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Australia's National Research Centre on AOD Workforce Development

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Drug testing: issues and implications for Indigenous workers.

AOD Knowledge Centre webinar

9th May 2018

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www.nceta.flinders.edu.au

Acknowledgement of Country

I acknowledge that this meeting is being presented from the traditional country of the Kaurna people of the Adelaide Plains and pay my respects to Elders past and present.

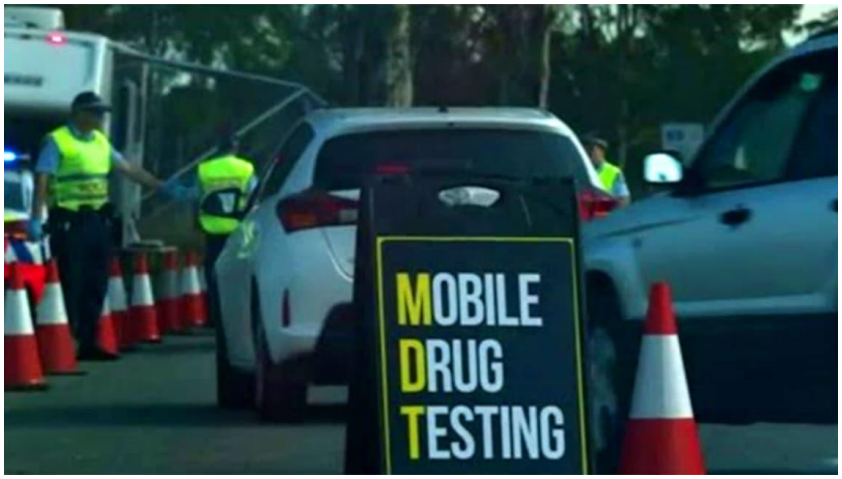
We recognise and respect their cultural heritage, beliefs and relationship with the land. We acknowledge that they are of continuing importance to the Kaurna people living today.

Overview

- Rationale for drug testing
- Testing Programs
- The testing process
- Drug testing technologies
- Does the rationale for testing stand up to scrutiny?
- Getting it right
- Issues for Indigenous workers

Rationale for testing

- To detect and/or deter use
  - clinical, sporting, workplace, roadside, custodial, school, & welfare contexts
- To improve safety:
  - workplace, roadside, 'pill' testing contexts



This presentation focuses on workplace testing

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Testing programs

- Random testing
- For-cause (targeted) testing
- Post-accident/incident testing
- Pre-employment testing

Testing programs

- **Random testing**
  - Screening a pre-determined proportion of given population
  - Conducted without notice
  - Objective is to deter use
  - Limitations
    - inefficient for detecting use
      - only a very small proportion of occasional drug use likely to be detected in any given population
      - ‘gamblers fallacy’ belief may limit any deterrent effect.

Testing programs

- **For-cause (targeted) testing**
  - Screening of individuals where drug use is expected or individual is monitored for drug use
  - Objective is to detect past drug use
  - Limitations
    - Detection reliant on accuracy of identifying target individuals & accuracy of test technology used.

Testing programs

- **Post- accident/incident testing**
  - Screening those involved in accidents or near-miss incidents
  - Objective is to detect past drug use:
    - depends on accuracy of test technology used & timeliness of test
  - Limitations
    - cannot determine if drug use played a causal role
    - may lead to under-reporting of minor accidents & incidents.

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Testing programs

- **Pre-employment screening**
  - Screening job applicants
  - Objective is to detect past drug use:
    - detection ability reliant on test accuracy
  - Limitations
    - only a one point in time test
    - applicants usually have advance notice of test

The testing process

Regardless of program/context, testing is a two step process

* Step 1) initial on-site screen, using a point of collection test (POCT) device
  - usually with immunoassay techniques that are less reliable & accurate than laboratory analysis.

* Step 2) laboratory analysis to confirm initial on-site +ve screens
  - typically involves more reliable & accurate mass-spectrometry techniques.

