Head the Horse off at the Pass

Or...Screening for Substance Use Disorders In the Primary Setting

By- Blair Bishop & Rachel Campbell
A very brief history of substance use.

- There has been co-evolution of mammalian brains and ancient psychotropic plants (Saah, 2005).
- Hedonism and cultural use abound (Saah, 2005).

- [https://www.youtube.com/watch?v=pSm7BcQHWXk](https://www.youtube.com/watch?v=pSm7BcQHWXk)
What defines a substance use disorder?

- Compulsion (APA, 2013).
- Control (APA, 2013).
- Consequences (APA, 2013).
The biochemistry of use disorder

- Enkephalins
- N. Accumbens
- Amphetamines, cocaine, opiates, THC, PCP, nicotine
- Opiates, Ethanol?, Barbiturates?, Benzodiazepines?
- GABA
- VTA
- LC
- Barbiturate?, Benzodiazepines?
- Dopamine
- Norepinephrine
Addiction Memory (AM)

- “Memory of Addiction” first described by Mello in 1972

- “Addiction Memory is an individually acquired software disturbance related to feedback loops of neuronal processing” (Boening, 2001).

- The AM becomes part of the personality represented at the molecular level via the neuronal level, especially in the episodic memory
Addiction Memory (AM)

Human Memory
- Sensory Memory (<1 sec)
- Short-term Memory (Working Memory) (<1 min)
- Long-term Memory (life-time)
  - Explicit Memory (conscious)
    - Declarative Memory (facts, events)
      - Episodic Memory (events, experiences)
      - Semantic Memory (facts, concepts)
  - Implicit Memory (unconscious)
    - Procedural Memory (skills, tasks)
Addiction Memory (AM)

Long-term memory

Procedural memories
("Knowing how")

Declarative memories
("Knowing that")

Semantic memories
(General knowledge)

Episodic memories
(Personal recollections)
Alcohol, Smoking and Substance Involvement Screening Test- ASSIST

- Screen for use disorders with ASSIST
- Then use ASSIST ‘response cards’ to guide your brief intervention

http://www.who.int/entity/substance_abuse/activities/assist_v3_english.pdf?ua=1
Why to screen for alcohol and other drug use

- Alcohol is linked to numerous health complications.
- Most complications are treatable when diagnosed early on.
- Alcohol and Drug use/dependence have a high impact on a person's global health.
Figure 2: Drugs ordered by their overall harm scores, showing the separate contributions to the overall scores of harm to users and harm to others.

The weights after normalisation (0-100) are shown in the key (cumulative in the sense of the sum of all the normalised weights for all the criteria to users, 46; and for all the criteria to others, 54). CW = cumulative weight. GHB = γ-hydroxybutyric acid. LSD = lysergic acid diethylamide.
The effects of alcohol in non-tolerant persons

Blood Alcohol Level (milligram/100ml)

Legal driving limit in Australia

Legal driving limit NZ

0
30
50
80
100
150
200
250
300

Relaxation
Talkativeness, sociability, feeling happier

Reduced - concentration
- reaction time
- decision-making
- vision

Driving impairment

Dysarthria
Disinhibited behaviour
Poor social judgement/risk-taking,
Ataxia and poor co-ordination

Nausea and vomiting
Vertigo

Double vision
Slow thinking
Memory blackouts
Aggression and violence (in some)
Personality change
Mood change, especially low mood
Confusion
Sleep

Obstructive sleep apnoea

Stupor
Coma

Respiratory depression
Death (from alcohol poisoning)
The Course of Ethanol Elimination

Figure 2.3 Time Course of Ethanol Elimination

Ethanol elimination in a non-habitual drinker following ingestion of 150 g of alcohol in the 4 hours before midnight.
Long-term health effects of alcohol

