition to different types of tests, drug testing can involve either onsite screening, and/or laboratory testing. Both methods have advantages and disadvantages.

Onsite tests are relatively inexpensive and easy to administer with little training required. Onsite testing kits are available for alcohol, cannabis, amphetamines, opioids, benzodiazepine, and cocaine. However, most onsite kits only test for a limited number of these drug types at any one time. In general as the number of drug types that an onsite test can detect increases, reliability of the test decreases.

Apart from breathalysers, onsite tests cannot determine intoxication or impairment levels or indicate when the drug was consumed. A positive test merely indicates that the drug detected was consumed at some time in the past.

An onsite test cannot accurately determine if the drug detected is an illicit or prescribed drug. Many prescribed drugs and over-the-counter medications contain alcohol, opioids, or amphetamine-like substances.

In addition, the level of accuracy and reliability of onsite tests is low. In general, for every 100 onsite tests conducted, there will be at least two false positives and two false negatives. Therefore, when the onsite test is positive, it is necessary to refer to further laboratory analysis for a confirmatory test. This confirmatory analysis of positive tests does not, however, address false negatives.

Laboratory analysis is much more reliable and accurate than onsite tests. It can detect a much wider range of drugs and can determine levels of drug concentration. However, the detected level of drug concentration does not necessarily indicate levels of intoxication or impairment.

Laboratory testing also has disadvantages. It can be expensive and time consuming and, in some cases, cannot accurately distinguish between prescribed drug use and illicit drug use. In addition, the testing of employees and the collection and storage of test specimens needs to conform to rigorous compliance standards.

While laboratory testing is usually more reliable and accurate than onsite testing, 100% accuracy is not guaranteed. As in most workplaces, laboratories that test for drugs are subject to human error and mistakes can be made. In a recent American study[1] the same 931 urine samples were submitted to two independent laboratories for analysis. Of these samples, a total of 52 resulted in a different analysis outcome from each laboratory. Thirty eight were found to be positive at the first laboratory and negative at the second, while 14 were found to be negative at the first laboratory and positive at the second. This is approximately a one-in-twenty (5%) error rate.

Testing programs

There is also a range of testing programs that workplaces can utilise, including:

- pre-employment screening,

- random testing, and

- testing for cause following an accident or 'near miss' incident.

These programs also have advantages and disadvantages. The advantages and disadvantages of the most common testing programs are outlined in Table 2.

Table 2. The advantages and disadvantages of common testing programs

Test program	Advantages	Disadvantages
Pre-employment screening	• Can be conducted as part of pre-employment medical • Little impact on exiting workforce productivity or morale • Can detect potential 'problem' users prior to employment	• Easily evaded (applicants are aware of timing and date of test) • Can add substantial cost to recruitment process • Does not address existing workforce use and the existing workplace culture • Positive or negative test results are generally a poor predictor of subsequent performance
Testing for cause	• Can provide an indication of the extent of drug-related accidents and incidents • Likely to be readily accepted by the workforce as a valid safety measure	• A positive test does not necessarily mean drugs played a causative role • A positive test may jeopardise insurance/compensation payments • May lead to the under-reporting of minor injuries/accidents and near misses
Random testing	• Random nature makes it more difficult to evade the test and more likely to deter use • More cost effective than blanket testing of all employees	• Open to abuse (targeting of 'problem' or 'disliked' employees) • Most likely to be perceived as 'unfair' by employees (regularly targets non drug using as well as drug using employees) • Can lead to a culture of employer/employee distrust

The deterrent effect of testing

There is some limited evidence that indicates workplace testing may have a deterrent effect on employees' drug use and may be associated with reductions in injury rates and productivity improvements. However, in general, reviews of research concerning the effectiveness of testing conclude that many of these studies are methodologically flawed and that overall, scientific evidence for the effectiveness of workplace testing as a deterrent is weak.[2, 3, 4]

Limitations to testing

One of the reasons that workplace drug testing receives so much attention is that it appears to be a logical response to alcohol- and other drug-related harm in the workplace. That is, testing can identify drug using workers and the removal of these workers from the workplace should improve workplace safety and productivity.

