Substance Use Disorder

Manual for Nursing Personnel

Editors:

Rakesh Lal, Sandhya Gupta

National Drug Dependence Treatment Centre
All India Institute of Medical Sciences, New Delhi

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Developed Under:

WHO (India)
and
Ministry of Health and Family Welfare
Government of India
Collaborative Programme
2006-2007

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Designed and Printed at:
SRP Print-O-Pack Private Limited
A-22, Naraina Industrial Area
Phase-II, New Delhi-110028
Tel: +91-11-9873010237, 9211659789

November 2007

This Manual can be procured from the National Drug Dependence Treatment Centre, All India Institute of Medical Sciences, New Delhi upon request without payment.

Foreword

Foreword

Controlling substance abuse by way of demand reduction, provision of treatment services, education and training has been a matter of priority for the Ministry of Health and Family Welfare for many years now.

Currently. there is dearth of literature for guiding nursing personnel working in substance abuse treatment units in our country. Due to rapid advancements in this field, the need for developing a working manual and a handbook is a necessity for establishing standards of care provided by nurses for alcohol and substance abuse in various treatment settings.

Further, there is a paucity of nursing personnel who are experts in this field. The manual will assist in strengthening the training of nursing faculty and practicing nursing personnel. After preparing the manual the challenges and tasks ahead is to sensitize and train nurses in this specialized field to combat the problem of substance abuse. The task of managing this training is entrusted to the National Drug Dependence Treatment Centre, AIIMS. The faculty of this Centre alongwith the College of Nursing, AIIMS have been conducting regular courses for medical and nursing personnel on the subject of treatment of Substance Abuse for the past 17 years.

I congratulate the National Drug Dependence Treatment Centre, AIIMS for bringing out the training manual for nursing professionals. I am sure it will be a useful tool for all persons concerned with the treatment and care of patients of Substance Use Disorder not only in the de-addiction units but in the community units as well.

Mr. T. Dileep Kumar
Nursing Advisor,
Ministry of Health and Family Welfare,
GOI and President, Indian Nursing Council

Preface

Preface

It is indeed a pleasure to be associated with the task of compiling the manual on behalf of the World Health Organization (India) and the Ministry of Health and Family Welfare (Government of India). This manual is a product of intense deliberations and the felt need to prepare a formal document to facilitate the training of nurses in the field of substance abuse. It is intended to cover as many areas as can be envisaged. All the invited contributors for the manual are experts in the field with considerable experience.

The WHO has now officially changed the nomenclature and replaced the word 'drug' by 'substance' and 'addiction' is now called abuse or dependence, depending on the socio-cultural context and severity. However, in this chapter the term 'drug' and 'addiction' does find a mention in places where it is contextually relevant.
There may be some degree of overlap in the information given between chapters, which the editors have not deleted in order to maintain the coherence of individual chapters. Any suggestions for topics that have not been covered and are important may be informed, so that they may be addressed in the revised version.

An appendix is included. This includes common assessment scales and a proforma for clinical assessment. A glossary of technical terms also finds a place alongwith a list of De-addiction centres funded by the Ministry of Health & Family Welfare.

We look forward to any suggestions for improvement and changes.

Rakesh Lal Sandhya Gupta Ravindra Rao Shivanand Kattimani

Acknowledgements

Acknowledgements

In the efforts to prepare this manual, acknowledgements are due to a number of individuals and agencies. At the outset, we would like to gratefully acknowledge the World Health Organization (India) for providing the funds for the manual. We would like to especially thank Dr Cherian Varghese at the WHO (I) in this regard. Thanks are also due to the Drug Abuse Cell at the Ministry of Health and Family Welfare (Government of India) for the support and encouragement. Special mention must be made of Mr. Dileep Kumar, Advisor, Ministry of Health & FW and the President, Indian Nursing Council for his interest and involvement in preparation of the manual.

Acknowledgments are due to the Director as well as to the Dean, All India Institute of Medical Sciences for permission to carry out the work.

Professor Rajat Ray, Chief, National Drug Dependence Treatment Centre deserves special gratitude for being the constant guide and critic Without his tireless assistance from the start of the exercise to the finish, this work would not have been possible.

This work would just not have been possible without the timely help of the contributors and special thanks are due to each and every one of them.

Our associate editors, Dr. Ravindra Rao and Dr. Shivanand Kattimani deserve special mention of gratitude for their tireless support and help in putting this manual together.

Rakesh Lal

Sandhya Gupta

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Introduction to Substance Abuse

1

K. Reddamma

Psychoactive substances including alcohol, cannabis, khat, coca leaves and opium poppy have been consumed in different societies for centuries. In recent times, however, traditional use of these substances, which had social sanction and control, has given way to a more problematic pattern of use associated with many social and health problems. Additionally, the prevalence of persons consuming both licit and illicit substance is progressively increasing and the age of initiation decreasing.

The Ministry of Social Justice and Empowerment, Government of India and United Nations office on drugs and crime (UNODC) has recently completed a report of the extent, pattern and trends of drug abuse in India. According to the National household survey, the current one month period use for alcohol, cannabis and opiates were 21.4%, 3% and 0.7%, respectively. Prevalence of Intravenous Drug Users (IDUs) in general population is 0.1%. Applying the prevalence estimates to the population figures of 2001, the report estimates and projects that there are 6.25 crore alcohol users, 87 lakh cannabis users and 20 lakh opiate users in the country. These numbers, when applied to the total Indian population of 102.7 crore (2001 census), provides prevalence rates of 60/1000, 8/1000 and 2/1000 populations, respectively. Dependent users were 17% for alcohol, 26% for cannabis and 22% for opiates. Unfortunately, only 18% seek treatment.

Overview of Substance abuse problems

The overuse of alcohol and other drugs is called substance abuse. It is common and costly. It can cause or worsen many medical problems and destroy families and lives.

Abused substances produce some form of intoxication that alters judgment, perception, attention, or physical control.

There are no universal 'safe' drinking limits. Moderate use, abuse and dependence are on a continuum of severity.

Licit substances

Tobacco:

People cite many reasons for using tobacco, including pleasure, improved performance and vigilance, relief of depression, curbing hunger, and weight control. According to WHO estimates, there are around 1.1thousand million smokers in the world.

