UNIT 2 SUBSTANCE ABUSE AND ADDICTION

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2.0 INTRODUCTION
Substance abuse and addictions result from the misuse of harmful or addictive substances which include, alcohol, illegal or street drugs, prescription and over-the-counter medicines, and volatile chemicals.

The resultant problems include both mental and physical illnesses, and family, housing, employment, and legal difficulties. Treatment of substance abuse disorder is complex and challenging as the reason for substance abuse and addiction is unique for each abuser. Further, the family environment and situation of each abuser is unique. Treatment and management of substance abuse need to take into account all these. Both psychological and pharmacological interventions are used that may include detoxification and substitute prescribing.

The use and misuse of drugs is increasing and affecting our children, youth, men and women, and the elderly also. In this Unit, you will learn about the substance abuse disorder, various drugs used, and the assessment and treatment of substance abuse.

2.1 OBJECTIVES
By the end of this Unit, you will be able to:
- explain the concept of substance abuse disorders;
- know the most commonly used illegal drugs;
- describe the signs and symptoms in the different types of substance intoxication and withdrawal states;
explain the assessment of a person with substance abuse disorders; and

discuss the management and treatment of persons with substance abuse disorders.

2.2 SUBSTANCE ABUSE DISORDERS

A formal definition of substance abuse disorder, based on the Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision (DSM-IV-TR), is as follows:

Drug abuse is a maladaptive pattern of drug use leading to clinically significant impairment or distress, as manifested by one or more of four symptoms or criteria in a 12-month period.

- Recurrent drug use may result in *failure to fulfill major role obligations* at work, school, or home. Repeated absences, tardiness, poor performance, suspensions, or neglect of duties in major life domains suggests that use has crossed over into abuse.

- Recurrent drug use in situations in which it is *physically hazardous* is a sign of abuse. Operating machinery, driving a car, swimming, or walking in a dangerous area while under the influence indicates drug abuse.

- Recurrent drug-related *legal problems*, such as arrests for disorderly conduct or DUI [driving under the influence] arrests, are indicative of abuse.

- Recurrent use, despite having persistent or recurrent *social or interpersonal problems* caused or exacerbated by the effects of the drug, is indicative of abuse. For example, getting into arguments or fights with others, passing out at others’ houses, or acting inappropriately in front of others (which is disapproved of) is indicative of abuse.

In summary, drug use that leads to decrement in performance of major life roles, dangerous action, legal problems, or social problems indicates a substance abuse disorder.

Alternatively, a diagnosis of substance dependence, a more severe disorder, subsumes a diagnosis of substance abuse. There are seven other criteria that, if met, constitute substance dependence.

The criteria for substance dependence, provided by the *DSM-IV-TR*, include a maladaptive pattern of drug use leading to clinically significant impairment or distress, as manifested by three or more of the following seven symptoms occurring in the same 12-month period.

- *Tolerance is experienced.* Tolerance entails a need for markedly increased amounts of a drug to achieve the desired drug effect or a markedly diminished effect with continued use of the same amount of the drug.

- *Withdrawal is experienced.* Either a characteristic withdrawal syndrome occurs when one terminates using the drug, or the same or a similar drug is taken to relieve or avoid the syndrome.

- *Larger amounts of the drug are taken over a longer period* than was intended. For example, an alcohol-dependent individual may intend to drink only two drinks on a given evening but ends up having 15 drinks, or to “party” over the weekend but the party lasts for 2 weeks until there is no more money for alcohol.

- *There exists a persistent desire or unsuccessful effort to cut down or control drug use.* For example, a drug-dependent individual may decide to control his or
her use but ends up abstaining on some evenings and using in excess on other evenings.

- A great deal of time is spent on activities needed to obtain the drug, use the drug, or recover from its effects. For example, a person may travel long distances or search all day to obtain cocaine, use the drug that night, and miss work the next day to recover and catch some rest. In this scenario, 2 days were spent for 1 night of “getting high.”

- Important social, occupational, or recreational activities are given up or reduced because of drug use. For example, the drug abuser may be very high, passed out, or hung over much of the time and thus may not spend time with family and friends like he or she did before becoming dependent.

- Drug use continues despite knowledge of having a persistent or recurrent physical or psychological problem that is likely to have been caused or worsened by the drug. For example, someone who becomes paranoid after continued methamphetamine use and is hospitalized but continues to use it after release from the hospital exhibits this symptom.

Alternatively, the 10th revision of the International Statistical Classification of Diseases and Related Health Problems (ICD-10) provides eight classifications of consequences from the use of a substance in its section on mental and behavioural disorders due to psychoactive substance use (Chapter 5; F10-F19). The ICD-10 definition focuses more on the mental or physical health complications and not social, legal, or environmentally hazardous consequences of abuse, as does the DSM-IV-TR.

Let us know a few terms that we come across while discussing about substance abuse and addiction.

a) Acute intoxication

The pattern of reversible physical and mental abnormalities caused by the direct effects of the substance. These are specific and characteristic for each substance. Most substances have both pleasurable and unpleasant acute effects; for some, the balance of positive and negative effects is situation-, dose- and route-dependent.

b) At-risk use

A pattern of substance use where the person is at increased risk of harming their physical or mental health. This is not a discrete point but shades into both normal consumption and harmful use. At-risk use depends not only on absolute amounts taken but the situations and associated behaviours.

c) Harmful use

The continuation of substance use despite evidence of damage to the user’s physical or mental health or to their social, occupational, and familial well-being. This damage may be denied or minimised by the individual concerned.

d) Withdrawal

Where there is physical dependence on a drug, abstinence will generally lead to features of withdrawal. These are characteristic for each drug. Some drugs are not associated with any withdrawals; some with mild symptoms only; and some with significant withdrawal syndromes. Clinically significant withdrawals are recognised in dependence on alcohol, opiates, nicotine, benzodiazepines, amphetamines, and cocaine. Symptoms of withdrawal are often the opposite of the acute effects of the drug.
e) Complicated withdrawal
Withdrawals can be simple, as above or complicated by the development of seizures, delirium, or psychotic features.

f) Substance-induced psychotic disorder
Illness characterised by hallucinations and/or delusions occurring as a direct result of substance-induced neurotoxicity. Psychotic features may occur during intoxication and withdrawal states, or develop on a background of harmful or dependent use. There may be diagnostic confusion between these patients and those with primary psychotic illness and comorbid substance misuse. Substance-induced illnesses will be associated in time with episodes of substance misuse and may have atypical clinical features, (e.g. late first presentation with psychosis, prominence of non-auditory hallucinations).

g) Cognitive impairment syndromes
Reversible cognitive deficits occur during intoxication. Persisting impairment (in some cases amounting to dementia) caused by chronic substance use is recognised for alcohol, volatile chemicals, benzodiazepines, and, debatably, cannabis. Cognitive impairment is associated with heavy chronic harmful use/dependence and shows gradual deterioration with continued use and either a halt in the rate of decline or gradual improvement on abstinence.

h) Residual disorders
Several conditions exist (e.g. alcoholic hallucinosis, persisting drug-induced psychosis; LSD flashbacks, where there are continuing symptoms despite continuing abstinence from the drug.

i) Exacerbation of pre-existing disorder
All other psychiatric illnesses, especially anxiety and panic disorders, mood disorders, and psychotic illnesses may be associated with comorbid substance use. Although this may result in exacerbation of the patient’s symptoms and a decline in treatment effectiveness, it can be understood as a desire to self-medicate (e.g. alcohol taken as a hypnotic in depressive illness) or escape unpleasant symptoms. Sometimes there is debate about whether there is, for example, a primary mood disorder with secondary alcohol use or vice versa. Careful examination of the time course of the illness may reveal the answer. In any case, it is advisable to address substance misuse problems first as this may produce secondary mood improvements and continuing substance misuse will limit antidepressant treatment effectiveness.

j) The Dependence syndrome
Dependence includes both physical dependence (the physical adaptations to chronic, regular use) and psychological dependence (the behavioural adaptations). In some drugs (e.g. hallucinogens), no physical dependence features are seen.

