Substance Use: The Pre-placement Assessment of Safety Sensitive Workers

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Title?

- **Substance Use** not just Substance Use Disorder
- ‘**Pre-placement**’ Evaluation v ‘**Pre-employment**’
- **Safety Sensitive Workers**
Safety Sensitive?

- Danger to self
- Danger to coworkers
- Danger to general public
- Danger to environment
Alcohol & Drug Use?

Abuse

Dependence 8 – 13%

‘Addiction’

Regular Use

Abstinent

?15%

50 - 60%

?

“Pickle Line”

Substance Use Disorders

Early

Mid-stage

Late
SUDs - Prevalence

- General population 10% (dependent)
- 25 - 30% of population: “risky drinking”
- SD in hospitals 22-24% (medical) much higher on psychiatric and trauma wards
- >20% of primary care, EFAP visits
- >70% of people with SD currently employed*
Pre-placement Evaluation

- Part of Pre-placement Medical Evaluation
  - PP Screening Clinical interview – substance use
  - PP Screening Questionnaires - SUD
  - PP Drug & Alcohol Biological Testing?
  - PP Medical V Legal Issues?

- PP Assessment
  - Basic
  - Specialized

- PP Diagnosis

- PP Management
Pre-placement Evaluation

• Part of Pre-placement Medical Evaluation
  ◦ PP Screening Clinical interview substance use
  ◦ PP Screening Questionnaires/Tools - SUD
  ◦ PP Drug & Alcohol Biological Testing?
  ◦ PP Medical V Legal Issues?
Pre-placement clinical interview & examination?
Pre-placement screening & assessment tools?

- CAGE
- MAST (Michigan Alcohol Screening Test)
- DAST (Drug Abuse Screening Test)
- AUDIT (Alcohol Use Disorders Identification Test)
Pre-placement lab testing

- Involves testing certain samples to confirm absence or presence of certain compounds
  - Urine
  - Oral fluids
  - Breath
  - Hair
  - Sweat
  - Blood (GGT, MCV etc)
Biological 'Testing'

- Collection (Supervised V Witnessed)
- Transportation (Chain of Custody paperwork)
- Testing techniques ('Screening' V 'Confirmatory')
- Interpretation of test results
- Verification by certified Medical Review Officer
- Reporting*
Limitations of urine drug tests

- Does *not* diagnose:
  - Impairment
  - Drug abuse, or addiction
  - Physical dependence
  - Diversion

- Does *not* provide accurate information on:
  - Time of last exposure
  - Dose of drug
  - Frequency of use
Breath Alcohol Testing

- Relevance?
- Screening?
- Confirmation?
Ethyl Glucuronide (EtG)

- Metabolite of alcohol
- Offers extended window
- Can be detected 3 – 5 days following consumption
- Not detectable unless alcohol consumed
- Un-intentional alcohol consumption
- Un-intentional alcohol exposure
Lab testing – Medical & Legal issues
‘Drug & Alcohol Testing’

- ‘Let’s do drug testing so that we can avoid hiring individuals who use drugs and could pose a safety risk’
- We just need ‘pee-testing’
- Testing for alcohol & drug use is a form of medical exam
Employee Alcohol & Drug Testing in Canada

- No legislation permitting or regulating
- Rely on Court and tribunal decisions
- Canada V US
- Interprovincial differences
- Balancing safety V privacy
‘Pre-Employment’ Screening for D & A

- Generally not permitted (even SS)
- Canadian courts have decided not ‘before’
- Except ?? maybe Alberta

Other Testing

- Random
- Post-incident
- With reasonable cause
- Returning to duty (after treatment)
Canadian Human Rights Act

- Prohibits discrimination on 11 grounds… including ‘Disability’
- Addiction is a Disability
- Duty to accommodate a disability ‘to the point of undue hardship’
‘Pre-employment’ medical examinations

- At interview stage – limited to determining ability to perform essential duties
- ‘Pre-employment’ drug testing?
- ‘Pre-employment’ alcohol testing?
- If D & A testing valid requirement – notify applicant
“Pre-employment” drug and alcohol testing

