VOLUME A
Basics of Addiction, Screening, Assessment, Treatment Planning and Care Coordination
Pre-assessment
Introductory module
Basics of Addiction
Training objectives

At the end of this workshop you will be able to:

► Understand the reasons people start drug use
► Identify 3 main defining properties of drug addiction
► Identify 3 important concepts in drug addiction
► Understand characteristics and effects of major classes of psychoactive substances
► Understand why many people dependent on drugs frequently require treatment
Introduction to psychoactive drugs
What are psychoactive drugs?

“…Any chemical substance which, when taken into the body, alters its function physically and/or psychologically....”

*World Health Organization, 1989*

“…Any substance people consider to be a drug, with the understanding that this will change from culture to culture and from time to time.”

*Krivanek, 1982*
Psychoactive drugs interact with the central nervous system (CNS) affecting:

- Mental processes and behaviour
- Perceptions of reality
- Level of alertness, response time and perception of the world
Why do people initiate drug use?

There is a believe that drug use is motivated (at least initially) by the pursuit of pleasure. However, according to scientific evidence, there are factors such as exposure to abuse, neglect, violence, etc., especially in childhood, leading to vulnerabilities to initiate drug use.
### Why do people initiate drug use?

<table>
<thead>
<tr>
<th>Drug use INITIATION starts through:</th>
<th>Key MOTIVATORS &amp; conditioning factors:</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Experimental use</td>
<td>• Stress/pain amelioration</td>
</tr>
<tr>
<td>• Peer pressure</td>
<td>• Functional (purposeful)</td>
</tr>
<tr>
<td>• Personality disorder</td>
<td>• Fun (pleasure)</td>
</tr>
<tr>
<td>• Comorbid psychiatric disorder</td>
<td>• Psychiatric disorders</td>
</tr>
<tr>
<td>• Exposure to abuse and violence in early childhood</td>
<td>• Social/educational disadvantages</td>
</tr>
</tbody>
</table>
Why do people continue drug use?

After repeated drug use, “deciding” to use drugs is no longer voluntary because

DRUGS AFFECT THE BRAIN!
What are substance use disorders?
What is drug addiction?

Drug addiction is a complex illness characterised by compulsive and at times, uncontrollable drug craving, seeking, and use that persist even in the face of extremely negative consequences.

(NIDA, 1999)

Substance dependence is not a failure of will or of strength of character but a medical disorder that could affect any human being. Dependence is a chronic and relapsing disorder, often co-occurring with other physical and mental conditions."

(WHO, 2004)
Characteristics of drug addiction

► Compulsive behaviour

► Behaviour is reinforcing (rewarding or pleasurable)

► Loss of control in limiting intake
Important terminology

► Psychological craving

► Tolerance

► Withdrawal symptoms
Psychological craving

Psychological craving is a strong desire or urge to use drugs. Cravings are most apparent during drug withdrawal.
Tolerance

Tolerance is a state in which a person no longer gets the expected responses from a drug as it was experienced before. A higher dose is now required to achieve the same effect.
Withdrawal

The following symptoms may occur when drug use is reduced or discontinued:

► Tremors, chills
► Cramps
► Emotional problems
► Cognitive and attention deficits
► Hallucinations
► Convulsions
► Death
How addictive drugs work
The neurobiology of dependence

- Involves the release of the neurotransmitter, dopamine, in the nucleus accumbens region of the brain
- Produces pleasurable feelings, positive attitudes, and focused attention
- With repeated exposure, compulsive drug-seeking and craving are elicited
Psychoactive substances

**Legal substances**

- Alcohol
- Tobacco products

**Illicit substances**

- Opioids
- Cannabis
- Cocaine
- Hypnotics
- Sedatives
- Hallucinogens
- Psychoactive inhalants
- Amphetamines and other stimulants
Let’s think!

Categories of drugs

How many drugs do you know? Do you know to which of the following categories they belong?