This is a clinical syndrome describing the features of substance dependence. These features form the core of both ICD-10 and DSM-IV descriptions of substance dependence.

- Primacy of drug-seeking behaviour: The drug and the need to obtain it become the most important things in the person’s life, taking priority over all other activities and interests. Thus drug use becomes more important than retaining job or relationships, remaining financially solvent, and in good physical health and may diminish moral sense leading to criminal activity and fraud. If the person rates drug use above health, then stern warnings about impending illness are likely to mean little.
• Narrowing of the drug-taking repertoire: The user moves from a range of drugs to a single drug taken in preference to all others. The setting of drug use, the route of use, and the individuals with whom the drug is taken may also become stereotyped.

• Increased tolerance to the effects of the drug: The user finds that more of the drug must be taken to achieve the same effects. They may also attempt to combat increasing tolerance by choosing a more rapidly acting route of administration, (e.g. IV rather than smoked), or by choosing a more rapidly acting form, (e.g. freebase cocaine rather than cocaine hydrochloride). In advanced dependence there may be a sudden loss of previous tolerance; the mechanism for this is unknown. Clinically, tolerance is exhibited by individuals who are able to display no or few signs of intoxication while at a blood level in which intoxication would be evident in a non-dependent individual.

• Loss of control of consumption: A subjective sense of inability to restrict further consumption once the drug is taken.

• Signs of withdrawal on attempted abstinence: A withdrawal syndrome, characteristic for each drug, may develop. This may be only regularly experienced in the mornings because at all other times the blood level is kept above the required level.

• Drug taking to avoid development of withdrawal symptoms: The user learns to anticipate and avoid withdrawals, (e.g. having the drug available on waking).

• Continued drug use despite negative consequences: The user persists in drug use even when threatened with significant losses as a direct consequence of continued use, (e.g. marital break-up, prison term, loss of job).

• Rapid reinstatement of previous pattern of drug use after abstinence: Characteristically, when the user relapses to drug use after a period of abstinence, they are at risk of a return to the dependent pattern in a much shorter period than the time initially taken to reach dependent use.

**Concept of Addiction**

Addiction is a disease characterised by compulsion, loss of control, and continued use in spite of adverse consequences (Coombs, 1997; Smith & Seymour, 2001). The primary elements of addictive disease are three Cs:

1) **Compulsive use:** an irresistible impulse; repetitive ritualized acts and intrusive, ego-dystonic (i.e., ego alien) thoughts e.g. the person cannot start the day without a cigarette and/or a cup of coffee. Evening means a ritual martini, or two, or three. In and of itself, however, compulsive use doesn’t automatically mean addiction.

2) **Loss of control:** the inability to limit or resist inner urges; once begun it is very difficult to quit, if not impossible, without outside help. This is the pivotal point in addiction. The individual swears that there will be no more episodes, that he or she will go to the party and have two beers. Instead, the person drinks until he or she experiences a blackout and swears the next morning to never do it again; only to repeat the behaviour the following night. The individual may be able to stop for a period of time, or control use for a period of time, but will always return to compulsive, out-of-control use.

3) **Continued use despite adverse consequences:** use of the substance continues inspite of increasing problems that may include declining health, such as liver impairment in the alcohol addict; embarrassment, humiliation, shame; or increasing family, financial, and legal problems.
Drug addiction refers to a situation where drug procurement and administration appear to govern the individual’s behaviour, and where the drug seems to dominate the individual’s motivational hierarchy. Jaffe (1975) has described addiction as “a behavioural pattern of compulsive drug use, characterized by overwhelming involvement with the use of a drug, the securing of its supply, and a high tendency to relapse after withdrawal (abstinence).” This definition follows the general lexical usage of the term and is consistent with the word’s etymology (Bozarth 1987).

Drug addiction is defined behaviourally. It carries no connotations regarding the drug’s potential adverse effects, the social acceptability of drug usage, or the physiological consequences of chronic drug administration (Jaffe 1975). This latter point is especially important because some investigators have mistakenly used the term addiction to describe the development of physical dependence (see Bozarth 1987a, 1989; Jaffe 1975). Although drug addiction frequently has adverse medical consequences, it is usually associated with strong social disapproval, and it is sometimes accompanied by the development of physical dependence, these factors do not define addiction nor are they invariably associated with it. Drug addiction is an extreme case of compulsive drug use associated with strong motivational effects of the drug.

Substance dependence is the term which formally replaced ‘addiction’ in medical terminology in 1964 when the World Health Organizations Expert Committee on Drug Abuse proposed that the terms addiction and habituation be replaced with the term dependence and distinguished between two types- psychological dependence and physical dependence. Psychological dependence refers to “the experience of impaired control over drug use” while physical dependence involves “the development of tolerance and withdrawal symptoms upon cessation of use of the drug, as a consequence of the body’s adaptation to the continued presence of a drug event” (UNIDCP, 1998).

Researchers and clinicians traditionally limit ‘addiction’ to alcohol and other drugs. Yet, neuroadaptation, the technical term for the biological processes of tolerance and withdrawal, also occurs when substance-free individuals become addicted to pathological gambling, pornography, eating, overwork, shopping, and other compulsive excesses.

**Acquisition and Maintenance Phases of Addiction**

Drug addiction is frequently divided into two phases—acquisition and maintenance. This conceptual partition acknowledges that different factors may be involved in these two phases and that different degrees of drug-taking behaviour are associated with these phases. The progression from the acquisition phase to the maintenance phase of addiction is not a quantal change, but rather it represents a shift in the importance of various factors that control the individual’s behaviour along with an increase in the motivational strength of the drug-taking behaviour.

- Prior to the first experience with a drug, the direct rewarding effects of drug administration are largely irrelevant in governing the individual’s behaviour,


- except of course in that expectancies are developed from social interactions (e.g., media exposure, conversations with experienced users).
- Initiation of drug-taking behaviour is governed by intrapersonal and sociological variables such as curiosity about the drug's effects or peer pressure to try the drug.
- After initial exposure to the drug, pharmacological variables are relevant and will influence subsequent drug-taking behaviour.
- Intrapersonal and sociological factors are probably still important in determining continued drug use, but they are less significant as the potent rewarding effects are repeatedly experienced.
- At some point there is a shift in control from intrapersonal/sociological to pharmacological factors in governing drug-taking behaviour. This is concomitant with a marked increase in the motivational strength of the drug and with a progression from casual to compulsive drug use and ultimately to drug addiction. This may occur very rapidly for some drugs such as heroin or free-base cocaine and much more slowly for other drugs such as alcohol.

The division of addiction into two separate phases does not presume that different mechanisms are involved in each phase. Rather, the demarcation acknowledges the possibility of different mechanisms but more importantly emphasizes differences in the motivational strength between the acquisition and maintenance of addictive behaviour. The same psychobiological process underlies both phases but additional variables are important in the acquisition of addiction. These other variables lose much of their influence as the addiction fully develops and as it becomes increasingly under control of basic pharmacological mechanisms.
### Self Assessment Questions 1

1) What is tolerance of drugs?

2) What is harmful use of substances?

3) Drug addiction is frequently divided into two phases such as ________ and ________.

### 2.3 ILLEGAL DRUGS

A study of 300 street child laborers in slums of Surat in 1993 (Bansal & Banerjee) showed that 135 (45%) used substances. The substances used were smoking tobacco, followed by chewable tobacco, snuff, cannabis and opioids. Injecting drug use (Tripathi & Lal, 1999) is also becoming apparent among street children as are inhalants (Praharaaj, Kumar, Verma & Arora, 2008).

There are serious sexually transmitted disease risks, including HIV that women partners and drug users face (Murthy, 2008; Kumar & Sharma, 2008).

The Global Youth Tobacco Survey (Sinha et al.) in 2006 showed that 3.8% of students smoke and 11.9% currently used smokeless tobacco.