The primary addicting substance in cigarettes is nicotine. However, cigarette smoke contains thousands of other chemicals that also damage health. Hazards include heart disease, lung cancer and emphysema, peptic ulcer disease and stroke. According to the World Health Report (2002), over 90% of lung cancer in men and about 70% of lung cancer among women is directly attributable to tobacco smoking, among industrialized countries. Additionally, in these countries, the attributable fractions are 56-80% for chronic respiratory disease and 22% for cardiovascular disease.

Alcohol

People who drink alcohol are more likely to engage in high risk sexual behavior and have poor grades or job performance. Alcohol use may be an unconscious attempt at self treatment for another problem, such as depression.
Alcohol is estimated to cause about 20-30% of esophageal cancer, liver cancer, and cirrhosis of the liver, homicide, epilepsy, and motor vehicle accidents. Worldwide, alcohol causes 1.8 million deaths each year.

Illicit substances

Opiates

Reports by the UNDCP have shown that there has been a global increase in the production, transportation and consumption of opioids, mainly heroin. The worldwide production of heroin has almost tripled since 1985. Globally, it is estimated that 13.5 million people take opioids, including 9.2 million who use heroin. Heroin is also known as smack and horse. Overdose may result in death from respiratory depression. Since heroin is often injected, using dirty needles, its use can trigger other health complications including destruction of heart valves, HIV/AIDS, infections, tetanus and botulism.

Cannabis

Cannabis is by far the most widely cultivated, trafficked and abused illicit drug. Half of all drug seizures worldwide are cannabis seizures. The geographical spread of those seizures is also global, covering practically every country of the world. About 147 million people (2.5% of the world population), consume cannabis (annual prevalence) compared with 0.2% consuming cocaine and 0.2% consuming opiates. In the present decade, cannabis abuse has grown more rapidly than cocaine and opiate abuse. Cannabis has become more closely linked to youth culture and the age of initiation is usually lower than for other drugs.

Cocaine

Cocaine (crack, coke, snow, rock) is derived from the coca plant of South America. Cocaine and its derivative 'crack' provide an example of both the globalization of substance use and the cyclical nature of drug epidemics. Traditionally people in the Andean countries of South America have chewed coca leaves for thousands of years. Cocaine became widely available in North America in the 1970s and Europe in the 1980s.

Prevalence rates for lifetime use of cocaine are typically 1-3% in developed countries, with higher rates in the United States and in the producer countries. Cocaine dependence has become a major public health problem, resulting in a significant number of medical, psychological and social problems, including the spread of infectious diseases (e.g. AIDS, hepatitis and tuberculosis), crime, violence and neo-natal drug exposure.

Amphetamine type stimulants

Amphetamine-type stimulants (ATS) refer to a group of drugs whose principal members include amphetamine and Methamphetamines. However, a range of other substances also fall into this group, such as methcathinone, fenetylline, ephedrine, pseudoephedrine, methylphenidate and MDMA or 'Ecstasy' – an amphetamine-type derivative with hallucinogenic properties. Smoking, sniffing and inhaling are the most popular methods of ATS use, but ways to take the drug vary widely across different regions.

Methamphetamines: The use of Methamphetamines (meth, crank, ice, speed, crystal) has increased, especially in the West. Methamphetamines are powerful stimulant that increases alertness, decrease appetite, and gives a sensation of pleasure.

The drug can be injected, snorted, smoked, or eaten. It shares many toxic effects with cocaine, including heart attacks, dangerously high blood pressure and stroke.

Club drugs: The club scene and rave parties have popularized an assortment of other drugs. Many young people believe these drugs are harmless or even healthy. These are commonly known as club drugs.

Ecstasy (MDMA, Adam, STP): This is a stimulant and hallucinogen used to improve mood and to maintain energy, often for all-night dance parties. Long-term use may cause damage to the brain's ability to regulate sleep, pain, memory, and emotions.

GHB (Liquid XTC, G, blue nitro): Once sold at health food stores, GHB's effects are related to dose. Effects range from mild relaxation to coma or death. GHB is often used as a date-rape drug because it is tasteless, colorless, and acts as a powerful sedative.

Rohypnol (roofies, roche): This is another sedative that can be used as a date-rape drug. Effects include low blood pressure, abdominal cramps, confusion, and impaired memory.

Ketamine (Special K, K): This is an anesthetic that can be taken orally or injected. Ketamine can impair memory and attention. Higher doses can cause amnesia, paranoia and hallucinations, depression, and difficulty breathing.

LSD: (acid, microdot) and mushrooms (shrooms, magic mushrooms, peyote, buttons): Popular in the 1960s, LSD has been revived in the club scene. LSD and hallucinogenic mushrooms can cause hallucinations, numbness, nausea, and increased heart rate. Long-term effects include unwanted "flashbacks" and psychosis (hallucinations, delusions, paranoia, and mood disturbances).

PCP: (angel dust, hog, love boat): PCP is a powerful anesthetic used in veterinary medicine. Its effects are similar to those of ketamine but often stronger. The anesthetic effects are so strong that you can break your arm but not feel any pain. Usually, tobacco or marijuana cigarettes are dipped into PCP and then smoked.

Attitudes and Myths

Substance abuse is viewed differently depending on the substance used, the person using it, and the setting in which it is used. Nurses should be aware of these social and cultural attitudes and recognize their impact on individual users and people close to them. For instance, a

businessman who starts arguments after a few drinks with his associates would not usually be considered an alcohol abuser. If the same person were caught nipping from a bottle in his desk, he would probably be considered to have a drinking problem.

Tobacco abuse is still accepted in India and other countries despite convincing evidence of medical problems related to smoking and the effects of secondary smoke inhalation. On the other hand, a person who smokes opium would be considered deviant, even if the behavior took place in private.

Many nurses have negative, moralistic attitudes towards alcohol and other substance abusers. Some have had negative experiences with family members or friends who have had substance related problems. This may influence the nurse's ability to assess and care for these patients. Nurses often see substance abusers at their worst, during a medical or psychiatric crisis. They see these patients returning repeatedly for alcohol or substance related health problems.

MYTHS / TRUTHS

Many myths are available around substance abusers. To mention a few;

"People who drink too much only hurt themselves."

Truth: Every person who drinks has a parent, sibling, grandparent, best friend, or partner who worries about him or her. What if the person gets behind the wheel of a car?

"Alcohol is a safer drug because people generally react the same."