- Tobacco
- Alcohol
- Cannabis
- Cocaine
- ATS
- Inhalants
- Sedatives
- Hallucinogens
- Opioids
- Other
<table>
<thead>
<tr>
<th>Categories</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Tobacco</strong></td>
<td>Cigarettes, chewing tobacco, cigars, etc.</td>
</tr>
<tr>
<td><strong>Alcohol</strong></td>
<td>Beer, wine, spirits, etc.</td>
</tr>
<tr>
<td><strong>Cannabis</strong></td>
<td>Marijuana, pot, grass, hash, etc.</td>
</tr>
<tr>
<td><strong>Cocaine</strong></td>
<td>Coke, crack, etc.</td>
</tr>
<tr>
<td><strong>ATS</strong></td>
<td>Speed, meth, ecstasy, etc.</td>
</tr>
<tr>
<td><strong>Inhalants</strong></td>
<td>Nitrous, glue, petrol, paint thinner, etc.</td>
</tr>
<tr>
<td><strong>Sedatives</strong></td>
<td>Diazepam, alprazolam, flunitrazepam, midazolam, etc.</td>
</tr>
<tr>
<td><strong>Hallucinogens</strong></td>
<td>LSD, acid, mushrooms, trips, ketamine, etc.</td>
</tr>
<tr>
<td><strong>Opioids</strong></td>
<td>Heroin, morphine, opium, methadone, codeine, etc.</td>
</tr>
<tr>
<td><strong>Other</strong></td>
<td>Kava, datura, khat, nutmeg and caffeine</td>
</tr>
</tbody>
</table>
What are New Psychoactive Substances (NPS)?

“Substances of abuse, either in a pure form or a preparation, that are not controlled by the 1961 Single Convention on Narcotic Drugs or the 1971 Convention on Psychotropic Substances, but which may pose a public health threat.”

(UNODC)
Substances

- Cigarettes
- Chewing tobacco
- Cigars

Pharmacological effects

- Stimulant and sedative.
  Increase in blood pressure, slight hyperglycemia.

The risks associated with use of tobacco products include:

- Premature ageing and wrinkling of the skin
- Low fitness and longer recovery times after having a cold or flu
- Respiratory infections and asthma
- High blood pressure and diabetes mellitus
- Miscarriage, premature labour and low birth weight babies for pregnant women
- Kidney disease
- Chronic obstructive pulmonary diseases including emphysema
- Heart disease, stroke and vascular diseases
- Cancers of lung, bladder, breast, mouth, throat and oesophagus
If you drink alcohol, you are at risk of a range of health and other problems, especially if:

- you drink more than 2 standard drinks* a day;
- you do not have at least 2 days of the week when you do not drink.

There is no risk-free level of alcohol consumption, and for many people consumption of 2 standard drinks a day can still be associated with significant risks.

*A standard drink is:

- 1 can of ordinary beer (330ml at 4%);
- a single shot of spirits (30 ml at 40%);
- a glass of wine or small glass of sherry (100 ml at 12% or 70ml at 18%);
- a small glass of liqueur or aperitif (50ml at 25%).
Alcohol: effects and risks

**Substances**
- Beer
- Wine
- Spirits, etc.

**Pharmacological effects**
- Acts as a sedative-hypnotic depressant
- Slows down the nervous system
  - Causes drowsiness
  - Relieves pain
  - Blood Alcohol Concentration determines how much depression of the CNS will occur
Cannabis: effects and risks

Substances
► Hashish
► THC
► Marijuana
► Bhang
► Ganja

Pharmacological effects
► Feelings of euphoria, lightness of limbs, increased appetite, tachycardia. Impaired judgment

The risks associated with use of cannabis include:
- Problems with attention and motivation
- Anxiety, paranoia, panic and depression
- Decreased memory and problem solving ability
- High blood pressure
- Asthma and bronchitis
- Psychotic symptoms and psychoses particularly in those with a personal or family history of schizophrenia
- Heart disease and chronic obstructive pulmonary disease
- Cancers of the upper airway and throat
Opioids: effects and risks

Substances
- Heroin
- Morphine
- Codeine
- Methadone
- Pethidine

Pharmacological effects
- Relieve pain, produce euphoria
- Induce respiratory depression, drowsiness, and impaired judgment
Cocaine: effects and risks

### Substances
- Cocaine
- Crack
- Rock

### Pharmacological effects
- Feelings of elation, exaggerated feelings of confidence
- Acute toxic reactions
  - hypertension
  - cardiac arrhythmias
  - auditory and visual hallucinations
  - seizures