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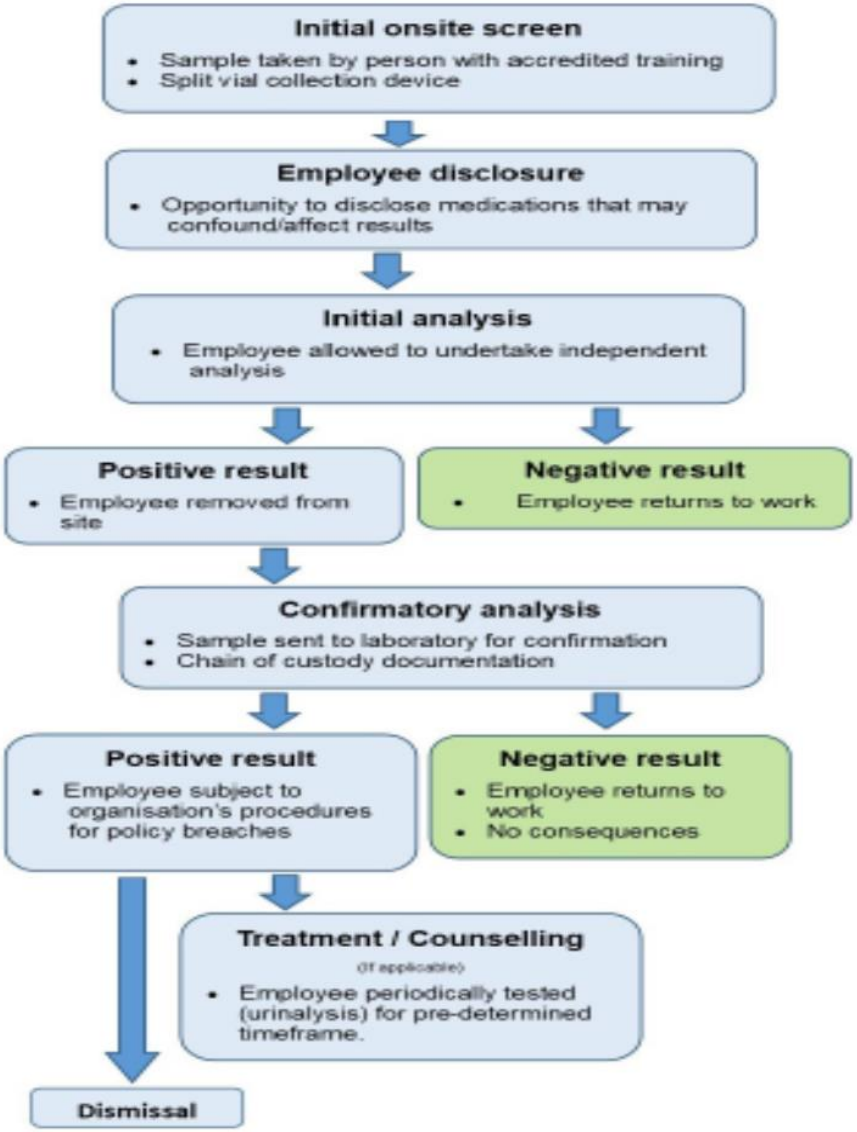
Workplace testing process



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Drug testing technologies

Most common technologies used in non-medical settings:

Urinalysis

Oral fluid/saliva

Both have advantages & disadvantages

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Urinalysis

Advantages

- Most on-site screens of good quality
- Sufficient quantity of sample readily available
- Can screen for a wide range of drugs
- Science underpinned by long history of research
- Lab analysis readily available & Australian standards exist

Disadvantages

Urine sample ready for testing

- Relatively invasive
- Suitable collection facilities required
- Cannot detect very recent use (past 1-4 hours)
- Adulteration/substitution relatively easily achieved
- Samples need to be appropriately stored to avoid sample deterioration
- Can be time consuming (shy or empty bladder)

