The Dutch experience of workplace drug testing

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Dutch legislation

- Opium Act since 1928
- In NL difference between
  - Hard drugs: heroin, cocaine, amphetamine, LSD, XTC
  - Soft drugs: benzodiazepines, cannabis
- Possession, trade, import, export, dealing and production of drugs is an criminal act
- Drug use does not constitute a crime in legal terms
Dutch legislation II

- Addicts will be treated and NOT punished in NL Unless…..
- Serious offences are committed

- Ministery of Health vs. Ministery of Justice

- In less serious offences is the punishment: a treatment for the addiction

- Treatment: get off the drug and medical care (if necessary methadon supply; syringe exchanges)
- Prevention of use and misuse
Prevalence of drug use in Europe

Cannabis: last year prevalence among all adults (15-64 years old)

Drug
- ★ Cannabis
- ★ Cocaine
- ★ Amphetamines
- ★ Ecstasy
- ★ Inhalants (schools only)
- ★ Problem drug use (injecting drug use or long duration/regular use of opioids, cocaine and/or amphetamines)

Population
- ★ All adults (15-64)
- ★ Young adults (15-34)
- ★ Schools population

Source: EMCDDA
Workplace drug testing in NL

• In NL workplace drug testing is not obliged

• For specific sectors European guidelines are followed
  – EBIS: European Barge Inspection Scheme
    • Once a year → twice a year drug testing
  – Offshore

• Acceptance of drug testing by Employees Council of company
Customers MaasstadLab

- Offshore: Dutch companies worldwide
- Barge companies
## Drugsscreening MaasstadLab

<table>
<thead>
<tr>
<th>Drug</th>
<th>Amount</th>
<th>Positive samples (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Opiates</td>
<td>36.080</td>
<td>783 (2.2%)</td>
</tr>
<tr>
<td>Amphetamines</td>
<td>35.930</td>
<td>873 (2.4%)</td>
</tr>
<tr>
<td>Cocain</td>
<td>34.998</td>
<td>1.428 (4.1%)</td>
</tr>
<tr>
<td>Benzodiazepines</td>
<td>29.175</td>
<td>3.682 (12.6%)</td>
</tr>
<tr>
<td>Barbiturates</td>
<td>2.817</td>
<td>0 (0%)</td>
</tr>
<tr>
<td>Methadon</td>
<td>12.998</td>
<td>1.880 (14.5%)</td>
</tr>
<tr>
<td>THC</td>
<td>46.152</td>
<td>9.407 (20.4%)</td>
</tr>
<tr>
<td>XTC</td>
<td>5.371</td>
<td>118 (2.2%)</td>
</tr>
<tr>
<td>Ethanol</td>
<td>9.995</td>
<td>420 (4.2%)</td>
</tr>
<tr>
<td>ETG</td>
<td>9.144</td>
<td>696 (7.6%)</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>222.660</strong></td>
<td>-</td>
</tr>
</tbody>
</table>
Examples from daily practice - I

• Ship with 100 employees
• DOA screening for workplace drug testing
• 20 employees positive for opiates

• Confirmation analysis
Examples from daily practice - I

- All 20 employees positive for Pholcodin (which was stated on informed consent)
- Explanation from shipping company.....
Examples from daily practice - II

- Ethanol screening in urine
- In 1 run a lot of positive samples
- Rather unusual

- What next?
Examples from daily practice - II

• Ethylglucuronide (ETG) screening

• ETG is not formed in vitro (by fermentation)
• ETG is longer detectable in urine than ethanol

• Samples are negative for ETG

• Conclusion?
Examples from daily practice - III

• External Quality Control
• KKGT (association for quality assessment in Therapeutic Drug Monitoring and Clinical Toxicology)
• Drugs of Abuse: since 1994 4x/year 2 urine samples
Examples from daily practice - III

• Results round 2012.1A

- Screening amphetamines & analogues
  - Positive: 30
  - Not tested: 19
  - Negative: 23

- Screening MDMA
  - Not tested: 54
  - Negative: 13
  - Positive: 5

- Screening amphetamine
  - Not tested: 49
  - Negative: 21
  - Positive: 2

- Screening cannabis
  - Positive: 21
  - Not tested: 4
  - Negative: 47
• Blanc urine spiked with bleach (8%)
• Abnormal foaming and smell
• Report 70 labs:
  – 44 no special details
  – 16 something unusual
  – 10 real irregularity
Conclusions

• In NL workplace drug testing is not generally accepted
• Sample acquiring, sample preparation, analysis in laboratory and interpretation requires specific knowledge
• Analysis of drugs of abuse in laboratory is only a part of the drugs- and alcohol policy within a business