There are as many patterns of drug use as drug user and individual patient assessment is mandatory; nonetheless a number of patterns of use of illegal drugs can be recognised:

- **Experimental use:** Use of drug in order to explore effects. Common among young and heavily driven by drug availability and drug use among peers. Very common for softer drugs, (e.g. cannabis, volatile chemicals), rarer for more hard drugs, (e.g. heroin).
- **Situational use:** Drug use limited to certain situations, (e.g. parties, raves). Mainly drugs with stimulant/hallucinogenic properties.
- **Recreational use:** Regular but non-dependent use. May be limited in time by period of life (e.g. ending at the end of university life) or may progress to dependent use.
- **Polydrug use:** Non-dependent use of variety of drugs. One drug may be taken to potentiate the effects of another or to manage unpleasant after effects of drug use. Risks can be additive or multiplicative.
- **Dependent use:** Use of a drug for which a dependence syndrome has developed. Continued use may be motivated more by the desire to avoid withdrawals than by positive drug effects which may have diminished due to the development of tolerance. Tendency is for the use of the dependent drug to predominate, with other drugs being taken only if the primary drug is unavailable.
- **Dual diagnosis use:** Drug users who also suffer from a major mental illness. An important group for therapeutic intervention.
Categories of drugs of abuse

- Opiates e.g., heroin, dihydrocodeine, methadone, codeine, buprenorphine, pethidine.
- Depressants e.g., benzodiazepines, barbiturates, alcohol, GHB.
- Stimulants e.g., amphetamine, cocaine, MDMA.
- Hallucinogens e.g., LSD, PCP, mushrooms, ketamine.
- Others e.g., cannabis, volatile substances, anabolic steroids.

Table 1: COMMONLY ABUSED DRUGS

<table>
<thead>
<tr>
<th>Substances: Category and Name</th>
<th>Commercial and Street Names</th>
<th>How Administered</th>
<th>Intoxication Effects / Potential Health Consequences</th>
</tr>
</thead>
<tbody>
<tr>
<td>CANNABINOIDS</td>
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</tr>
<tr>
<td>Hashish</td>
<td>boom, chronic, gangster, hash, hash oil, hemp</td>
<td>I/swallowed, smoked</td>
<td>euphoria, slowed thinking and reaction time, confusion, impaired balance and coordination / cough, frequent respiratory infections; impaired memory and learning; increased heart rate, anxiety, panic attacks; tolerance</td>
</tr>
<tr>
<td>Marijuana</td>
<td>blunt, dope, ganja, grass, herb, joints, Mary Jane, pot, reefer, sinsemilla, skunk, weed</td>
<td>I/swallowed, smoked</td>
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<tr>
<td>DEPRESSANTS</td>
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<tr>
<td>Barbiturates</td>
<td>Amytal, Nembutal, Seconal, Phenobarbital: barbs, reds, red birds, phennies, tooies, yellows</td>
<td>injected, swallowed</td>
<td>reduced anxiety; feeling of well-being; lowered inhibitions; slowed pulse and breathing; lowered blood pressure; poor concentration / fatigue; confusion; impaired coordination, memory, judgment</td>
</tr>
<tr>
<td>benzodiazepines (other than flunitrazepam)</td>
<td>Ativan, Halcion, Librium, Valium, Xanax: candy, downers, sleeping pills, tranks</td>
<td>injected, swallowed</td>
<td>sedation, drowsiness / depression, unusual excitement, fever, irritability, poor judgment, slurred speech, dizziness,</td>
</tr>
<tr>
<td>flunitrazepam</td>
<td>Rohypnol: forget-me pill, Mexican Valium, R2, Roche, roofies, roofinol, rope, rorphies</td>
<td>swallowed, snorted</td>
<td>visual and gastrointestinal disturbances, urinary retention, memory loss for the time under the drug’s effects</td>
</tr>
<tr>
<td>GHB</td>
<td>gamma-hydroxybutyrate: G, Georgia home boy, grievous bodily harm, liquid ecstasy</td>
<td>swallowed</td>
<td>drowsiness, nausea / vomiting, headache, loss of consciousness, loss of reflexes, seizures, coma, death</td>
</tr>
<tr>
<td>methaqualone</td>
<td>Quaalude, Sopor, Parest: ludes, mandrex, quad, quay</td>
<td>injected, swallowed</td>
<td>euphoria / depression, poor reflexes, slurred speech, coma</td>
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<tr>
<td>Addictions</td>
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<tr>
<td>DISSOCIATIVE ANESTHETICS</td>
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<tr>
<td>ketamine</td>
<td>Ketalar SV: cat Valiums, K, Special K, vitamin K</td>
<td>injected, snorted, smoked</td>
<td>increased heart rate and blood pressure, impaired motor function / memory loss; numbness; nausea / vomiting</td>
</tr>
<tr>
<td>PCP and analogs</td>
<td>phencyclidine: angel dust, boat, hog, love boat, peace pill</td>
<td>injected, swallowed, smoked</td>
<td>at high doses, delirium, depression, respiratory depression and arrest</td>
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<td></td>
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<td>possible decrease in blood pressure and heart rate, panic, aggression, violence/ loss of appetite, depression</td>
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<tr>
<td>HALLUCINOGENS</td>
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<tr>
<td>LSD</td>
<td>lysergic acid diethylamide: acid, blotter, boomers, cubes, microdot, yellow sunshines</td>
<td>swallowed, absorbed through mouth tissues</td>
<td>altered states of perception and feeling; nausea; persisting perception disorder (flashbacks)</td>
</tr>
<tr>
<td>Mescaline</td>
<td>buttons, cactus, mesc, peyote</td>
<td>swallowed, smoked</td>
<td>increased body temperature, heart rate, blood pressure; loss of appetite, sleeplessness, numbness, weakness, tremors</td>
</tr>
<tr>
<td>psilocybin</td>
<td>magic mushroom, purple passion, shrooms</td>
<td>swallowed</td>
<td>persistent mental disorders</td>
</tr>
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<td></td>
<td></td>
<td></td>
<td>nervousness, paranoia</td>
</tr>
<tr>
<td>OPIOIDS &amp; MORPHINE DERIVATIVES</td>
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<tr>
<td>Codeine</td>
<td>Empirin with Codeine, Fiorinal with Codeine, Robitussin A-C, Tylenol with Codeine: Captain Cody, Cody, schoolboy; (with glutethimide) doors &amp; fours, loads, pancakes and syrup</td>
<td>Injected, swallowed</td>
<td>pain relief, euphoria, drowsiness / nausea, constipation, confusion, sedation, respiratory depression and arrest, tolerance, addiction, unconsciousness, coma, death</td>
</tr>
<tr>
<td>fentanyl</td>
<td>Actiq, Duragesic, Sublimaze: Apache, China girl, China white, dance fever, friend, goodfella, jackpot, murder 8, TNT, Tango and Cash</td>
<td>injected, smoked, snorted</td>
<td>less analgesia, sedation, and respiratory depression than morphine</td>
</tr>
<tr>
<td>Heroin</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Substance</td>
<td>Common Names</td>
<td>Routes of Administration</td>
<td>Additional Effects</td>
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<tr>
<td>Morphine</td>
<td>diacetylmorphine: brown sugar, dope, H, horse, junk, skag, skunk, smack, white horse</td>
<td>injected, smoked, snorted</td>
<td>staggering gait</td>
</tr>
<tr>
<td>Opium</td>
<td>Roxanol, Duramorph: M, Miss Emma, monkey, white stuff</td>
<td>injected, swallowed, smoked</td>
<td></td>
</tr>
<tr>
<td>Oxycodone HCL</td>
<td>laudanum, paregoric: big O, black stuff, block, gum, hop</td>
<td>swallowed, smoked</td>
<td></td>
</tr>
<tr>
<td>hydrocodonebitartrate, acetaminophen</td>
<td>OxyContin: Oxy, O.C., killer</td>
<td>swallowed, snorted, injected</td>
<td></td>
</tr>
<tr>
<td>Vicodin: vike, Watson-387</td>
<td></td>
<td>swallowed</td>
<td></td>
</tr>
<tr>
<td>STIMULANTS</td>
<td>Biphetamine, Dexedrine: bennies, black beauties, crosses, hearts, LA turnaround, speed, truck drivers, uppers</td>
<td>injected, swallowed, snorted, truck drivers, uppers snorted</td>
<td>increased heart rate, blood pressure, metabolism; feelings of exhilaration, energy, increased mental alertness / rapid or irregular heart beat; reduced appetite, weight loss, heart failure, nervousness, insomnia</td>
</tr>
<tr>
<td>Amphetamine</td>
<td>Cocaine hydrochloride: blow, bump, C, candy, Charlie, coke, crack, flake, rock, snow, foot</td>
<td>injected, smoked, snorted</td>
<td>rapid breathing / tremor, loss of coordination; irritability, anxiousness, restlessness, delirium, panic, paranoia, impulsive behavior, aggressiveness, tolerance, addiction, psychosis</td>
</tr>
<tr>
<td>Cocaine</td>
<td>Adam, clarity, ecstasy, Eve, lover’s speed, peace, STP, X, XTC</td>
<td>swallowed</td>
<td>increased temperature / chest pain, respiratory failure, nausea, abdominal pain, strokes, seizures, headaches, malnutrition, panic attacks</td>
</tr>
<tr>
<td>MDMA (methylendioxymethamphetamine)</td>
<td>Desoxyn: chalk, crank, crystal, fire, glass, go fast, ice, meth, speed</td>
<td>injected, swallowed, smoked, snorted</td>
<td>mild hallucinogenic effects, increased tactile sensitivity, empathic feelings / impaired memory and learning, hyperthermia, cardiac toxicity, renal failure, liver toxicity</td>
</tr>
<tr>
<td>Methamphetamine</td>
<td>Ritalin: JIF, MPH, R-ball, Skippy, the smart drug, vitamin R</td>
<td>injected, swallowed, snorted</td>
<td>aggression, violence, psychotic behavior / memory loss, cardiac and neurological damage; impaired memory and learning, tolerance</td>
</tr>
<tr>
<td>Methylphenidate (safe and effective for treatment of ADHD)</td>
<td>cigarettes, cigars, smokeless tobacco, snuff, spit tobacco, bids, chew</td>
<td>smoked, snorted, taken in snuff and spit tobacco</td>
<td>additional effects attributable to tobacco exposure: adverse pregnancy outcomes; chronic lung disease, cardiovascular disease, stroke</td>
</tr>
<tr>
<td>nicotine</td>
<td></td>
<td></td>
<td>cancer; tolerance</td>
</tr>
</tbody>
</table>
2.3.1 Opiates