Saliva/oral fluid

– Advantages

- Better indicator of potential impairment
- Can detect very recent use (within 10-20 minutes of use)
- Relatively non-invasive & sample can be collected at any location
- Sample collection directly supervised (minimal risk of subs/adulteration)
- Australian standards exist

– Disadvantages

- Quality of onsite screens can vary
- May need more than one onsite device to screen for full range of drugs
- Can be time consuming (dry mouth & 30 minute prior screen supervision)
- Some screening devices less able to detect benzodiazepines
- Australian standards for onsite devices under review

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Testing rationale

How does testing measure up in terms of:

* Detection of drug use?
* Deterring drug use?
* Improving safety?

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Detection *

Drug	Urinalysis	Saliva/oral fluid
Meth/amphetamine	Up to 3 days	Up to 48 hours
Benzodiazepines	Up to 14 days	Up to 36 hours
Occasional cannabis use	Up to 4 days	Up to 24 hours
Frequent cannabis use	Up to 30 days	Up to 48 hours
Cocaine	Up to 3 days	Up to 36 hours
Methadone	Up to 3 days	Up to 36 hours
Opiates (codeine, morphine)	Up to 3 days	Up to 48 hours

Test type	Non-detectable period	Detectable period
Urinalysis	0 - 4 hours	4 hours - 3 days
Saliva/oral fluid	<20 minutes	0-36 hours

* Times vary according to drug type & individual differences

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Deterrence

- Limited evidence of deterrent effect
  - Few rigorous studies:
    - most show no effect, or a very small effect

- Any deterrent effect likely to vary according to test program & associated sanctions
  - 'Gambler's fallacy' belief may mitigate deterrent effect
  - Deterrence theory
    - Likelihood of must be high (low for random testing)
    - Immediate & severe sanctions must apply
- Long term impact of sanctions problematic
  - Further stigmatise & marginalise vulnerable individuals
  - Hamper pathways into treatment .

Improving safety

- Evidence limited
  - Few quality evaluations:
    - Available evidence indicates little, if any, effect
  - Cost effectiveness studies indicate little economic value.

- Drug testing detects past use, not impairment/intoxication
  - Provides little evidence of causal role.
- Can have an unexpected negative impact on safety
  - Individuals may change behaviour to avoid detection, not reduce risk:
    - change pattern of use without reducing risk of harm
    - use drug with shorter window of detection, less detectable, or more easily explained.

Why is testing popular?

- Fast response & relatively easily implemented
- Objective biological marker of past use
- Symbolic function
- Effective marketing by service providers
- Galea (2013) – a 'compelling idea'
  - A logical & compelling idea driven by wider social concerns = implementation & support regardless of evidence base.
- Can be a useful tool
  - But is not the 'silver bullet' for deterrence/safety improvement
  - Needs to be supported by other relevant strategies.

Getting it right

- Must comply with Australian Standards
  - AS/NZS 4308:2008 (urine)
  - AS 4760-2006 (oral fluid/saliva).

- Standards ensure initial on-site screen & laboratory confirmation meet requirements for reliable detection & quantitation of drugs in biological specimens.

Getting it right

- In the workplace:
  - Must be based on principles of good practice & accepted by employees
    - Should be justified as required to address identified risk
    - Procedures & processes need to be adequately disseminated & applied in a procedurally fair manner.
- Should:
  - Result in counselling/ treatment, not punitive outcomes
  - Only target safety sensitive & integrity reliant work roles
  - Allow for a right of appeal.

NCETA Drug Testing Resources

Drug Testing: Technologies & Programs

Ken Pidd

For more information and resources visit the NCETA website: http://nceta.flinders.edu.au

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Drug testing technologies

Biological specimens that can be analysed to detect drug use include blood, sweat, urine, oral fluid/saliva, and hair. This fact sheet focuses on urine, oral fluid/saliva, and hair as the most common biological specimens tested for drugs outside medical settings.