- “There is evidence that pre-employment drug and alcohol tests are related to absenteeism and possibility of accidents, but there is considerably less evidence of the link between drug testing outcomes and job performance.” (Murphy & Wright 1996 p 332).
Drug testing at work.
Subst Use misuse 2003; 38:1891 - 902; White, Tony
Pre-placement Evaluation

- PP Assessment – if screening positive
  - Basic
  - Specialized

- PP Diagnosis of SUD

- PP Management of SUD
People involved

- Employer
  - Human Resources
  - Supervisors
- Family physician, P/T Occ Med
- Occupational Health Physician
- Substance Abuse Professional
- Substance Abuse Expert
- Certified Addiction Medicine Specialist
- Medical Review Officer
WorkSafe BC
4.20 Impairment by alcohol drug or other substance
Impairing medications as part of ‘Treatment’?
‘He has a prescription’

Prescription Medications
‘Pain Killers’
Sleeping Pills, Sedatives
‘Medical’ Marijuana
Methadone and Buprenorphine (Suboxone)

Addiction, Overdose & Death?
$$$$$$
Workplace impairment
CDC: Parallel increases in opioid sales, deaths and substance abuse

Rates of prescription painkiller sales, deaths and substance abuse treatment admissions (1999-2010)

US opioid sales quadrupled 2000-2010

Since 2008, 15,000 deaths per year. This exceeds MVA deaths in 30 states.

Washington State in 2010?

Answer: 120 mg ME/day
Medical Return to Work Guidelines

- Railways workers medical guides (RAC)
- ACOEM Practice Guidelines: Opioids and Safety-sensitive work
- Law Enforcement Officer Guides (ACOEM)
- Drivers Medical Fitness Guidelines (CMA)
- Firefighter Medical Guides (NFPA)
The Canadian Guidelines for Safe and Effective Use of Opioids for Chronic Non-Cancer Pain published by National Opioid Use Guideline Group:

- **R07** During dosage titration in a trial of opioid therapy, advise the patient to avoid driving a motor vehicle until a stable dosage is established and it is certain the opioid does not cause sedation; and when taking opioids with alcohol, benzodiazepines, or other sedating drugs.
American College of Occupational Environmental Medicine

- ‘Acute or chronic opioid use is not recommended for patients who perform safety-sensitive jobs. These jobs include operating motor vehicles, other modes of transportation, forklift driving, overhead crane operation, heavy equipment operation, sharps work (knife, boxcutters, needles), work with injuries risk (e.g. heights), and tasks involving high levels of cognitive function and judgment.’

- Also Railway Act of Canada
Opioids

Risk-sensitive/Safety-sensitive fitness considerations

◦ No addiction disorder?
  • Chronic, stable, reasonable dose with benefit?
  • Literature supported diagnosis?
  • Good supervision

◦ Addiction diagnosis or History?
  • Increased complexity
  • Probably not a good candidate for COT

◦ Other psych & medical issues?

◦ Patients on opioids and machines – not a good mix
Opioids and Safety – Take Homes?

‘the risk of a motor vehicle accidents appear to be increased when medicinal opioids and illicit opiates have been consumed’
Marihuana for Medical Purposes Regulations

Marihuana Medical Access Regulations – repealed March 31 2014

‘Dried marijuana is not an approved drug or medicine in Canada. The Govt. of Canada does not endorse the use of marijuana, but the courts have required reasonable access to a legal source of marijuana when authorized by a physician.’
‘Medical’ Marijuana

• Marijuana is not medication in traditional sense
• Crude drug
• Contains 489 distinct compounds
• 70 are Cannabinoids
• Endocannabinoid system
• Delta-9-Tetrahydrocannabinol (THC) psychoactive
• 10% (1 – 30%) average content THC
• CBD, CBG, CBN, CBC, THCV
• Some benefits?
Marijuana - The Evidence

- Independent risk factor for psychosis
  - established
- Effect on mood disorders
  - Less well established
  - Appears to impair treatment response
- Effect on anxiety disorders
  - Unclear
- Independent risk factor for MVAs
  - Established*
Marijuana

What does it impair?