The opiates are a group of chemicals derived from the opium poppy (papaver somniferum); synthetic compounds with similar properties are called opioids. They have potent analgesic properties and as such have wide legitimate uses in medicine. They are widely abused for their euphoriant and anxiolytic properties. Heroin is the most frequently abused opiate.

2.3.2 Depressants

Drugs of this group produce their effects by generalised or specific cortical depression. They include the benzodiazepines, alcohol, and the barbiturates. They can be taken for their pleasurable anxiolytic and relaxant properties alone, or as a way of counteracting unpleasant side-effects of other drugs of abuse.

2.3.3 Stimulants

These drugs potentiate neuro-transmission and increase cortical excitability producing effects of increased alertness and endurance, diminished need for sleep, and a subjective sense of well-being. They include cocaine (and crack cocaine), amphetamines, 3,4-methylenedioxymethamphetamine (MDMA or ecstasy), and caffeine.

2.3.4 Hallucinogens

Hallucinogens (or psychedelics) are a heterogeneous group of natural and synthetic substances which produce altered sensory and perceptual experiences. They include: lysergic acid diethylamide (LSD), phenylcyclidine (PCP), magic mushrooms, ketamine, mescaline, 2,5-di-methoxy 4-methylamphetamine (DOM), and dimethyltriptamine (DMT).
2.3.5 Other Drugs

a) Cannabis

This is the most commonly used illegal drug, with only a small minority of its users ever using another illegal drug. It has been used for centuries as a pleasurable mind-altering substance and as a medication for a wide variety of ailments. Clinical trials are underway to clarify its role in the treatment of chronic pain. Its illegal use is of interest to psychiatrists because of its association with other drugs of abuse (as a gateway drug) and because of its exacerbating effect on chronic psychotic illnesses.

Cannabis is produced from the dried leaves, flowers, stems, and seeds of the weed Cannabis Sativa. It may be distributed as herbal material (grass or marijuana), as a resin (hash), or as cannabis oil. Cannabis may be smoked in cigarettes, alone, or mixed with tobacco; the resin form may be eaten directly or incorporated into foodstuffs (e.g. cakes).

Usage pattern is very variable, from infrequent situational use to daily heavy use; the latter at highest risk of harmful effects and most likely to take other drugs.

The effects of intoxication are apparent within minutes if the drug is smoked, peaking in 30 minutes and lasting 2-5 hours. The effects of orally consumed cannabis are slower to begin and more prolonged. The immediate effects include mild euphoria, a sense of enhanced well-being, subjective sense of enhanced sensation, relaxation, altered time sense, and increased appetite. Physically there is mild tachycardia and variable dysarthria and ataxia.

Acute harmful effects include mild paranoia, panic attacks, and accidents associated with delayed reaction time. Cannabis is normally smoked with tobacco, therefore all of the health risks associated with tobacco will also apply. The tendency of cannabis smokers to inhale deeply and to retain the smoke in the lungs for as long as possible will exacerbate this risk. Chronic harmful effects include dysthymia, anxiety/depressive illnesses, the disputed amotivational syndrome (possibly representing a combination of chronic intoxication in a heavy user and a long half-life). The drug is not usually associated with physical dependency but there is a mild but characteristic withdrawal syndrome in very heavy regular users. Cannabis use can precipitate an episode of or relapse of schizophrenia. In addition, in regular users it is associated with dose-related paranoid ideation and other psychotic features.

b) Volatile substances

Simple hydrocarbons such as acetone, toluene, xylene, and butane have intoxicant properties. These chemicals are found in a variety of common products including glue, solvents, lighter fuel, paint stripper, fire extinguishers, aerosols, paints, petrol, typewriter correcting fluid, and nail varnish remover. They are rapidly absorbed when deeply inhaled or by sniffing propellant gases or aerosols. They cause non-specific increased permeability of nerve cell membranes and produce euphoriant effects, disinhibition, slurred speech and blurred vision, and visual misperceptions.

Acute harmful effects include local irritation, headache, cardiac arrhythmias, acute suffocation by bag or laryngeal oedema, unconsciousness, and sudden death. Chronic harmful effects include liver and kidney damage, memory/concentration impairment, and probable long-term cognitive impairment. There is a withdrawal syndrome similar to alcohol in very heavy regular users.
c) **Anabolic steroids**

These prescription-only medicines (e.g. nandrolone and stanozolol) have limited legitimate uses in the treatment of aplastic anaemia and osteoporosis. They can be abused by athletes and body builders seeking competitive advantage or, more rarely, for their euphoriant effects alone. They produce increased muscle mass and strength, with increased training time and reduced recovery time as well as euphoriant effects and a sense of increased energy levels.

Use of anabolic steroids is associated with physical health problems including hypertension, hypogonadism, gynaecomastia, amenorrhoea, liver damage, impotence, and male pattern baldness; and with mental health problems including acute emotional instability.