Urine

Urinalysis is one of the most researched drug test technologies. For most drug types it can detect use that has occurred up to three days prior to the test. One exception to this is cannabis, where the window of detection can be up to several weeks. Specimen donors are usually required to produce a urine sample, delivered directly into a sterile tamper-proof container.

Advantages:

- Onsite drug screening tests exist for urine
- Sufficient quantities of specimen sample can be obtained for confirmatory analysis and retesting
- A substantial number of Australian laboratories have expertise in urinalysis
- Higher concentrations of drug metabolites[1] are present in urine compared to other types of specimen samples, allowing for reliable detection of past drug use
- Australian standards exist for urine testing.

Disadvantages:

- Relatively intrusive
- Cannot detect very recent use (e.g. past few hours)
- Collection facilities that maintain donor privacy and comfort need to be provided
- Can be time consuming (e.g. donor may n
- Can be able to readily provide a sample)
- Dilution, adulteration, or substitution of u
- Samples is more easily achieved compa to other specimen samples
- Storage and transport issues may occ urine specimens require refrigeration

[1] Metabolites are chemical compounds created as a drug is activated or deactivated by internal chemical processes after ingestion. In some cases, very little of the actual (parent) drug is evident in biological samples, however recent use can be determined by the presence of drug metabolites.

Drug Testing: Rationale, Utility and Effectiveness

Ken Pidd

For more information and resources visit the NCETA website: http://nceta.flinders.edu.au

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Rationale For Drug Testing

The three main reasons for drug testing are to: 1) detect use; 2) deter use; and 3) improve safety. Contexts within which drug testing is implemented vary according to reason for testing.

1. To detect drug use	2. To deter drug use	3. To improve safety
Contexts: • Clinical • Sporting • Workplace • Roadside • Custodial • Schools • Welfare recipients	Contexts • Clinical • Sporting • Workplace • Roadside • Custodial • Schools • Welfare recipients	Contexts • Workplace • Roadside • 'Pill' testing (music events etc.)

Utility and effectiveness

The utility and effectiveness of drug testing can be evaluated against the three main reasons for its introduction (i.e., to detect use, to deter use, and to improve safety).

1. Detecing Drug Use

Urinalysis, oral fluid/saliva, and hair testing can only detect past drug use. They cannot indicate intoxication/impairment, the drug dose, or the pattern of use. While most drug test types are reliable indicators of past drug use, their utility and effectiveness varies between test types.

Urinalysis	Oral fluid/saliva testing	Hair testing
• Typically detects use that has occurred up to 3 days prior to the test • The exception is cannabis use, where occasional use can be detected for up to 6 days and more regular use can be detected for up to several weeks • The main disadvantages of urinalysis are that it may not detect very recent use (past 2-6 hours) and urine specimens can be adulterated or substituted relatively easily.	• Has a much shorter window of detection compared to urinalysis • For most drug types it detects use that has occurred in the previous 1-3 days • Compared to urinalysis, oral fluid/saliva specimens are less easily adulterated or substituted • The main disadvantage of oral fluid is that pH levels can affect drug concentrations in oral fluid/saliva.	• Can detect use that has occurred up to 6 months prior to the test (depending on individual hair growth rates) • Cannot detect relatively recent use (past 1-4 weeks) • Cannot detect single use of drug • No Australian Standards for hair testing (unlike urinalysis and oral fluid/saliva) • Prohibitive cost.

Drug Testing: Processes & Good Practice

Ken Pidd

For more information and resources visit the NCETA website: http://nceta.flinders.edu.au

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The drug testing process

Regardless of where testing occurs or the type of testing technology utilised, drug testing is a two-step process. Step 1 involves an initial on-site screen, using a point of collection test (POCT) device. Most point of collection test devices use immunoassay techniques that are less reliable and accurate than laboratory analysis. For this reason, step 2 involves laboratory analysis to confirm the accuracy of any initial on-site screen that detects the presence of a drug. Laboratory analysis typically involves more reliable and accurate mass-spectrometry techniques.