- Balance, coordination, reaction time, reduces task-attention, problem solving time, manual dexterity and short term memory
- Chronic use not well researched
- Impairment may last up to 24 hours with single use
Marijuana

Researchers looking at marijuana and driving ability have concluded that marijuana is a real but secondary (to alcohol) safety risk, but “any situation where safety depends on alertness and capability of control of man-machine interactions precludes the use of marijuana”.
‘Medical’ Marijuana – Take Homes

- Not a benign herb
- Use associated with evidence of impairment
- A valid ‘prescription’ ≠ no impairment
- Cesamet (Nabilone) and Marinol (Dronabinol)
  - HPB approved medical indications
- Approved usages may exclude occupying a SSP
‘Sedative/Hypnotics’

• Indications:
  – Sedation, anxiety, seizure, movement and spasticity disorders

• Benzodiazepines - the “pam” drugs
  – Diazepam (Valium), Lorazepam (Ativan)
  – Clonazepam (Rivotril)

• The “Z” drugs
  – Zopiclone, Zaleplon, Zolpidem
  – Marketed as less dependence forming
  – Abuse potential
Benzodiazepines

• Limited:
  ◦ Research – mostly from 1980s
    • Anterograde memory loss – may persist long term
    • Loss of coordination, impaired psychomotor functioning, falls

• Limited:
  – Prescribing data
    • 3 to 4% of population taking a BZD at any one time
    • Prescriptions increase with age
Benzodiazepine Use

Age (years)

Female

Male

0%
5%
10%
15%
20%
25%
30%

Benzodiazepines – Take Homes

- Widely available
- May be predictive of other substance use
  - Alcohol and opioids
  - High rate of abuse in Methadone population
  - Look for decreased level of function
- Sedation, memory loss, loss of coordination etc
- Often involved in opiate related deaths (also alcohol)
Methadone and Buprenorphine

Indications

- Opioid Agonist Therapy (OAT)
  - Means opioid addiction
  - All patients are “polydrug dependent”
  - How stable is underlying addiction?

- Chronic Cancer and Non-cancer Pain
  - Methadone only
  - Means failure of typical opioids
  - Fit for work?
Methadone and Suboxone

- Prescribing MDs with poor understanding of Occupational Safety issues
  - Traditionally patients not employed and limited access to private disability benefits
- Variable standard of care
  - Generally OK but…
  - When poor – can be very poor
- Methadone & BZD, ETOH – Risk++
DRUID Study

(Driving Under the Influence of Drugs, Alcohol, & Medicines)

‘Researchers who investigated accident risk for driving with opioid medicines found that even at low doses methadone and buprenorphine caused impairment when given as a single dose to healthy subjects and reported that no clear evidence exists if patients under maintenance treatment are able to drive safely’

36 institutes, 20 EU countries 2006 - 2011
Methadone and Suboxone – Take Homes

Means opioid dependence or chronic pain (or both!)
  Have known addiction or
  Have failed typical opioids for CCP/CNCP

‘In many Canadian cities, more people are addicted to prescription opiates than street drugs such as heroin or cocaine’ – CJPH April 2005

Failure to progress or loss of level of function
  Comprehensive assessment
Section 6 Drugs:

Patients taking illicit, non-prescription or prescription drugs known to have pharmacologic effects or side effects that can impair the ability to drive should be advised not to drive until their individual response is known or the side effects no longer result in impairment.
Prescribed medication & safety?

- May be impairment issues when SS worker uses some prescribed medications
- A valid prescription ≠ no impairment
- No valid prescription = impairment
- Is the medical condition ≠ occupying a SSP?
- Sometimes the individual does not appreciate subtle impairment of ‘meds’
- Physicians plays important role in education & safety at work
- Need comprehensive A & D policy as well as ‘testing’ policy
Thank You

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