### 2.4 ASSESSMENT OF THE DRUG USER

In most cases an assessment of a patient’s history of drug use will form part of a routine psychiatric interview. In addition, all doctors should consider the possibility of, and be prepared to ask about, comorbid drug misuse when interviewing patients for other reasons. The more detailed assessment described here is appropriate for patients in whom drug use is the primary focus of clinical concern and who are being assessed for entry into a treatment programme. The detailed assessment of a patient with drug use problems will usually be carried out over more than one consultation. There are only a few circumstances (such as an opiate-dependent patient presenting as an acute medical emergency), where treatment should be considered before full assessment. History should cover the following topics:

a) **Background information**

Name, address, next of kin, GP, names of other professionals involved (e.g. social worker, probation officer).

b) **Reasons for consultation now**

Why has the drug user presented now, (e.g. pressure from family, pending conviction, had enough, increasing difficulty injecting)?: What does the user seek from the program? In females, is there a possibility of pregnancy?

c) **Current drug use**

Enquire about each drug taken over the previous 4 weeks. Describe the frequency of use (e.g. daily, most days, at weekends); and the number of times taken each day. Record the amount taken and the route. Ask the user about episodes of withdrawal. Include alcohol, tobacco, and cannabis. If there is IV use, inquire about needle or other equipment sharing.

d) **Lifetime drug use**

Record the age at first use of drugs and the changing pattern of drug use until the most recent consultation. Enquire about periods of abstinence or stability and the reasons for this (e.g. prison, relationship, treatment programme).

e) **Complications of drug use**

Overdoses deliberate or accidental. History of cellulitis, abscesses, or phlebitis. Hepatitis B and C and HIV status if known.
f) Previous treatment episodes
Timing, locus, and type of previous drug treatment. How did the treatment attempt end? Was the treatment helpful?

g) Medical and psychiatric history
All episodes of medical or psychiatric inpatient care. Contact with hospital specialists. Current health problems. Relationship with GP.

h) Family history
Are there other family members with drug or alcohol problems? Family history of medical or psychiatric problems.

i) Social history
Current accommodation. How stable is this accommodation? Sexual orientation and number of sexual partners. Enquire about safe sex precautions. Describe the user’s relationship: sexual, personal, and family. Note how many of these individuals currently use drugs.

j) Forensic history
Previous or pending convictions. Periods of imprisonment. Enquire about continuing criminal activity to support drug use (remind the patient about confidentiality).

k) Patient’s aims in seeking treatment
What is the patient’s attitude to drug use? What treatment options do they favour?

l) Mental status examination (MSE)
Observe for history or objective signs of depressed mood or suicidal thoughts or plans. Inquire directly about generalised anxiety and panic attacks (a benzodiazepine user may be self medicating a neurotic condition). Inquire directly about paranoid ideas and hallucinatory experiences and the directness or otherwise of their relationship with drug use.

m) Physical examination

n) Urine screening
This is essential. Several specimens should be taken over several weeks. Repeated absence of evidence of a drug on screening make its dependent use unlikely. Occasionally, testing errors do occur so do not take action (e.g. stopping maintenance prescription) on the basis of the results of a single sample.

o) Blood testing
FBC, LFT, discuss with patient the need for HIV and Hepatitis screening.

Standardised assessment and screening tools: Such tools can be a useful means of gathering data by providing an objective (reliable and valid) view of the client’s difficulties and current life situation (Ries, 1995; Winters, 1999). Furthermore, when conducted appropriately the process of standardised assessment can be a source of rapport building.
## Summary of available screening and assessment measures

<table>
<thead>
<tr>
<th>Instrument</th>
<th>Utility/Measures</th>
<th>Administration</th>
<th>Strengths</th>
<th>Limitations</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>GLOBAL INSTRUMENTS</strong></td>
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<tr>
<td>Addiction Severity Index (ASI)</td>
<td>Assessment and outcome measurement, 30-day &amp; lifetime alcohol use, drug use, medical problems, psychiatric problems, family/social problems, employment, legal problems.</td>
<td>Interview or self-report</td>
<td>Widely used across a range of population groups.</td>
<td>Psychometric and interpretation concerns. Less extensive Australian use. Lengthy.</td>
<td>No</td>
</tr>
<tr>
<td>Brief Treatment Outcome Measure (BTOM) / Australian Alcohol Treatment Outcome Measure (AATOM)</td>
<td>Outcome measurement. Bloodborne virus risk, drug use, social and psychological functioning, health.</td>
<td>Interview</td>
<td>Adequate reliability and validity. Australian. No training required. Previous use within D&amp;A sector in NSW. Public domain.</td>
<td>Limited testing across populations.</td>
<td>No</td>
</tr>
<tr>
<td>Health of the Nation Outcome Scale (HoNOS)</td>
<td>Assessment and outcome measurement. Severity of aggression, self-harm, D&amp;A use, memory/orientation, physical problems, mood disturbance, hallucinations and delusions, other mental, social relationships/environment.</td>
<td>Interview</td>
<td>Generally adequate validity and reliability. Thoroughly evaluated and externally used across a range of populations (incl. Indigenous Australians). Public domain.</td>
<td>Intolerable refusal concerns. Training required.</td>
<td>No</td>
</tr>
<tr>
<td>Maudsley Addiction Profile (MAP)</td>
<td>Outcome measurement. Substance use, health risk behaviour, physical and psychological health, social functioning.</td>
<td>Self-report or interview</td>
<td>Adequate reliability and validity. Used widely across different cultural groups. Public domain.</td>
<td>Limited validation in specific population groups and outside of Europe.</td>
<td>No</td>
</tr>
<tr>
<td>Opiate Treatment Index (OTI)</td>
<td>Assessment and outcome measurement. D&amp;A use, risk taking, social functioning, criminality, health status, psychological adjustment.</td>
<td>Interview</td>
<td>Good psychometrics across a range of cultures. Brief and simple to administer. Includes brief intervention strategies. Public domain.</td>
<td>Limited empirical evidence for sub-populations.</td>
<td>No</td>
</tr>
<tr>
<td><strong>Alcohol, Smoking and Substance Involvement Screening Test (ASSIST)</strong></td>
<td>Screening. D&amp;A use and risk (lifetime/exist substance use, specific substance involvement, frequency, dependence, abuse, intravenous drug use).</td>
<td>Interview</td>
<td>Good psychometrics across a range of cultures. Brief and simple to administer. Includes brief intervention strategies. Public domain.</td>
<td></td>
<td>No</td>
</tr>
<tr>
<td><strong>Alcohol Use Disorders Identification Test (AUDIT)</strong></td>
<td>Screening and outcome measurement. Alcohol use: consumption, dependence, and related problems.</td>
<td>Self-report or interview</td>
<td>Freely available. Brief. Good psychometrics across a vast range of populations (incl. mentally ill). No training required. Australian version.</td>
<td>Concerns about utility in females, Indigenous and older populations. Intended for general populations.</td>
<td>No</td>
</tr>
<tr>
<td>Dartmouth Assessment of Lifestyle Instrument (DALI)</td>
<td>Screening. Substance use disorders use with people with severe mental illness.</td>
<td>Interview</td>
<td>Brief and simple. No special training required. Adequate psychometrics.</td>
<td>Limited studies in different populations.</td>
<td>No</td>
</tr>
<tr>
<td>Drug Abuse Screening Test (DAST)</td>
<td>Screening and assessment. Identify problem drug use.</td>
<td>Self-report or interview</td>
<td>Brief. Freely available. Good psychometrics across a range of populations (incl. mentally ill).</td>
<td>Concerns over applicability to women and across cultures. Does not discriminate between past and present use.</td>
<td>No</td>
</tr>
<tr>
<td>Michigan Alcoholism Screening Test (MAST)</td>
<td>Screening and assessment. Identify problem alcohol use.</td>
<td>Self-report or interview</td>
<td>Brief. Public domain. Good psychometrics across a range of populations (incl. mentally ill). No training required for use.</td>
<td>Does not discriminate between past and present drinking. Concerns over applicability to women and across cultures.</td>
<td>No</td>
</tr>
<tr>
<td>T-ACE/TWEEAK</td>
<td>Screening. Specifically designed to identify at-risk drinking patterns (women but has some utility in other groups).</td>
<td>Interview</td>
<td>Available online without cost. Very brief. Moderate psychometrics. No training required.</td>
<td>Does not provide a picture of pattern of use. Debate over suitable cut-off scores.</td>
<td>No</td>
</tr>
<tr>
<td><strong>D&amp;A SEVERITY INSTRUMENTS</strong></td>
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<tr>
<td>Alcohol Dependence Scale (ADS)</td>
<td>Assessment and outcome measurement. Identify and assess alcohol abuse and dependence.</td>
<td>Self-report</td>
<td>Adequate psychometrics. Brief. Fairly widely used in a variety of populations.</td>
<td>Copyrighted/cost.</td>
<td>Yes</td>
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Self Assessment Questions 2

1) What information is collected as part of History during assessment of the drug abuser?

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2) What are Hallucinogens?

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3) What are the categories of drugs of abuse?