Good practice in drug testing

od practice dictates that the drug testing ess must comply with the relevant alian Standards – AS/NZS 4308-2008 and AS 4760-2006 (oral fluid/saliva). pose of these standards is to ensure nitial on-site screen and confirmatory procedures meet the requirements detection and quantitation of drugs specimens.

s cover procedures for collection, storage, handling & sport to a laboratory dy procedures nd training required for on- llectors and laboratory

nagement of onsite and ces/methods.

The Standards also stipulate cut point levels for a positive on-site screen and laboratory analysis. While there are no Australian Standards for hair testing, the Australian Health Practitioner Regulation Agency has produced a hair testing protocol.

Any potential beneficial effect of drug testing is likely to be realised when it is combined with a more comprehensive response that provides better access to treatment, de-stigmatisation and improved support.

More comprehensive responses also need to be tailored to meet the specific needs and circumstances of the target group.

In addition, responses need to include strategies to minimise the risk of unexpected negative outcomes known to be associated with testing. One unexpected negative outcome is that rather than changing their behaviour to reduce drug use or related risk of harm, the target group may simply change their behaviour to avoid detection. When this occurs drug testing programs are likely to have counter-productive consequences.

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Issues for Indigenous workers

- Reasons for drug use are often complex:
  - Historical factors
  - Social context

- A workplace drug testing program that adopts an enforcement/punitive approach typically fails to address this complexity

Issues for Indigenous workers

- A non-punitive approach integrating AOD education & rehabilitation with drug testing is a better approach

- Workplace AOD programs need to operate in a culturally appropriate manner that does not unfairly target specific population groups.

Issues for Indigenous workers

- The overall level of illicit drug use by Indigenous Australians is more than twice the level of non-Indigenous Australians.

- A strict enforcement/punitive approach may derail efforts to improve Indigenous health & wellbeing.

Issues for Indigenous workers

- Strategies need to take into account Indigenous workers' health & culture

- Proactive screening combined with appropriate education, counselling & rehabilitation may assist Indigenous workers who test positive to a workplace test:
  - Reduce AOD use/related harm
  - Contribute to long term employment.

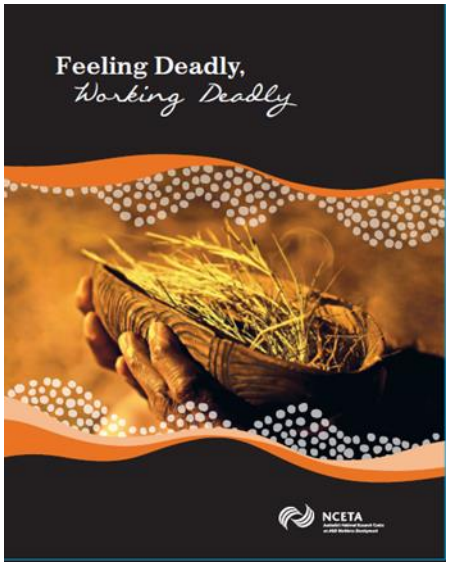
Feeling Deadly, Working Deadly

Resource kit developed by NCETA in consultation with Aboriginal and Torres Strait Islander stakeholders.

Focus on enhancing Aboriginal worker wellbeing.

Can be used by:

- Aboriginal managers and supervisors
- Aboriginal workers
- Non-Aboriginal managers and workers.



Download from NCETA website:

http://nceta.flinders.edu.au/workforce/indigenous-aod-workforce/feeling-deadly-working-deadly-indigenouworker-wellbeing

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Thank You

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Watch the recording on the **Health*InfoNet* YouTube channel**
https://www.youtube.com/channel/UCftVbk_1fVQz2i_9TyQ1E2Q/videos