Truth: There are dozens of factors that affect reactions to alcohol including age, sex, body weight, time of day, food intake, how one feels mentally, body chemistry, expectations, etc.

"It's just a beer. It can't permanently damage you."

Truth: Beer can do major damage to your digestive system. It can hurt your heart, liver, stomach, and other critical organs. It can take away years from life.

"Marijuana doesn't stay in your system very long."

Truth: Marijuana is fat soluble (alcohol is water soluble). THC, the active chemical in marijuana, can be detected in the urine 14 days after use. Even after a person has stopped smoking, the effects will linger.

"Switching between beer, wine, and liquor will make you more drunk than sticking to one type of alcohol."

Truth: Your blood alcohol concentration is what determines how drunk you are, not the flavors you selected. Alcohol is alcohol.

"Alcohol gives you energy."

Truth: It's a depressant. It slows down your ability to think, speak, and move.

"Cocaine is not addictive unless you use it frequently."

Truth: Cocaine is both physically and psychologically addictive. Even a single use of crack (a cooked form of cocaine) can be addictive/ fatal.

"A cold shower or cup of coffee will sober someone up."

Truth: Nothing sobers you up but time. You may be clean and awake, but you're still drunk.

"Drugs are a bigger problem than alcohol."

Truth: Alcohol and tobacco kill more than 50 times the number of people killed by cocaine, heroin, and every other illegal drug combined. Ten million Americans are addicted to alcohol. It is a drug.

"A drink or two will not interfere with my driving."

Truth: Small amounts of alcohol can impair your judgment. Even one drink can cloud your thinking, dim your vision, and slow your reflexes .

Scope of Substance Abuse Nursing:

Nurses form a core component of many health care systems so their role in responding to problems related to psychoactive substance use is crucial. They are often under-utilized, mainly because of anxieties concerning role adequacy, legitimacy, lack of support and failure to implement interventions in a variety of settings. Nurses have unique opportunities through interactions they have with young people, families and significant others. Training and career preparation should encompass development of innovative strategies and take a leading role in management of substance use patients. Nursing personnel need to be involved in the treatment of the homeless mentally ill, HIV-infected individuals and persons with dual disorders of mental health and substance use. The opportunity for nurses to address the problem with their patients presents itself along the full continuum of care.

The Association of Nurses in substance abuse states that dependent patients can be assisted through nursing interventions such as health promotion (physical, mental, social and spiritual), harm minimization (especially in women alcoholics and unborn child) risk reduction (counseling in individuals who had accident related to alcohol) maintenance and stability and palliative care and a pain-free death. They need to be involved in development of an effective support system, matching to appropriate helping services, empowerment and more. They have role in addressing psychosomatic problems of spouses and children of alcoholic abusers and substance abuse among women.

International Council of Nurses is alarmed by the growing number of youths who abuse dependence producing substances. Nurses as key providers in the health care for substance abuse play a crucial role in addressing substance abuse.

Striving to prevent and reduce substance abuse through policy and advocacy, promotion of healthy life styles and equipping youth with life skills to deal with stress, peer pressure and other risk factors are important roles for nursing.

Role of Nurse:

Direct care provider.

- Management and supervision.
- Teaching & research.
- Public health nurse.
- School health nurse.
- Forensic role.

Role of Nurse as Direct Care Provider.

- Assessment of patient for the use of substances and extent of use. The assessment can be done by proper history taking. This can be done by general nurses in the general medical surgical wards because some patients might not be aware of their dependence and will not report which can lead to various medical emergencies related to the withdrawal of the substances.
- Assessment of the motivational level of a person and takes active steps for motivational enhancement and relapse prevention.
- Conduct of group activities with the patients and the family members in the inpatient setting.
- Maintenance of the therapeutic environment of inpatient unit.
- Monitoring and recording of the withdrawal symptoms and complications.
- Implementing treatment orders as prescribed and watch for any side effects.
- Maintenance of records and reports.
- Maintenance of confidentiality of the records.

Role of Nurse as Manager and Supervisor.

- Management of ward.
- Management of ward behavior of patients.
- Supervision of patients in the ward.
- Supervision of other health care staff.
- Identification of drug related behavior in coworkers and reporting.
- Supervision and training of nursing and other staff.
- Maintaining drug inventory.

Role of Nurse in Teaching and Research

- Helping the patients to make informed choices.
- Teaching and guiding the fellow staff members to participate in research activities related to substance use nursing.
- Conduct and participate in research activities related to substance use nursing.
- Promote evidence-based practices.

Role of Nurse in Primary health care settings

- Identify cases in the community.
- Performs motivational counseling and enhancement.
- Conducts public awareness programs.
- Counseling family members.
- Support and participate prevention efforts in community.

Role of Nurse in School health programme

- Provide primary prevention/education to individual students and classrooms in an age specific, culturally and developmentally appropriate way. Utilization of the proven approaches to prevention including enhancement of protective factors and reduction of risk factors; practicing of life skills; interactive teaching methods; inclusion of parents or caregivers;

coordination with community-based prevention.

- Recognize that students living in alcohol-affected homes may have a multiplicity of alterations in academic achievement, social skills, affect, and health.
- Provide support to the student without reinforcing the child's perception of being responsible for the family's situation.
- Refer those students that need evaluation and treatment for abusive or addictive chemical use and concurrent mental health problems, including suicide risk.
- Make appropriate referrals to agencies such as Social Services, Drug and Alcohol Treatment Services, Mental Health services, and the Child Protection Team.
- Respect the confidentiality of student and 'problem-solve' the ethical dilemmas often associated with substance use and abuse issues.

Forensic Role of Nurse

- Legal advice to the public about the issues related to the substance use/abuse.
- Legal advice to staff about the issues related to substance use/abuse.