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2.5 TREATMENT AND MANAGEMENT OF SUBSTANCE ABUSE AND ADDICTIONS

The longer-term goal of treatment will be eventual abstinence from drugs, but this may not be an achievable short-or medium-term goal in an individual case. Immediate treatment aims are therefore: to reduce drug related mortality and morbidity; to reduce...
Addictions

community infection rates; to reduce criminal activity, including the need for drug users to sell to others to finance their own habit; to optimise the patient’s physical and mental health; and to stabilise where appropriate on an alternative substitute drug. The following things can be kept in mind.

i) Make diagnosis


Where there is evidence of psychotic illness or severe depressive illness the patient may require inpatient assessment.

ii) Engage in service

Treatment of drug misuse cannot be carried out through one off interventions. Patients should be engaged in the service by empathic and non-judgemental interviewing, availability of the service close to the point of need, and ability of the service to respond to change in a previously ambivalent patient. Substitute prescribing will be a strong motivator for engagement in some patients but should always also have a role in helping the patient achieve some worthwhile change.

iii) Decide treatment goals and methods

After assessment and diagnosis the doctor should discuss with the patient their thoughts about treatment options given the patient’s drug history and local treatment availability. The doctor may have strong feelings about the appropriateness of a certain treatment but this will not be successful unless the patient agrees. Plans may include:

- Return to dependent use as previously. Where individuals present in withdrawals, without other medical surgical or psychiatric reasons for admission, and where there is no history of complicated withdrawal, and where there has been no previous involvement in treatment services, it is inappropriate to prescribe. The individual should not receive replacement medication. They should be offered the opportunity to attend for further assessment.

- Counselling and support for non-dependent drug use particularly episodic use this may be the appropriate course. Give drug information and harm-reduction advice, possibly coupled with referral to a community resource.

- Detoxification: Where there is drug dependence and the patient wishes abstinence, then a plan for detox is considered. This may be community-based, with psychological support, symptomatic medication, or reducing substitute medication, or as an inpatient. Consideration should be given to support after detox. How is abstinence to be maintained?
  - Supported detox without prescription: Some individuals can withdraw from drugs of dependence without use of a prescription. This may occur particularly where other changes in a person’s life (e.g. change of area, break from dependent partner) facilitate abstinence. Unsupported detox without any medical help is frequently reported by users.
  - Supported detox with symptomatic medication. Here, in addition to the support mentioned above, the individual is prescribed other, non-replacement
drugs to ameliorate withdrawal symptoms (e.g. lofexidine in opiate withdrawal).

- Conversion to substitute drug with aim of detox Here the aim is to convert the individual’s drug use from street-bought to prescribed. Then, from a period of stability, attempt supervised reduction in dose, aiming towards abstinence.

- Conversion to substitute drug with aim of maintenance. Here the aim again is to convert from street to prescribed drugs, with stabilisation via maintenance prescribing in the medium term. In a dependent user who does not feel that they can move to abstinence in the short term, maintenance prescribing to suitably selected patients is useful and associated with overall health benefits.

iv) Address other needs

The drug treatment service should consider part of its role as being a gateway to other services which the drug user may require but be reluctant or unable to approach independently. Patients with social, financial, or physical health needs should have these explored and the need for referral considered. Do not make such referrals without the knowledge and agreement of the patient. Review psychiatric symptoms which have been attributed to drug use to assess their resolution. Consider in-house or specialist psychiatric treatment of residual anxiety/depressive symptoms.

Principles in the management of Substance Abuse and Addictions

Addiction is a brain disease. While the path to drug addiction begins with the act of taking drugs, over time a person’s ability to choose not to do so becomes compromised, and seeking and consuming the drug becomes compulsive. This behaviour results largely from the effects of prolonged drug exposure on brain functioning. Addiction affects multiple brain circuits, including those involved in reward and motivation, learning and memory, and inhibitory control over behaviour. Some individuals are more vulnerable than others to becoming addicted, depending on genetic makeup, age of exposure to drugs, other environmental influences, and the interplay of all these factors.

Addiction is often more than just compulsive drug taking—it can also produce far-reaching consequences. For example, drug abuse and addiction increase a person’s risk for a variety of other mental and physical illnesses related to a drug-abusing lifestyle or the toxic effects of the drugs themselves. Additionally, a wide range of dysfunctional behaviours can result from drug abuse and interfere with normal functioning in the family, the workplace, and the broader community. Because drug abuse and addiction have so many dimensions and disrupt so many aspects of an individual’s life, treatment is not simple. Effective treatment programs typically incorporate many components, each directed to a particular aspect of the illness and its consequences. Addiction treatment must help the individual stop using drugs, maintain a drug-free lifestyle, and achieve productive functioning in the family, at work, and in society.

Thus, treatment planning must be multidimensional and recognize that there is more than one effective treatment for substance dependence. However, there are certain basic treatment principles that apply across modalities.

Principles of Effective Treatment

Scientific research in the west since the mid-1970s shows that treatment can help patients addicted to drugs stop using, avoid relapse, and successfully recover their lives. Based on this research, key principles have emerged that should form the basis of any effective treatment programs:
Addiction is a complex but treatable disease that affects brain function and behaviour: Drugs of abuse alter the brain’s structure and function, resulting in changes that persist long after drug use has ceased. This may explain why drug abusers are at risk for relapse even after long periods of abstinence and despite the potentially devastating consequences.

No single treatment is appropriate for everyone: Matching treatment settings, interventions, and services to an individual’s particular problems and needs is critical to his or her ultimate success in returning to productive functioning in the family, workplace, and society.

Treatment needs to be readily available: Because drug-addicted individuals may be uncertain about entering treatment, taking advantage of available services the moment people are ready for treatment is critical. Potential patients can be lost if treatment is not immediately available or readily accessible. As with other chronic diseases, the earlier treatment is offered in the disease process, the greater the likelihood of positive outcomes.

Effective treatment attends to multiple needs of the individual, not just his or her drug abuse: To be effective, treatment must address the individual’s drug abuse and any associated medical, psychological, social, vocational, and legal problems. It is also important that treatment be appropriate to the individual’s age, gender, ethnicity, and culture.

Remaining in treatment for an adequate period of time is critical: The appropriate duration for an individual depends on the type and degree of his or her problems and needs. Research indicates that most addicted individuals need at least 3 months in treatment to significantly reduce or stop their drug use and that the best outcomes occur with longer durations of treatment. Recovery from drug addiction is a long-term process and frequently requires multiple episodes of treatment. As with other chronic illnesses, relapses to drug abuse can occur and should signal a need for treatment to be reinstated or adjusted.

Counseling—individual and/or group—and other behavioural therapies are the most commonly used forms of drug abuse treatment: Behavioural therapies vary in their focus and may involve addressing a patient’s motivation to change, providing incentives for abstinence, building skills to resist drug use, replacing drug-using activities with constructive and rewarding activities, improving problem-solving skills, and facilitating better interpersonal relationships. Also, participation in group therapy and other peer support programs during and following treatment can help maintain abstinence.

Medications are an important element of treatment for many patients, especially when combined with counseling and other behavioural therapies: For example, methadone and buprenorphine are effective in helping individuals addicted to heroin or other opioids stabilize their lives and reduce their illicit drug use. Naltrexone is also an effective medication for some opioid-addicted individuals and some patients with alcohol dependence.

An individual’s treatment and services plan must be assessed continually and modified as necessary to ensure that it meets his or her changing needs: A patient may require varying combinations of services and treatment components during the course of treatment and recovery. In addition to counseling or psychotherapy, a patient may require medication, medical services, family therapy, parenting instruction, vocational rehabilitation, and/or social and legal services. For many patients, a continuing care approach provides the best results.
with the treatment intensity varying according to a person’s changing needs.

- **Many drug-addicted individuals also have other mental disorders:** Because drug abuse and addiction—both of which are mental disorders—often co-occur with other mental illnesses, patients presenting with one condition should be assessed for the other(s). And when these problems co-occur, treatment should address both (or all), including the use of medications as appropriate.