**BREAST**
- Cancer risk

**MOUTH/THROAT**
- Cancer including oesophagus

**PANCREAS**
- Inflammation
- Diabetes

**LIVER**
- Impaired function
- Inflammation
- Cirrhosis
- Cancer

**HEART**
- Hypertension
- Irregular pulse
- Heart muscle damage

**NERVOUS SYSTEM**
- Tingling loss of sensation in hands and feet
- Impaired balance and coordination

**REPRODUCTIVE SYSTEM**
- Impotence
- Reduced fertility
- Foetal abnormalities

**MUSCLES**
- Weakness
- Loss of muscle tissue

**BRAIN**
- Memory loss
- Confusion
- Blackouts
- Problem solving
- Stroke
- Alcohol 3\textsuperscript{rd} leading risk factor (High BP, smoking)
- 40\% world adults drink alcohol (ave: 17.1 litres/year)
- Alcohol caused 2.8\% of all deaths in 2010 (cancer, cirrhosis, injury)
- Increasing since 1990 GBD studies (Rehm J, et al 2014)
When to consider screening for alcohol and drug use

- Client is concerned about their drinking or drug use.
- Low mood and/or anxiety.
- Unexplained abnormal liver functions.
- Unexplained changes in BP.
- Ongoing unexplained gastric difficulties.
- Pancreatitis.
- Persistent disturbed sleep.
- Frequent presentations to ED for accidents.
- Frequently requesting medications potentially of abuse.
- Evidence of injecting.
Why to screen for alcohol and other drug use

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ASSIST

W.H.O
Question 1

In your life, which of the following substances have you ever used? (NON-MEDICAL USE ONLY)

- a. Tobacco products (cigarettes, chewing tobacco, cigars, etc.)
- b. Alcoholic beverages (beer, wine, spirits, etc.)
- c. Cannabis (marijuana, pot, grass, hash, etc.)
- d. Cocaine (coke, crack, etc.)
- e. Amphetamine type stimulants (speed, diet pills, ecstasy, etc.)
- f. Inhalants (nitrous, glue, petrol, paint thinner, etc.)
- g. Sedatives or Sleeping Pills (Valium, Serepax, Rohypnol, etc.)
- h. Hallucinogens (LSD, acid, mushrooms, PCP, Special K, etc.)
- i. Opioids (heroin, morphine, methadone, codeine, etc.)
- j. Other - specify

- Yes or no answers
In the past three months, how often have you used the substances you mentioned (FIRST DRUG, SECOND DRUG, ETC)?

- a. Tobacco products (cigarettes, chewing tobacco, cigars, etc.)
- b. Alcoholic beverages (beer, wine, spirits, etc.)
- c. Cannabis (marijuana, pot, grass, hash, etc.)
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- j. Other – specify

Answers are rated never – daily or almost daily
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j. Other – specify

Answers are rated never – daily or almost daily
Question 4
During the past three months, how often has your use of (FIRST DRUG, SECOND DRUG, ETC) led to health, social, legal or financial problems?

- a. Tobacco products (cigarettes, chewing tobacco, cigars, etc)
- b. Alcoholic beverages (beer, wine, spirits, etc.)
- c. Cannabis (marijuana, pot, grass, hash, etc.)
- d. Cocaine (coke, crack, etc.)
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- i. Opioids (heroin, morphine, methadone, codeine, etc.)
- j. Other – specify

Answers are rated never – daily or almost daily
Question 5
During the past three months, how often have you failed to do what was normally expected of you because of your use of (FIRST DRUG, SECOND DRUG, ETC)?

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- j. Other – specify

Answers are rated never – daily or almost daily
Ask Questions 6 & 7 for all substances ever used (i.e. those endorsed in Question 1)

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Questions are answered: No Never, Yes in the past 3 months, Yes but not in the past 3 months
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- j. Other – specify

Questions are answered: No Never, Yes in the past 3 months, Yes but not in the past 3 months
Question 8
Have you ever used any drug by injection?

- No, Never
- Yes, in the past 3 months
- Yes, but not in the past 3 months
The type of intervention is determined by the patient’s specific substance involvement score.