Suggested reading materials

1. Association of Nurses in substance Abuse (1997): Substance use: Guidance on Good Clinical Practice for Specialist Nurses working with Alcohol and Drug Users. Survey, K.T., Pinpoint Communication, Ltd.2. Gururaj. G., Girish, N., Issac, M.K., (2006).
2. Mental Neurological and Substance abuse disorders : Strategies towards a systems approach. NCMH Background papers – Burden of diseases in India. 226-250.
3. Isidore. S. Obot and Shekhar Saxena (Eds) (2005) Substance Abuse among young people in urban environment, WHO.
4. Laria Michele. T. and Jefferson Linda. V. (2005). Chemically mediated responses and substance related disorders. In principles and practice of psychiatric nursing (eds). Stuart G.W. and Laria Michele. T. Mosby. 473-516.
5. Lowinson Joyee, H., Ruiz Pedro, Milman Robert. R.B., Langrod John. G., John (2005). Substance abuse. A comprehensive text book (4th edition) Lippincot Williams and Wilkins.
6. Nutt David Jaud Law Fergus D. (2005). Substance use disorders: Pharmacological and Psychological aspects of drugs of abuse. In: New Oxford text book of Psychiatry (Volume 1) (Eds) Gelder M.G., Loper J.J – Ibor Jr and Andreasen, Nancy C. Oxford University Press. 471-476.
7. National Association of School Nurses (NASN). (2002). Issue brief: Role of the school nurse. Retrieved from: http://www.nasn.org
8. National Center on Addiction and Substance Abuse at Columbia University (CASA). (1999). No safe haven: Children of substance-abusing parents. New York, NY: Author. Retrieved from http://www.casacolumbia.org on March 22, 2002.
9. Sullivan, E. J. (1995). Nursing care of patients with substance abuse. St. Louis, MO: Mosby.
10. http://findarticles.com. International Journal of Nursing Practice, Volume 10 Page 102 - 112 June 2004.
11. Ray R (principal author) :National Survey ; The extent, pattern and trends of Drug Use in India.2004

Suggested slide material

Slide1

Introduction

- Alcohol & Drug use is growing problem in India
- Alcohol & Drug use is associated high–risk behaviors, i.e. Sexual risk behavior and Injecting Drug Use (IDU)
- Risk behaviors make the populations susceptible to Sexually transmitted diseases and Blood borne infections
- High risk groups i.e. female commercial sex workers (FCSWs) & their patients, Truck drivers, Male sex workers (MSW), also use Alcohol and Drugs
- Substance use- Risk behaviors – HIV susceptibility
- Substance use treatment and reduction in risky behaviors help in prevention of Sexually transmitted diseases and Blood borne infections including HIV infection

Slide2

Prevalence of Alcohol & Drug use

- The National Household Survey carried out in 2001-02 showed current (last 1 month) prevalence rates of use for various drugs were: 21.4% (alcohol), 3.0% (cannabis), and 0.7% (opiates).
- Prevalence of Intravenous Drug Users (IDUs) in general population 0.1%.
- DAMS data (Treatment seekers) IDUs 14%
- RAS ever injected drugs 43%.

Slide 3

Drug Use in India- National Survey

- Prevalence opiate 0.7% (0.7% R; 0.5%U)
- High prevalence areas- Mizoram, Manipur, Nagaland; Haryana, Himachal, Punjab, Rajasthan; UP, West Bengal
- Estimated number of current opiate users 2.04 million
- Treatment seeking 18%
- IDU 0.1%-43% (depending upon location & setting)

Slide4

Drug Use in India- National Survey

- Special Populations
- IDU% - Rural 2.5% (UP), Border 40%, Prison 0.6-6.0%
- Female drug users 1-10%
- Female drug user HIV + (Manipur) 20%
- Female IDU HIV + (Manipur) 57%
- IDU-CSW HIV seropositivity 9 times

Slide5

Myths related to substance use

- People who drink too much only hurt themselves
- Alcohol is a safer drug because people generally react the same
- It's just a beer. It can't permanently damage you.
- Marijuana doesn't stay in your system very long
- Switching between beer, wine, and liquor will make you more drunk than sticking to one type of alcohol.
- Alcohol gives you energy.
- Cocaine is not addictive unless you use it frequently.
- A cold shower or cup of coffee will sober someone up.
- Drugs are a bigger problem than alcohol.
- A drink or two will not interfere with my driving.

Slide 6

Role of Nurse

- Direct care provider.
- Management and supervision.
- Teaching & research.
- Public health nurse
- School health nurse.
- Forensic role.

Slide7

Direct Care Provider.

- Assessment of patient for substance use
- Motivational assessment & enhancement & relapse prevention.
- Conducting group activities.
- Maintaining therapeutic environment of inpatient unit.
- Monitoring withdrawal symptoms and recording.
- Carrying out treatment orders.
- Maintenance of records and reports.

Slide 8

Role of Nurse as Manager and Supervisor.

- Management of ward.
- Management of ward behavior of patients.
- Supervision of patients in the ward.
- Supervision of other health care staff also identifying a drug related behavior in coworkers and reporting.
- Supervision and training of nursing and other staff.
- Maintaining drug inventory.

Slide 9

Role of Nurse in Teaching and Research

- Helping the patients to make informed choices.
- Teaching and guiding the fellow staff members to participate in research activities related to substance use nursing.
- Conduct and participate in research activities related to substance use nursing.
- Promotes evidence-based practices.

Slide 10

Role of Nurse in Primary health care settings

- Identify the cases in community.
- Performs motivational counseling and enhancement.
- Conducts public awareness programs.
- Counseling family members.
- Support and participate prevention efforts in community.

Slide 11

Role of Nurse in School health programme

- Provide primary prevention/education to individual students and classrooms in an age specific, culturally and developmentally appropriate way,
- Recognize that students living in alcohol-affected homes.
- Provide support to the student
- Refer those students that need evaluation and treatment
- Respect the confidentiality

Slide 12

Forensic Role of Nurse

- Legal advice to the public about the issues related to the substance use/abuse.
- Legal advice to staff about the issues related to substance use/abuse.

Drug De-addiction Programmes in India

2

Debasish Panda

Drug addiction in India has of late emerged as a matter of great concern both due to the social and economic burden caused by substance use and due to its established linkage with HIV/AIDS. The onus of responding to the problems associated with drug use lies on the central and state governments. The constitution of India under Article 47, enjoins that the state shall endeavour to bring about prohibition of the consumption, except for medical purposes, of intoxicating drinks and of drugs which are injurious to health. The various drug de-addiction programmes of Government of India have to be seen in this light. However, to provide effective and acceptable deaddiction services to about 3 million (about 0.3 per cent of total population) estimated drug users (excluding alcohol dependents) of India is a herculean task which requires concerted efforts from several ends. The activities to reduce the drug use related problems in the country can broadly be divided into two arms – supply reduction and demand reduction. The supply reduction activities which aim at reducing the availability of illicit drugs within the country come under the purview of the Ministry of Home Affairs with the Department of Revenue as the nodal agency and are executed by various enforcement agencies. The demand reduction activities focus upon awareness building, treatment and rehabilitation of drug using patients. These activities are run by agencies under the Ministry of Health and Family Welfare, and the Ministry of Social Justice and Empowerment. The demand reduction activities will be discussed in the subsequent sections of this chapter.