- **Medically assisted detoxification is only the first stage of addiction treatment and by itself does little to change long-term drug abuse:** Although medically assisted detoxification can safely manage the acute physical symptoms of withdrawal and, for some, can pave the way for effective long-term addiction treatment, detoxification alone is rarely sufficient to help addicted individuals achieve long-term abstinence. Thus, patients should be encouraged to continue drug treatment following detoxification.

- **Treatment does not need to be voluntary to be effective:** Sanctions or enticements from family, employment settings, and/or the criminal justice system can significantly increase treatment entry, retention rates, and the ultimate success of drug treatment interventions.

- **Drug use during treatment must be monitored continuously, as lapses during treatment do occur:** Knowing their drug use is being monitored can be a powerful incentive for patients and can help them withstand urges to use drugs. Monitoring also provides an early indication of a return to drug use, signaling a possible need to adjust an individual’s treatment plan to better meet his or her needs.

- **Treatment programs should assess patients for the presence of HIV/AIDS, hepatitis B and C, tuberculosis, and other infectious diseases as well as provide targeted risk reduction counseling to help patients modify or change behaviours that place them at risk of contracting or spreading infectious diseases:** Typically, drug abuse treatment addresses some of the drug-related behaviours that put people at risk of infectious diseases. Targeted counseling specifically focused on reducing infectious disease risk can help patients further reduce or avoid substance-related and other high-risk behaviours. Counseling can also help to manage their illness.

You can refer to Table 2 of Section 1.8 in the Unit 1 regarding choosing an appropriate treatment setting.

**Comprehensive Drug Abuse Treatment**
Optimum care will involve engaging the patients with the service, exploring and encouraging motivation to change, and suggesting harm reduction strategies. It should always be a comprehensive treatment plan addressing the various needs of the individual and involving the family and the community.

**Medical Detoxification**

A process whereby individuals are systematically withdrawn from addicting drugs in an inpatient or outpatient setting, typically under the care of a physician. Detoxification is sometimes called a distinct treatment modality but is more appropriately considered a precursor of treatment, because it is designed to treat the acute physiological effects of stopping drug use. Medications are available for detoxification from opiates, nicotine, benzodiazepines, alcohol, barbiturates, and other sedatives. In some cases, particularly for the last three types of drugs, detoxification may be a medical necessity, and untreated withdrawal may be medically dangerous or even fatal. Detoxification is not designed to address the psychological, social, and behavioural problems associated with addiction and therefore does not typically produce lasting behavioural changes necessary for recovery. Detoxification is most useful when it incorporates formal processes of assessment and referral to subsequent drug addiction treatment.

**Scientifically based psychological approaches to drug addiction treatment**

**Relapse Prevention:** A cognitive behavioural therapy, it was developed for the treatment of problem drinking and adapted later for cocaine addicts. Cognitive-behavioural strategies are based on the theory that learning processes play a critical role in the development of maladaptive behavioural patterns. Individuals learn to identify and correct problematic behaviours. Relapse prevention encompasses several cognitive-behavioural strategies that facilitate abstinence as well as provide help for people who experience relapse. The relapse prevention approach to the treatment of cocaine addiction consists of a collection of strategies intended to enhance self-control. Specific techniques include exploring the positive and negative consequences of continued use, self-monitoring to recognize drug cravings early on and to identify high-risk situations for use, and developing strategies for coping with and avoiding high-risk situations and the desire to use. A central element of this treatment is anticipating the problems patients are likely to meet and helping them develop effective coping strategies. Research indicates that the skills individuals learn through relapse prevention therapy remain after the completion of treatment. In one study, most people receiving this cognitive-behavioural approach maintained the gains they made in treatment throughout the year following treatment.

**Cognitive Behaviour Therapy:** Suitable for Alcohol, Marijuana, Cocaine, Methamphetamine, Nicotine abuse and dependence. Cognitive-behavioural therapy was developed as a method to prevent relapse when treating problem drinking, and later was adapted for cocaine-addicted individuals. Cognitive-behavioural strategies are based on the theory that learning processes play a critical role in the development of maladaptive behavioural patterns. Individuals learn to identify and correct problematic behaviours by applying a range of different skills that can be used to stop drug abuse and to address a range of other problems that often co-occur with it. Cognitive-behavioural therapy generally consists of a collection of strategies intended to enhance self-control. Specific techniques include exploring the positive and negative consequences of continued use, self-monitoring to recognize drug cravings early on and to identify high risk situations for use, and developing strategies for coping with and avoiding high-risk situations and the desire to use. A central element of this treatment is anticipating likely problems and helping patients develop effective coping strategies.
Supportive-Expressive Psychotherapy: It is a time-limited, focused psychotherapy that has been adapted for heroin- and cocaine-addicted individuals. The therapy has two main components:

- Supportive techniques to help patients feel comfortable in discussing their personal experiences.
- Expressive techniques to help patients identify and work through interpersonal relationship issues. Special attention is paid to the role of drugs in relation to problem feelings and behaviours, and how problems may be solved without recourse to drugs.

Individualized Drug Counseling: Focuses directly on reducing or stopping the addict’s illicit drug use. It also addresses related areas of impaired functioning such as employment status, illegal activity, family/social relations, as well as the content and structure of the patient’s recovery program. Through its emphasis on short-term behavioural goals, individualized drug counseling helps the patient develop coping strategies and tools for abstaining from drug use and then maintaining abstinence. The addiction counselor encourages 12-step participation and makes referrals for needed supplemental medical, psychiatric, employment, and other services. Individuals are encouraged to attend sessions one or two times per week. In a study that compared opiate addicts receiving only methadone to those receiving methadone coupled with counseling, individuals who received only methadone showed minimal improvement in reducing opiate use. The addition of counseling produced significantly more improvement. The addition of onsite medical/psychiatric, employment, and family services further improved outcomes.

In another study with cocaine addicts, individualized drug counseling, together with group drug counseling, was quite effective in reducing cocaine use. Thus, it appears that this approach has great utility with both heroin and cocaine addicts in outpatient treatment.

Motivational Enhancement Therapy: A client-centered counseling approach for initiating behaviour change by helping clients to resolve ambivalence about engaging in treatment and stopping drug use. This approach employs strategies to evoke rapid and internally motivated change in the client, rather than guiding the client stepwise through the recovery process.

This therapy consists of an initial assessment battery session, followed by two to four individual treatment sessions with a therapist. The first treatment session focuses on providing feedback generated from the initial assessment battery to stimulate discussion regarding personal substance use and to elicit self-motivational statements. Motivational interviewing principles are used to strengthen motivation and build a plan for change. Coping strategies for high-risk situations are suggested and discussed with the client. In subsequent sessions, the therapist monitors change, reviews cessation strategies being used, and continues to encourage commitment to change or sustained abstinence. Clients are sometimes encouraged to bring a significant other to sessions. This approach has been used successfully with alcoholics, nicotine and marijuana-dependent individuals.

Behavioural Therapy for Adolescents: Incorporates the principle that unwanted behaviour can be changed by clear demonstration of the desired behaviour and consistent reward of incremental steps toward achieving it. Therapeutic activities include fulfilling specific assignments, rehearsing desired behaviours, and recording and reviewing progress, with praise and privileges given for meeting assigned goals. Urine samples are collected regularly to monitor drug use. The therapy aims to equip the patient to gain three types of control:
Stimulus Control helps patients avoid situations associated with drug use and learn to spend more time in activities incompatible with drug use.

Urge Control helps patients recognize and change thoughts, feelings, and plans that lead to drug use.

Social Control involves family members and other people important in helping patients avoid drugs. A parent or significant other attends treatment sessions when possible and assists with therapy assignments and reinforcing desired behaviour.

Multidimensional Family Therapy (MDFT): For adolescents, it is an outpatient family-based drug abuse treatment. MDFT views adolescent drug use in terms of a network of influences (that is, individual, family, peer, community) and suggests that reducing unwanted behaviour and increasing desirable behaviour occur in multiple ways in different settings. Treatment includes individual and family sessions held in the clinic, in the home, or with family members at the family court, school, or other community locations. During individual sessions, the therapist and adolescent work on important developmental tasks, such as developing decision making, negotiation, and problem-solving skills. Teenagers acquire skills in communicating their thoughts and feelings to deal better with life stressors, and vocational skills. Parallel sessions are held with family members. Parents examine their particular parenting style, learning to distinguish influence from control and to have a positive and developmentally appropriate influence on their child.