However, the logic of workplace testing as a response is undermined by the limitations of testing. As much of the threat to workplace safety and productivity is likely to result from intoxicated or impaired workers, the most obvious of these limitations is the inability of most tests to detect intoxication or impairment. A less obvious limitation is that testing in itself can have an unexpected negative impact on workers' morale and work motivation[5], which in turn may negatively affect productivity.

The reason for this is that employee attitudes toward testing vary according to their assessment of the fairness of the testing strategy used.[5, 6] While many employees see testing as relatively non-invasive, many also perceive it to be unable to detect impairment or enhance safety, and have a negative view of their experience in taking drug test.[7] Perceptions of a testing program as unfair are associated with negative job attitudes and less job commitment.[5]

Some types of testing programs are seen as 'fairer' than others. For example, it can be argued that pre-employment screening (the most common form of workplace testing) is justified on the grounds that employers have a right to screen potential employees for a variety of factors (e.g., past employment history, personality, aptitude, overall health) including current drug use. Similarly, some argue that testing for cause after an accident or 'near miss' is not only justified, but necessary.

Random testing – A contentious issue

The most contentious workplace testing program is random testing. Random testing is usually conducted without prior notice with all employees potentially having an equal chance of being selected for a drug test. Of all testing programs, random testing consistently receives least support from employees.[8, 9, 10] The reason for this is that it is seen by many as the least fair or justified form of testing. Proponents of random testing argue that it is the most effective method of deterring drug use because it places all employees under the constant threat of a test. However, it is this constant 'threat' that is most likely to contribute to poor employee morale.

Random testing assumes that all employees may use drugs and are thus required to prove that they don't by submitting to a test. Hence, random testing can lead to an atmosphere of guilt and mistrust, which in turn can substantially impact on employee morale and motivation. This is especially the case if a positive test results in dismissal. When this occurs, employees may not see testing as a legitimate occupational health and safety or productivity issue. Rather, they may view testing as a disciplinary measure that extends employer control beyond the workplace into their private lives.

Testing - An illicit drug use focus

A further limitation to testing is the predominant emphasis on illicit drugs. The vast majority of workplace tests are conducted to detect the use of illicit drugs, not alcohol. Recent prevalence data[11] indicate that while 84% of Australians are current drinkers, only 15% are current illicit drug users. The most commonly used illicit drug is cannabis, with only 3% of Australians using other illicit drugs. Thus, the greatest risk to safety and productivity is likely to come from the much larger numbers of employees who engage in unsafe or risky patterns of alcohol consumption.

Achieving the desired behaviour change

Testing may not achieve the desired behaviour change. Instead of eliminating drug use, employees may simply change their behaviour to make their drug use less detectable. A plethora of internet websites offer advice or devices to evade detection from workplace drug testing without reducing drug use. An alternative way to reduce the chances of detection is to change the type of drugs used. For example, due to the long detection period of cannabis use, an employee may shift from occasional cannabis use to risky (but less detectable) levels of alcohol use, or the use of other illicit drugs with a shorter detectable period.

The usefulness of testing

Drug testing currently has only a limited role to play in addressing the issue of drug-related harm in the workplace. This may change as tests become more technically advanced and are able to estimate intoxication/impairment levels with a greater degree of accuracy and precision. However, the ability of testing to prevent or reduce alcohol- and other drug-related harm in the workplace will always be limited to some extent. The reason for this is that testing focuses on identifying and dealing with (via discipline and/or treatment) individual employees.

Drug testing is best used as part of a more comprehensive and integrated approach that incorporates aspects of policy, prevention, and treatment. Drug testing should not be used as a single stand alone response associated only with disciplinary outcomes.

The management of alcohol and other drug issues in the workplace is no different to the management of any other safety or productivity risk. That is, by utilising a consultative process involving workers and management, the risk of alcohol- and other drug-related harm can be identified and strategies implemented to reduce this risk. These strategies should include significant components of worker education and training to enhance the capacity of all workers to identify and deal with alcohol- and other drug-related harm in the workplace.

Simplistic single strategies such as drug testing are not only likely to fail in reducing any alcohol- or other drug-related harm in the workplace, but may also result in counterproductive outcomes.

For a range of other potential intervention options, see Information & Data Sheet #3 in this series.

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