Evolution of the Drug De-addiction Programmes in India

The Ministry of Health and Family Welfare, Government of India, in 1976, appointed a high powered committee to examine the problem of Drug De-Addiction and suggest future guidelines. The report of this high powered committee was submitted in 1977 and was laid on the floor of the Parliament. The recommendations of the report emphasized the need to evolve appropriate strategies and to bring about better coordination among different Ministries and Departments working in this area. The Planning Commission and the Central Council of Health Ministers reviewed and accepted the report in 1979.

In the late seventies and early eighties, the country was presented with new challenges in the field of drug deaddiction as refined products such as heroin entered into the Indian illicit drug market for the first time. The issue was also complicated by the increasing reports of Injecting

drug use (IDU) especially from the North-eastern region of the country and with the emergence of HIV infection in the country, the situation appeared to be grim especially as deaddiction services were not available to the majority of the population. It was in this context that the Govt. of India adopted a three-pronged strategy for demand reduction consisting of:

- Building awareness and educating people about ill effects of drug abuse
- Dealing with the drug dependent patients through programme of motivational counselling, treatment, follow-up and social-reintegration of recovered patients
- To impart drug abuse prevention/ rehabilitation training to volunteers with a view to build up an educated cadre of service providers.

The objective of the entire strategy is to empower the society and the community to deal with the problem of drug abuse. Rehabilitation of addicts as well as their counselling comes under the domain of the Ministry of Social Justice & Empowerment in Government of India, while demand reduction by way of treatment and after care is the concern of Ministry of Health & Family Welfare. However, the activities of both the government agencies overlap considerably in several ways. The approved budget for the deaddiction programme in the 10th Five Year Plan was Rs 33.00 crores which is expected to be increased in the 11th plan considering the need for comprehensive deaddiction services in the country.

Demand Reduction Approach: Initiatives of the Ministry of Health and Family Welfare

The role of Ministry of Health & Family Welfare in the area of Drug De-addiction is demand reduction by way of providing treatment services. The Drug De-addiction Programme in the Ministry of Health & Family Welfare was started in the year 1987-88 which was later modified in 1992-93. The programme was initiated as a scheme with funding from the central government and implementation through the states. Under the scheme, a one time grant in aid of Rs. 8.00 lakhs was given to states for construction of each Drug Deaddiction Centre and a recurring grant of Rs. 2.00 lakhs was given to Drug De-addiction Centres established in North Eastern Regions to meet the expenses on medications and other requirements. At present 122 such Centres have been established across the country including centres in Central Government hospitals and institutions of which 43 Centres have been established in the North Eastern Region. Under this programme, a national nodal centre, the "National Drug Dependence Treatment Centre", has been established under the All India Institute of Medical Sciences (AIIMS), New Delhi which is located in Ghaziabad while four other centres have been proposed to be developed as Regional centres which are: Drug De-addiction Centre, PGI, Chandigarh; Drug De-addiction Centre, NIMHANS, Bangalore; Drug De-addiction Centre, CIP, Ranchi and Drug De-addiction Centre, KEM, Bombay. The purpose of these centres is not only to provide deaddiction and rehabilitation services to the patients but also to conduct research and provide training to medical doctors in the area of drug deaddiction.

National Drug Dependence Treatment Centre, AIIMS

The De-addiction Centre, AIIMS was established during the year 1987-88 and functioned from the premises of the Deen Dayal Upadhyay Hospital, Hari Nagar, New Delhi till 2003. The centre was subsequently shifted to its own building constructed at CGO Complex, Kamala Nehru Nagar, Ghaziabad and was henceforth called as the National Drug Dependence Treatment Centre.

It started outdoor facilities on 14.04.03 and indoor facilities from 2.12.03. The centre also established a Community Clinic at Trilokpuri, New Delhi which started functioning from 1.8.2003. The centre has also started a unique Mobile De-addiction Clinic at Sunder Nagar, New Delhi from 19.3.2007 as part of its endeavour to widen its services. Apart from rendering patient-care services, the centre has been engaged in a number of other activities to fulfil its role as the nodal centre in the field of drug deaddiction. These activities include conducting several research, training programmes for general duty medical officers, development of resource material for professionals, patient awareness booklets, organization of national workshops, etc.

Demand Reduction Approach: Initiatives of Ministry of Social Justice & Empowerment

The Ministry of Social Justice & Empowerment has been implementing the Scheme for Prohibition and Drug Abuse Prevention since the year 1985-86. Unlike the MOH&FW, the MSJE follows a State-community partnership approach as the mechanism for service delivery. Accordingly, under the Scheme, while major portion of the cost of services is borne by the Government, the Non Governmental Organisations (NGOs) provide actual services through the Counselling and Awareness Centres; Deaddiction cum Rehabilitation Centres, Deaddiction Camps, and Awareness Programmes. Under this Scheme, the Ministry is assisting 361 voluntary organisations for maintaining 376 De-addiction-cum-Rehabilitation Centres and 68 Counselling and Awareness Centres all over the country. Average annual allocation for this programme has been around US $ 5 million. All Centres are equipped with a cadre of experts from various fields including doctors, counsellors, community workers, social workers etc. Thus, it is a multi-disciplinary approach being applied according to the needs of individual cases. They work in coordination with the community resources as well as infrastructure and services available under other related agencies.

The Counselling and Awareness Centers are engaged in a wide range of awareness generation programme in varied community settings including village panchayats, schools etc. Besides these Centers, the Ministry has been actively utilizing the various media channels (print as well as audio-visual) for educating the people on the ill effects of drug abuse and also disseminating information on the service delivery. Apart from this, the MSJE has established a National Centre for Drug Abuse Prevention (NCDAP) under the aegis of the National Institute of Social Defence, New Delhi, to serve as the apex body in the country in the field of training, research and documentation in the field of drug abuse prevention. To meet the growing demand of rehabilitation professionals in the country, the Centre has been conducting three months' Certificate Course on Deaddiction Counselling and Rehabilitation of Drug Abusers. Eight NGOs have been developed as Regional Resource and Training Centres (RRTCs) to provide training and information at the regional levels.