<table>
<thead>
<tr>
<th>The risks associated with use of cocaine include:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Difficulty sleeping, heart racing, headaches and weight loss</td>
</tr>
<tr>
<td>Numbness, tingling, clammy skin and skin scratching or picking</td>
</tr>
<tr>
<td>Intense craving and stress from the lifestyle</td>
</tr>
<tr>
<td>Accidents and injury and financial problems</td>
</tr>
<tr>
<td>Mood swings – anxiety, depression and mania</td>
</tr>
<tr>
<td>Paranoia, irrational thoughts and difficulty remembering things</td>
</tr>
<tr>
<td>Aggressive and violent behaviour</td>
</tr>
<tr>
<td>Psychosis after repeated use of high doses</td>
</tr>
<tr>
<td>Sudden death from cardiovascular acute conditions</td>
</tr>
</tbody>
</table>
Amphetamines: effects and risks

Substances
► Dexamphetamine
► Methamphetamine
► Methylphenidate
► Phenmetrazine
► Diethylpropion

Pharmacological effects
► Euphoria, anorexia, nausea, vomiting, insomnia, abnormal behavior such as aggression, grandiosity, hyper-vigilance, agitation and impaired judgment
Hypnotic / sedatives: effects and risks

Substances
- Benzodiazepines
- Barbiturates
- Buspirone
- Methaqualone

Pharmacological effects
- Muscle relaxation, calmness, sleep
- Impaired concentration, memory, coordination
- Slurred speech, drowsiness, unsteady gate

The risks associated with use of sedatives and sleeping pills include:

<table>
<thead>
<tr>
<th>Risk</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drowsiness, dizziness and confusion</td>
</tr>
<tr>
<td>Difficulty concentrating and remembering things</td>
</tr>
<tr>
<td>Nausea, headaches and unsteady gait</td>
</tr>
<tr>
<td>Sleeping problems</td>
</tr>
<tr>
<td>Anxiety and depression</td>
</tr>
<tr>
<td>Tolerance and dependence after a short period of use</td>
</tr>
<tr>
<td>Severe withdrawal symptoms</td>
</tr>
<tr>
<td>Overdose and death if used with alcohol, opioids or other depressant drugs</td>
</tr>
</tbody>
</table>
Hallucinogens: effects and risks

Substances

- Lysergide (LSD)
- Dimethyltryptamine (DMT)
- Psilocybin
- Mescaline
- MDMA
- Phencyclidine

Pharmacological effects

- Feelings of euphoria/dysphoria, mixed mood changes, altered perceptions, visual illusions
- Adverse effects include panic reactions, flashbacks, mood disorders

The risks associated with use of hallucinogens include:

- Visual, auditory, tactile and olfactory changes and unpredictable behaviour
- Difficulty sleeping
- Nausea and vomiting
- Increased heart rate and blood pressure
- Mood swings
- Anxiety, panic and paranoia
- Flash-backs
- Worsen the symptoms of mental illnesses such as schizophrenia
Inhalants: effects and risks

Substances
► Industrial solvents, glue, aerosol, paints, lacquer thinners, gasoline, cleaning fluids, amyl nitrite

Pharmacological effects
► Belligerence, hallucinations, lethargy, psychomotor impairment, euphoria, impaired judgement, dizziness, nystagmus, slurred speech, tremors, muscle weakness, unsteady gate, stupor, coma
Substance use problems

- Acute intoxication
- Regular use
- Dependent use
- Injecting
Acute intoxication

- Acute toxic effects including ataxia, vomiting, fever and confusion
- Overdose and loss of consciousness
- Aggression and violence
- Accidents and injury
- Unintended sex and unsafe sexual practices
- Unpredictable behaviour
Regular use

► (Substance) specific physical and mental health problems
► Tolerance
► Depression, anxiety, mood swings, irritability
► Sleep problems
► Relationship problems
► Some difficulties with regular activities (job or study)
► Cognitive problems relating to memory or attention
► Financial problems
► Legal problems
Dependent use

- Marked tolerance & withdrawal symptoms on abstinence
- Severe physical & mental health problems
- Increasingly dysfunctional in daily life
- Craving & increased desire to use
- Criminal behaviour
- Usual role obligations not fulfilled
- Relationship breakdowns
- Difficult to stop in spite of problems
- Continued use despite evidence the use is causing harms to the individual
Injecting

Increased likelihood of:

► Dependence
► Overdose
► Psychosis
► Vein collapse
► Infection
► Local abscesses and ulcers
► Systemic HIV and hepatitis C
► Stigma
Matters of substance

Very wide range of:
- Pharmacological properties
- Medical problems
- Social problems

At least as dangerous as many illicit substances!