<table>
<thead>
<tr>
<th>Substance</th>
<th>Record specific score</th>
<th>No Intervention</th>
<th>Receive brief intervention</th>
<th>More Intensive Treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. tobacco</td>
<td>0 - 3</td>
<td>4 - 26</td>
<td>27+</td>
<td></td>
</tr>
<tr>
<td>b. alcohol</td>
<td>0 - 10</td>
<td>11 - 26</td>
<td>27+</td>
<td></td>
</tr>
<tr>
<td>c. cannabis</td>
<td>0 - 3</td>
<td>4 - 26</td>
<td>27+</td>
<td></td>
</tr>
<tr>
<td>d. cocaine</td>
<td>0 - 3</td>
<td>4 - 26</td>
<td>27+</td>
<td></td>
</tr>
<tr>
<td>e. amphetamines</td>
<td>0 - 3</td>
<td>4 - 26</td>
<td>27+</td>
<td></td>
</tr>
<tr>
<td>f. inhalants</td>
<td>0 - 3</td>
<td>4 - 26</td>
<td>27+</td>
<td></td>
</tr>
<tr>
<td>g. sedatives</td>
<td>0 - 3</td>
<td>4 - 26</td>
<td>27+</td>
<td></td>
</tr>
<tr>
<td>h. hallucinogens</td>
<td>0 - 3</td>
<td>4 - 26</td>
<td>27+</td>
<td></td>
</tr>
<tr>
<td>i. opioids</td>
<td>0 - 3</td>
<td>4 - 26</td>
<td>27+</td>
<td></td>
</tr>
<tr>
<td>j. other drugs</td>
<td>0 - 3</td>
<td>4 - 26</td>
<td>27+</td>
<td></td>
</tr>
</tbody>
</table>
There is potential risk to the patient if they are alcohol dependent and stop drinking “cold turkey” without medical support.

However most patients can safely gradually reduce the amount of alcohol they drink.

When there is suspicion of alcohol dependence a referral to Alcohol and Drug services should be made with the patient.
Standard drinks

- One can of beer = 1 standard drink
- One bottle of wine = 7.1 – 8.3 standard drinks
- One bottle RTD = 2.1 standard drinks
- 3 liter cask of wine = 30 standard drinks
- 1 liter bottle of spirits = 37 standard drinks
Symptoms of Withdrawal Mild to moderate alcohol withdrawal

- Mild rise in temperature
- Mild hypertension
- Mild anxiety
- Slight tremor
- Mild sweating
- Nausea, vomiting
- Mild dehydration
- Headache
- Tachycardia
- Dyspepsia
- Sleep problems
- Insomnia, nightmares (moderate)
- Agitation (moderate)
Symptoms of severe alcohol withdrawal

Normal associated with daily consumption of more than 15 standard drinks.

- Hypertension
- Raised temperature
- Marked tremor
- Withdrawal seizures or history of seizures
- Dehydration
- Excessive sweating
- Nausea, vomiting, diarrhoea
- Acute anxiety
- Restlessness and or agitation
- Hypersensitivity to stimulation
- Hallucination
- Severely depressed moon
- Psychosis related to substance use
Thiamine

- Thiamine is water soluble B1.
- B1 deficiency can cause Wernicke’s encephalopathy.
- If not treated rapidly can lead to permanent brain damage and memory loss.
- Consider patients need for a thiamine supplement if drinking regularly.
Referrals and Treatment Options in the Wellington Region

- Case Management
- CBT
- Psychotherapy
- Motivational Enhancement (M.I., Assessment Feedback and Handouts)
- Brief Intervention Therapy
- 12 step approach AA-Groups
- Medication/Pharmacological treatments (Disulfiram, Naltrexone, Baclofen)
- Group work (DBT or mindful movement)
- Residential Treatment Facilities (Odyssey House, Nova, Spring Hill)
- Outpatient treatment NGO’s (Care NZ or Pact)
References


Alcohol, Smoking and Substance Involvement Screening Test- ASSIST

http://www.who.int/entity/substance_abuse/activities/assist_v3_english.pdf?ua=1
Any Questions?