Multisystemic Therapy (MST): Addresses the factors associated with serious antisocial behaviour in children and adolescents who abuse drugs. These factors include characteristics of the adolescent (for example, favorable attitudes toward drug use), the family (poor discipline, family conflict, parental drug abuse), peers (positive attitudes toward drug use), school (dropout, poor performance), and neighborhood (criminal subculture). By participating in intense treatment in natural environments (homes, schools, and neighborhood settings) most youths and families complete a full course of treatment. MST significantly reduces adolescent drug use during treatment and for at least 6 months after treatment. Reduced numbers of incarcerations and out-of-home placements of juveniles offset the cost of providing this intensive service and maintaining the clinicians’ low caseloads.

12 Step Facilitation Therapy: Used for the treatment of Alcohol, Stimulants, Opiate dependence and abuse. Twelve-step facilitation therapy is an active engagement strategy designed to increase the likelihood of a substance abuser becoming affiliated with and actively involved in 12 step self-help groups and, thus, promote abstinence.

Three key aspects predominate: acceptance, which includes the realization that drug addiction is a chronic, progressive disease over which one has no control, that life has become unmanageable because of drugs, that willpower alone is insufficient to overcome the problem, and that abstinence is the only alternative; surrender, which involves giving oneself over to a higher power, accepting the fellowship and support structure of other recovering addicted individuals, and following the recovery activities laid out by the 12 step program; and active involvement in 12 step meetings and related activities. While the efficacy of 12 step programs (and 12 step facilitation) in treating alcohol dependence has been established, the research on other abused drugs is more preliminary but promising for helping drug abusers sustain recovery.

Community Reinforcement Approach (CRA) Plus Vouchers: This is an intensive 24-week outpatient therapy for treatment of cocaine and alcohol addiction. The treatment goals are twofold:
● To achieve cocaine abstinence long enough for patients to learn new life skills that will help sustain abstinence.

● To reduce alcohol consumption for patients whose drinking is associated with cocaine use.

Patients attend one or two individual counseling sessions per week, where they focus on improving family relations, learning a variety of skills to minimize drug use, receiving vocational counseling, and developing new recreational activities and social networks. Those who also abuse alcohol receive clinic-monitored disulfiram (Antabuse) therapy. Patients submit urine samples two or three times each week and receive vouchers for cocaine-negative samples.

The value of the vouchers increases with consecutive clean samples. Patients may exchange vouchers for retail goods that are consistent with a cocaine-free lifestyle. This approach facilitates patients’ engagement in treatment and systematically aids them in gaining substantial periods of cocaine abstinence.

**Voucher-Based Reinforcement Therapy In Methadone Maintenance Treatment:**

Helps patients achieve and maintain abstinence from illegal drugs by providing them with a voucher each time they provide a drug-free urine sample. The voucher has monetary value and can be exchanged for goods and services consistent with the goals of treatment. Initially, the voucher values are low, but their value increases with the number of consecutive drug-free urine specimens the individual provides. Cocaine- or heroin positive urine specimens reset the value of the vouchers to the initial low value. The contingency of escalating incentives is designed specifically to reinforce periods of sustained drug abstinence. Studies show that patients receiving vouchers for drug-free urine samples achieved significantly more weeks of abstinence and significantly more weeks of sustained abstinence than patients who were given vouchers independent of urine analysis results.

**The Matrix Model:** The model provides a framework for engaging stimulant abusers in treatment and helping them achieve abstinence. Patients learn about issues critical to addiction and relapse, receive direction and support from a trained therapist, become familiar with self-help programs, and are monitored for drug use by urine testing. The program includes education for family members affected by the addiction. The therapist functions simultaneously as teacher and coach, fostering a positive, encouraging relationship with the patient and using that relationship to reinforce positive behaviour change. Therapists are trained to conduct treatment sessions in a way that promotes the patient’s self-esteem, dignity, and self-worth. A positive relationship between patient and therapist is a critical element for patient retention. Treatment materials draw heavily on other tested treatment approaches. Thus, this approach includes elements pertaining to the areas of relapse prevention, family and group therapies, drug education, and self-help participation. Detailed treatment manuals contain work sheets for individual sessions; other components include family educational groups, early recovery skills groups, relapse prevention groups, conjoint sessions, urine tests, 12-step programs, relapse analysis, and social support groups.

**Psychological approaches**

Substance misusers vary in their suitability for psychological treatments, and it may be more or less appropriate in individual cases due to age, cognitive ability or dysfunction, education, willingness and capability or capacity to view problems as psychological. However, psychological treatments are pivotal to treatment effectiveness, even when
pharmacological treatments are administered. Standardisation of approaches and outcome measures is complex. Treatment philosophies, environments and settings may differ greatly (e.g. primary care, accident and emergency, prisons). Additional resources for treatment (e.g. support by other agencies such as housing, education, probation) may vary. Some groups may be discriminated against across a variety of services, because of general stigmas around substance misuse, poorly trained staff, and lack of resources or due to old age, female sex or ethnic minority status.

**Stages of change**

A model for understanding motivation and action towards change in harmful patterns of drug use proposed by Prochaska and DiClemente is helpful in the treatment of substance abuse. Motivation is regarded as a prerequisite for and a precursor to action towards abstinence or more controlled drug use.

- **Pre-contemplation.** The user does not recognise that problem use exists, although this may be increasingly obvious to those around them.
- **Contemplation.** The user may accept that there is a problem and begins to look at both the positive and negative aspects of continued drug use.
- **Decision.** The point at which the user decides on whether to continue drug use or attempt change.
- **Action.** The point of motivation, where the user attempts change. A variety of routes exist by which change may be attempted, which may or may not include medical services.
- **Maintenance.** A stage of maintaining gains made and attempting to improve those areas of life harmed by drug use.
- **Relapse.** A return to previous behaviour but with the possibility of gaining useful strategies to extend the maintenance period on the user’s next attempt.

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2.6 LET US SUM UP

Taking of substance starts from using it to various degrees of use, resulting in misuse, abuse, harmful use, addiction and dependence. A variety of factors – biological, psychological and social – interact, and result in substance abuse and dependence.

Consequences of substance use cuts across various aspects such as physical consequences, psychological, social, economic, familial and legal consequences. The treatment and management of substance abuse should follow a comprehensive approach.

2.7 ANSWERS TO SELF ASSESSMENT QUESTIONS

Self Assessment Questions 1

1) Tolerance refers to a need for markedly increased amounts of a drug to achieve the desired drug effect or a markedly diminished effect with continued use of the same amount of the drug.

2) Harmful use of substances refers to the continuation of substance use despite evidence of damage to the user’s physical or mental health or to their social, occupational, and familial well-being.

3) acquisition and maintenance

Self Assessment Questions 2

1) Following information is collected as part of History during assessment of the drug abuser:

   Background information, reasons for consultation now, current drug use, previous treatment, medical, psychiatric, forensic, family and social history, mental status examination, and physical examination.

2) Hallucinogens (or psychedelics) are a heterogeneous group of natural and synthetic substances which produce altered sensory and perceptual experiences.

3) The categories of drugs of abuse are Opiates, Stimulants, Depressants, Hallucinogens, and Others such as cannabis etc.

Self Assessment Questions 3

1) Behaviour therapy aims at three types of control: stimulus, urge and social control.

2) Detoxification refers to a process whereby individuals are systematically withdrawn from addictive drugs in an inpatient or outpatient setting, typically under the care of a physician.

3) Cognitive behavioural therapy aims at enhancing self-control, self-monitoring to recognize drug cravings early on and to identify high risk situations for use, and developing strategies for coping with and avoiding high-risk situations and the desire to use.

2.8 UNIT END QUESTIONS

1) Differentiate between substance abuse and substance dependence.

2) Explain the concept of drug addiction.
3) Describe the Matrix model.

4) Describe the psychological approaches to drug addiction treatment.

5) What are the principles of effective treatment?

2.9 REFERENCES