Chemical substance in its pure form is just ONE determinant of harm
Drug use is accompanied by a variety of psychiatric problems, including:
- antecedent pre-disposing factors (e.g., personality disorders)
- those induced by drug use and drug dependence

Co-occurring psychiatric disorders cause:
- more extensive treatment
- worse clinical course than other cases

Intervention programmes should reflect:
- social and pharmacological complexities of psychoactive substances
- relative differences among social and pharmacological complexities
Prerequisites for a public health approach to harmful substance use

► Is the problem prevalent?
► Is there an adequate definition of the problem and operational criteria for diagnosis?
► Are screening tests available, brief, simple to administer and valid in different cultural settings?
► Are early intervention and treatment methods available?
### Is the problem prevalent?

<table>
<thead>
<tr>
<th>Developing Countries</th>
<th>High mortality</th>
<th>Low mortality</th>
<th>Developed Countries</th>
<th>Low mortality</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Underweight</td>
<td>Alcohol</td>
<td>Tobacco</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 Unsafe sex</td>
<td>Blood pressure</td>
<td>Blood pressure</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 Unsafe water/sanitation</td>
<td>Tobacco</td>
<td>Alcohol</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4 Indoor smoke, solid fuels</td>
<td>Underweight</td>
<td>Cholesterol</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 Zinc deficiency</td>
<td>Overweight</td>
<td>Overweight</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6 Iron deficiency</td>
<td>Cholesterol</td>
<td>Low fruit/veg. intake</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7 Vitamin A deficiency</td>
<td>Low fruit/veg. intake</td>
<td>Physical inactivity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8 Blood pressure</td>
<td>Indoor smoke, solid fuels</td>
<td>Illicit drugs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9 Tobacco</td>
<td>Iron deficiency</td>
<td>Unsafe sex</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10 Cholesterol</td>
<td>Unsafe water/sanitation</td>
<td>Iron deficiency</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11 Alcohol</td>
<td>Unsafe sex</td>
<td>Lead exposure</td>
<td></td>
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</tr>
</tbody>
</table>
Definition of the problem: conceptual issues

- Early intervention vs. traditional treatment
- At-risk use vs. dependence
- Public health vs. individual perspective
- Risk factors vs. disease conditions
Pyramid of services

- Long-stay residential service
- Specialized drug dependence services
- Specialized social welfare services
- Primary health-care services
- Generic social welfare services
- Informal community care
- Self-care

FREQUENCY OF NEED

QUANTITY OF SERVICES NEEDED

COST
The spectrum of drug use

- Lifetime abstinence
- Current abstinence
- Low risk use
- Hazardous use
- Harmful use
- Dependence
Definition of the problem: Diagnostic issues and WHO terminology

- **Hazardous use**: elevated risk without the presence of physical or mental harm
- **Harmful use**: substance use that causes physical or psychological harm
- **Substance dependence**: an interrelated cluster of physical symptoms, including physical withdrawal, impaired control over continued use, a strong desire to use the substance and continued use despite problems
Hazardous use

A pattern of substance use that increases the risk of harmful consequences

- In contrast to harmful use, it refers to patterns of use that are of public health significance despite the absence of any current disorder

Often defined by the amount one uses, also known as the dosage
ICD-10 harmful use

▶ A pattern of psychoactive substance use that is causing damage to health (physical or mental)

▶ Commonly, but not invariably, has adverse social consequences

▶ Social consequences in themselves are not sufficient to justify a diagnosis of harmful use
ICD-10 criteria for dependence

An individual is considered dependent if he or she meets 3 or more of the following six criteria:

► A strong desire or compulsion
► Difficulties in controlling use
► Continuing to use despite harmful consequences
► Neglect of alternative pleasures and interests
► Increased tolerance
► Withdrawal
Why intervene in health care or other human service settings?

5 main reasons

► Opportunity to find large numbers of patients at risk of developing substance use disorders
► It is medically appropriate to address both the symptoms and the cause of the problem
► Health care professionals are respected and trusted
► Studies prove that interventions are effective
► In health care settings, stigma can be minimized
Questions
► Why do people start drug use?
► What are the 3 main defining properties of drug addiction?
► What are the major classes of psychoactive substances?
► Can you give an example of some of their characteristics and effects?
► Why do many drug dependent people frequently require treatment?
Thank you for your time!
End of workshop