Convergence

The deaddiction programmes in India developed by the two Ministries appear to run in parallel to each other with little cooperation between the two agencies. To overcome this problem, a meeting was held on 6.10.04 in the chamber of Joint Secretary, Ministry of Social Justice & Empowerment, in which it was decided that an effective linkage between the rehabilitation centres managed by NGOs funded by the Ministry of Social Justice could be established with the treatment centres supported by the Ministry of Health. The collaboration would be through the following modalities:

- Identification of NGOs to be linked with Drug De-addiction Centres would be done, Drug De-addition Centre wise. This action would be initiated and completed by Ministry of Social Justice and Empowerment.
- NGOs would recommend cases requiring treatment for Drug De-addiction to the Drug De-addiction Centres. The Drug De-addiction Centres in turn would refer patients after completion of treatment to identified NGOs for rehabilitation and monitoring.
- Apart from detoxification services, which are provided by the Drug De-Addiction Centres run by MOH&FW, the counselling of patients and their families would commence along with the treatment. MSJE would consider funding one counsellor in each Drug De-Addiction Centre run by the Ministry of Health and Family Welfare.

Inter-sectoral Collaboration

Apart from the collaboration between the various agencies rendering deaddiction services, the Government of India has attempted to integrate activities involving all concerned Ministries and Departments which could complement and supplement the initiatives being taken under the Deaddiction Programmes. The initiatives being taken include imparting education on drugs and positive alternative to the youth through appropriate modification in school curriculum and sensitisation of school environment. Programmes are being developed for the sensitisation of the teachers, parents and the peer groups in a school environment through the participation of the Non-Government Organisations. The cooperation of the media and various youth organisations has also been solicited for dissemination of information on ill effects of alcohol/drugs and in engaging the community in positive/healthy alternatives. Available Government infrastructure and services for health problems such as TB, HIV/AIDS, Hepatitis etc is also being integrated with the drug deaddiction services. Efforts are also being made to provide the medical professionals in the health sector with the knowledge on rehabilitation and after-care of alcohol and drug dependents. One of the successful initiatives towards inter-sectoral collaboration has been the integration of HIV/AIDS prevention programme into the substance abuse programme of 100 NGO run Deaddiction Centres supported by the Ministry of Social Justice and Empowerment.

Monitoring and Evaluation

The Drug De-addiction Centres established under the Drug De-addiction Programme are periodically evaluated in a joint initiative by the WHO, India and the MOH&FW. Evaluation of these Centres is being done by National Drug Dependence Treatment Centre, AIIMS on the following parameters:

- To assess the status of functioning of Government De-addiction centres by assessing the patient load
- Treatment being provided
- Availability and utilization of equipment
- Staffing in terms of posts available and filled
- On-site interview and
- Review of records of de-addiction centres

The evaluation findings have served as a valuable input into the reformulation of the National Drug De-addiction Programme which is under consideration of the Ministry.

Speciality Nursing and Deaddiction Programme

Consequent to the Drug Deaddiction Programme initiated by the Ministry of Health & Family Welfare, many deaddiction centres have been made functional in the country. This has created an urgent need for nursing personnel who are

trained in the field of substance abuse. However, the specialization in nursing for Drug dependence treatment services is still in its infancy in our country. This is probably because of two reasons

- Nursing personnel are not a member of the therapeutic team, and
- Lack of opportunities for nursing students for training in the field of deaddiction

Nursing personnel are not working as partner in the treatment team at present due to inadequate skills in managing patients with substance dependence along with an absence of clear job description in the area of substance dependence treatment program. The role of the nurse is unclear not only to the administrators but also to the nursing personnel as well. However, there has been greater emphasis on the training of nursing staff in the area of deaddiction and the various courses in Psychiatric nursing now provide better exposure to this area. The existing training services for nurses in the field of drug abuse treatment are as follows:

Undergraduate Level

The curriculum has been revised and is effective from 2005. The students have 4-6 hours of theoretical component and one week clinical posting in Drug dependence treatment units/ centre. Additionally, students are to write at least one clinical assignment i.e. observational report, to ensure that all the nursing students learn adequately about treatment of substance dependence treatment program.

Post-graduate Diploma

Diploma in Psychiatric Nursing (DPN) of one year duration was initiated in 1956 in NIMHANS, Bangalore. This comprised of 6-8 hours of the theory classes along with clinical practice of one month's duration with patients having alcohol and substance dependence. The only other Institution that conducts this programme is CIP, Ranchi.

Post-graduate Degree

From 1973, post graduate courses were initiated in Delhi University at RAK College of Nursing and PGIMER, Chandigarh (1976). The syllabi included 4-6 hours of theory and the students were exposed to psychiatric units where patients with substance abuse were also treated. No specific clinical assignment was done by students. The curriculum was revised in 2005 for M.Sc Psychiatric Nursing courses and 8-10 hours of theory and at least one month clinical posting in the substance dependence treatment units is currently the norm.

Short Training Programmes

In India, only one specialized course is available in the areas of drug/substance dependence treatment. This was initiated in 1989 at NDDTC AIIMS and was of two and half week's duration. Only two such courses have been held at national level so far. Some of the specialized centres are conducting refresher courses for the in-house nurses.

It is obvious that as yet, not much work has been done in the area of substance abuse nursing specialty; the nursing personnel are not yet utilized appropriately and adequately in this area. The role of nurses in the deaddiction programme needs to be clearly defined and a multidisciplinary team should be evolved to improve utilization of nursing personnel in inpatient/outpatient settings, community settings and rehabilitation services for recovered patients.

