



## Drug Abuse & Addiction of Prescribed drugs

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### Key Words

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### Abstract:

Prescription drug abuse (PDA) is defined as the self-medication of a drug for un-prescribed intentions that deviate from accepted medical and social patterns in a particular culture and period. Such usage leads to addiction to a drug leading to a chronic adverse body conditions and fatal diseases. Misuse of prescribed drugs is common among young adults between 18 to 25 years of age. The prescribed drugs that are commonly misused are categorized into three classes which include Opioids, CNS stimulants, and CNS depressants, including sedatives, hypnotics, and tranquillizers. Physicians, pharmacists, and patients can play an important role in the awareness and prevention of prescription drug abuse. Opioids are commonly used by injection drug users (IDUs) in India. Prescription Drug Monitoring Programs (PDMPs) is an effective management scheme against PDA. Medical treatment of substance addiction is often administered along with counselling and behavioral support such as medication-assisted treatment (MAT) to get the maximum benefits. This mini review will discuss the various aspects of PDA.

**Introduction:** Prescription drug abuse (PDA) is the misuse of drugs in a way that is not prescribed or recommended and deviates from medical and social practices of a particular culture or period of time.[1] In modern world this has become an increasing problem spanning all age groups more commonly young adults between 18 to 25 years of age.[2] Prescription Drugs that are commonly misused are categorized into three classes which include Opioids, CNS stimulants, and CNS depressants. These drugs when prescribed by doctors are meant to treat diseases like chronic pain, respiratory problems, depression, obesity etc. (Table.1). However, due to certain reasons, people develop dependency and addiction behavior for such drugs and risk their health. Addiction can be defined as a persistent and continuing condition of obsession with a substance's needs and use even at the cost of adverse consequences. Addiction has grown into a serious condition, similar to heart disease, in which the regular, healthy functioning of an organ in the body is disrupted, resulting in adverse repercussions. Apart from the addiction liability of the above drugs, their misuse can lead to deleterious health effects including death.[3]

**Factors affecting prescription drug abuse.** Prescription medication usage can be influenced by a variety of factors, including age, mental health, life condition, and as well as its extent of availability. The modern life style dependency on drugs and also over prescriptions are other factors for prescription drug abuse. The common causes or risk factors for developing prescription drug abuse includes history of addiction of alcohol or tobacco, family history of drug abuse, pre-existing psychic problem, peer pressure, performance pressure, lack of knowledge about drugs side effects, and its easy availability. PDA can exist in the form of buying and using such drugs without

prescription, or using its over-dose or buying and using someone's else prescription.[4]

**Regional drug abuse:** The most common drugs abuse which are prevalent in different regions of India is mentioned in table 2. Opioids remain the most commonly practiced drug abuse in India.[5] In India opioids are mainly taken as used by Injection Drug Users [IDUs]. Cough syrup, particularly codeine-containing cough syrup, is also widely abused in India. The CNS stimulants dextroamphetamine and methylphenidate used for cognition enhancement are highly addiction-prone. The CNS depressants like benzodiazepines, non-benzodiazepines, and barbiturates used for treating anxiety, seizures, and sleep disorders are also potentially addictive.[6]

**Prevention and management of PDA:** Physicians, pharmacists, and their patients can play a major role in the proper control of prescription drug abuse. One way is to implement Prescription Drug Monitoring Programs [PDMPs] that use synchronized electronic databases which collect, the information submitted by pharmacies of all controlled substances prescribed to patients and monitor, their dispersion and distribution. [7] It helps to analyze patient's status of usage or if any abuse happened. The information can be used by authorized practitioner on request keeping the confidentiality of patients. It thus can prevent major source of prescription fraud, forgeries, or unwarranted prescription. Moreover, the major importance in the prevention of prescribed drug misuse lies in the hands of the patient and can be achieved by following proper instructions of drug usage that is either printed on the label or by adhering to physician/pharmacist instructions at the time of drug dispensation. The patient also should be made aware of the deleterious health effects and its potential lethal combination with other drugs and alcohol.

**Table 1.**

S No.	Drug of abuse	Serious Adverse effects
<b>OPIOIDS</b>		
1.	Morphine	Respiratory depression & Seizures
2.	Codeine	Hypotension, Tachycardia/Bradycardia & Confusion
3.	Diphenoxylate	Hallucination/Delusion, Dyspnea & allergic rashes
4.	Dextropropoxyphene	Hepatotoxicity & CNS depression / seizures
5.	Fentanyl	Hypotension, Respiratory depression & Hallucination
6.	Buprenorphine	Orthostatic Hypotension, Memory loss , cognitive and neural inhibition
7.	Pentazocine	Respiratory depression & Hallucination/ Delusions
<b>CNS Stimulants</b>		
8.	Dextroamphetamine	Hyper/Hypotension, Tachycardia, Erectile dysfunction, Blurred vision & Seizures precipitation
9.	Methylphenidate	Psychosis, Hallucination/Delusion & seizures
<b>CNS Depressants</b>		
10.	Benzodiazepines	Lack of co-ordination, Hypotension, Hypoventilation & Hepatotoxicity
11.	Barbiturates	CNS depression, Hepatotoxicity, Nystagmus & ataxia

**Table2:**

Region of India	Common drug abuse
North-eastern region	Heroin and dextropropoxyphene
Metros- Delhi, Mumbai, Chennai and Kolkata.	Impure heroin (smack), and buprenorphine
Karnataka, Andhra Pradesh, Chattisgarh.	Pentazocine
Punjab and Haryana.	Buprenorphine

**Treatment:** The treatment of afflicted people is divided into two categories: behavioural therapy and medications. Behavioural treatment, which includes contingency management and cognitive behavioural therapies, assists in modifying the patient's destructive habits of thinking and behaviour, as well as in regulating cravings and avoiding circumstances that can lead to reoccurrence.

Additionally, behavioural therapy involving counselling with individual, family, friends or group can support patients to improve their personal behavior, relationships and their ability to function in society.[8, 9] The medical treatment of prescription drug abuse is treated by antidotes, especially opioid abuse. The Opioid antidotes commonly used are buprenorphine, methadone, and naltrexone/naloxone.[10,11]

Medical treatment for opioid addiction is often administered along with psychosocial care or behavioral managements, known as medication-assisted treatment (MAT) to get the maximum benefit.[12] Such treatment method is approved by FDA and it provide a holistic approach in the combination of medication, counselling and behavior therapies tailored to patient needs and requirement. MAT has been useful for patient comprehensive recovery against drug abuse.

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