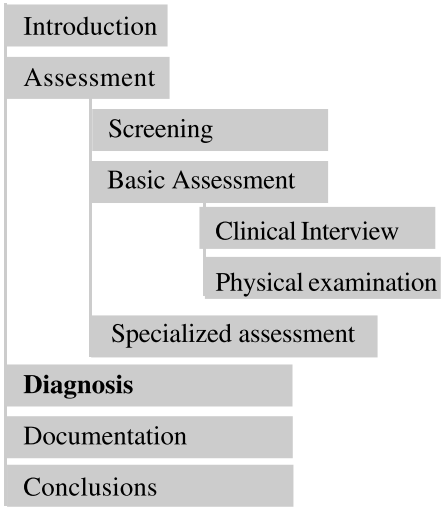
Assessment and Diagnosis in Substance Abuse Disorder

3

Rajat Ray and Shivanand Kattimani

Summary: *Certain psychoactive substances are known to cause adverse health effects and their use is a cause of concern. Appropriate assessment through clinical interview and physical examination helps in identifying the substance(s) of abuse and planning appropriate treatment for the same.*

This chapter is organized as shown here:



Introduction:

People have been using many substances for deriving pleasure, for relief of mental tension and tiredness, for getting sleep, for sexual energy enhancement and for increasing physical strength. Such drugs alter brain chemicals and are known as 'psychoactive substances'. They cause various adverse effects on long continued use. Substance use can be categorized as experimental use; harmful use and dependent use based on pattern of use.

Experimental use	*Harmful use/abuse*	*Dependent use*
Occasional use	Frequent use	Regular use
Mostly to experience pleasure	Seeks to re-experience pleasure	Increasing quantity and frequent use
No discomfort on stopping	Mild discomfort on stopping	Craving and withdrawal on stopping
Minimal or no physical or psychological harm	Evidence of physical or psychological harm	Clear evidence of physical and psychological harm

Certain other problems can also arise due to drug effect per se like intoxication and withdrawal, mood changes, sleep and sexual problems. It becomes the duty of health care providers to identify persons using these substances early and intervene. Identification of such individuals and further exploration of the extent of use and damage caused by various substances in these requires clinical skill. This is necessary to formulate a treatment plan. This chapter discusses these issues.

Assessment: Assessment is a process of gathering information about a person's substance use status and health, and is an ongoing process. Among substance users, assessment would include current and past substance use, treatment sought, outcome following treatment and current treatment need.

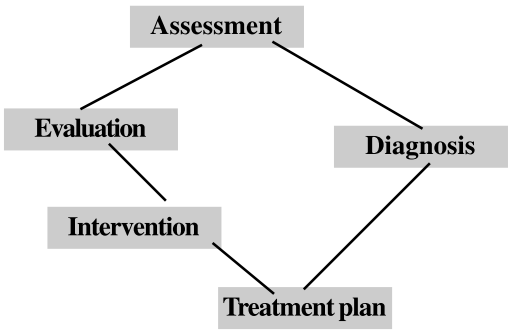
Types of assessment: Based on preciseness of the skill required, assessment can be done at three levels:

1. **Screening**
2. **Basic assessment**
3. **Specialized assessment**

A proper assessment is helpful in numerous ways:

- It identifies substance use in persons with physical problems.
- It identifies substance use in those who deny usage.
- It helps to establish a diagnosis
- It helps to plan treatment
- It helps in referral to a specialist for further treatment,
- It can motivate the patient to seek treatment

Figure1: Assessment as an ongoing process



Barriers in Assessment

- Denial of substance use by the person
- Guilt about the substance use & related behaviour
- Fear of stigmatization
- Fear of evoking bad reaction from health professionals
- Lacks of knowledge on treatment of addictive diseases
- Apprehension about possible legal and other punitive consequences

Basic assessment: This includes clinical interview and physical examination supported with or without laboratory investigations to arrive at a diagnosis.

Clinical interview: This is a specific way of conversing with the patient in order to collect relevant clinical material. It involves eliciting answers by enquiring into specific issues regarding substance use i.e. initiation, progression, complications associated with its use and motivation to undergo treatment for the same. Main aim is to identify *'harmful use'* or *'dependent use'* (known as 'substance dependence syndrome') as per accepted international criteria. (Table 1).

Structured clinical Interview: To avoid haphazard way of asking questions and to avoid personal bias in making diagnosis, health professionals have come out with booklets containing readymade questions arranged in particular order and choices of answers given for each question from which the patient has to choose. These are mostly used for research purposes.

Table 1

Dependence syndrome- as per ICD-10 requires at least 3 criteria out of following 6

1. Craving or compulsion to take the substance
2. Tolerance-need to increase the amount to experience desired effect
3. Withdrawal signs and symptoms appears on decreasing or sudden stopping of substance
4. Neglect of other activities due to involvement in substance use
5. Difficulty in controlling substance-using behaviour
6. Continues to use despite awareness of harm caused by substance

Out of six criteria at least three need to be present concurrently for one month over last one-year period

***Harmful use* of substance as per ICD-10 requires following two Criteria:**

1. Substance use not fulfilling criteria for dependence
2. Persistent use despite evidence of physical or mental health damage

Specialized assessment: This is done by a specialist to assess personality, coping skills, social supports, risk factors for relapse, presence of concurrent physical illness and psychiatric illness in-depth. Sometimes this is carried out to identify suitability of patient for starting certain kind of treatment.

HINTS

For successful clinical interview

- Introduce yourself
- Tell the purpose of interview
- Follow a format
- Do not judge the patient at first instance
- Listen to him for few minutes then ask questions
- Observe patient and look for signs

Key features of a successful interviews:

- Establish rapport
- Explain purpose of treatment
- Collect subjective and objective data
- Avoid using medical terms

Following interview:

- Summarize information gathered
- Analyze to arrive at possible diagnosis

Clinical history is obtained under the following heads:

A. Socio-demographic data

Begins with knowing the patient's name, age, educational status, gender, marital status, current living arrangement and occupation. Patient's residential address is also recorded.

Illustrative Case: Mr. A is a 35-year male, educated till 12th class, married and an electrician by occupation but not working since 5 months. He belongs to middle socio-economic status. He is a resident of Janakpuri, New Delhi that is about 30km distance from this hospital. He is from a nuclear family, staying with his wife and two children. He has come with his wife; information given by him appears reliable and adequate.

HINTS

If patient changes his information frequently then note that information is unreliable. If information taken from the patient or family member helps us to reach diagnosis then the information is said to be adequate.

Such comment should be made only after the proper interview is over

B. Details of substance use

Here the following issues are looked into: age and reasons of initiation of substance use, details of various substances used and route of taking substance, reasons for continued substance use and presence of 'craving'. Other issues are presence of 'tolerance', loss of control and withdrawal symptoms. If a patient is taking more than one substance, then above questions need to be asked for each substance. For each substance ask current pattern of substance use over last one month which include frequency of use, usual amount consumed in a typical day, the maximum amount of substance consumed in a day and the last time substance was used.

Rationale:

- To identify intoxication and withdrawal symptoms.
- To elicit criteria for 'harmful use' or 'dependence syndrome' for each substance.
- To identify factors leading to initiation and maintaining the substance use.
- Route of use helps in anticipating related health problems.
- Amount and dose in current pattern identify degree of dependence and helps in planning treatment.

Illustrative Case: Mr. B, comes with chief complaint of using heroin since 4 years. He was introduced to a 'special' cigarette at the age of 31 years in a marriage ceremony. He tried a few puffs and had cough, intense nausea, light headedness, itching sensation over the skin and felt drowsy for a considerable time.

Thus, he could not enjoy it at first instance; he tried it again and subsequently enjoyed its (pleasurable) effects. His consumptions gradually ***escalated*** to 6-8 cigarettes per day, which his friend would sell him.

On a subsequent day he went to a nearby village where he could not procure the substance and started ***experiencing body ache, weakness, repeated yawning, running nose and watering from the eyes*** which was embarrassing for him.

Due to unbearable body pain and experiencing feverishness and loose motions, he went to local physician who prescribed painkillers, which did not help much.

He came back to his friend told him about the problems and patient felt instant relief from all the problems after smoking those cigarettes. His friend told him that this was 'smack' being mixed with tobacco and filled in cigarette.

Following its regular use he started loosing weight and developed cough and breathing difficulty and financial difficulty. He now does not find time and interest in previous pleasurable recreational activities like listening songs, chatting with friends or taking family to holiday trips.

He spends most of day in activities involved in possessing and chasing smack. Currently he spends about rupees 300 per day on (smack) heroin.

C. Complications associated with substance:

It includes various problems faced by the patients in various domains due to his continued substance use. Denial of any problems due to their substance use is commonly seen. It is a form of coping method to avoid putting themselves to embarrassment and this is not considered as lying.

Common complications associated with continued substance use are:

1. **Physical** - viz. Breathing difficulty on exertion, repeated cough/chest infection, loss of weight, ulcers with oozing pus in areas of injections, early loss of teeth, appearing older than ones age.

2. **Psychological-** Guilt feeling, feels depressed and worthless, decreased self -confidence.

3. **Financial-**loss of money, debts, no savings.

4. **Social**-looked down in the society, not invited by the neighbours for ceremonies.

5. **Familial**-loss of respect in the family, frequent quarrels at home due to substance use.

6. **Occupational**-repeated sick leave, deterioration of job performance and even loss of job.

7. **Legal**-drunken driving, arrests, involvement in illegal activities to sustain substance use, charges on account of substance possession (booked under NDPS act).

D. High risk of behaviour

Usually substance use goes hand in hand with other risk taking behaviour like having unprotected sex with multiple partners, sex with commercial sex worker or involvement in substance use in the form of injections, where there is sharing of needle, syringes or cleaning needle from common water container. Consequently, there is a high risk for transmission of blood borne infections like hepatitis virus, HIV and various other sexually transmitted diseases.

E. Past abstinent attempt

Under this, various information collected includes number of attempts made, when and under what circumstances these attempts were made, whether sought treatment elsewhere, duration of abstinence, reasons for return to previous pattern of dependent use. Enquiry should focus on use of any substances (substitute) during the abstinent period.

HINTS

- Abstinence-staying off the substance of dependence for considerable period usually for a month or more.
- Lapse-few events of substance use after a period of abstinence and not showing dependence characteristics
- Relapse- return to previous pattern of dependent use after a period of abstinence

Illustrative Case: Mr. C made his first attempt 3 years back when he stopped heroin on his own and after going through withdrawal symptoms for 1- 2 weeks staying at home, he remained abstinent for next 6 month subsequently he was tempted to use heroin after seeing an old friend chasing it. He made yet another attempt 1-year back when he was admitted for 2 weeks for treatment of his substance problem. He was given some medications. After discharge he remained abstinent for a total period of 5 months and relapsed after he had a fight with brother over property dispute.

F. Reasons for seeking treatment and motivation of the patient

These are assessed by noting as to why the patient has reported to the treatment centre currently.

Factors that determine good motivation are:

- Seeking treatment on his own
- Accepting substance use related problems
- Past history of abstinence
- Willingness to take treatment
- Adherence with the treatment plan

G. Presence of psychiatric illness

Psychiatric disorders are sometimes seen among substance users. They might precede substance use or start after continued use of substance. Ask the patient or family members of any major abnormality in behaviour.

H. Family history

This information is related to patient's parents and his brother and sisters. Enquire about any history of substance use in family members and any psychiatric illness or suicide.

Rationale: Psychiatric illness and substance abuse tendency are inherited partly through genes. Presence in the family of such history also predisposes person for substance use at an early age and leads frequently to relapse after repeated abstinence attempts.

I. Personal history

This includes behaviour from childhood to adulthood. Some characteristics present in the childhood period makes them more prone to developing substance use, like repeated lying, stealing, cruelty to animals, bullying other children, absconding from home for days, absenteeism from school without parents knowledge and involvement in gang activities. Other details to be obtained are: marital history, current living arrangements, occupation and financial status.

J. Physical examination

General physical examination would include comment on physical appearance, signs and symptoms of intoxication or withdrawal, nicotine stains on fingers and teeth in tobacco users, needle marks, hardened veins on forearms and multiple ulcers on skin with hardened skin in injecting substance users, rash around the nose in inhalant users. Other measures to be recorded are:

- Weight
- Pulse
- Temperature
- Respiratory rate
- Blood pressure
- Systemic examination- involves examination of respiratory, cardiovascular, abdominal and nervous system.

Rationale: To assess the nutritional status and general health, signs of intoxication or withdrawal and observation of his co-operativeness and behavior. Vital signs are abnormal in patients with substance use. Systemic examination abnormalities found will guide further evaluations required.

Illustrative Case: Patient appears thin due to poor muscle mass and older than his stated age. Pallor was noticed in conjunctiva and delayed capillary refilling was noticed in nail beds. There was clubbing of nails. No swellings noticed or felt. He weighs 56kg.

He was found sweating while rest in the room were not, his pupils were mildly dilated bilaterally, occasional yawning noticed, he would frequently clear his nose-obviously experiencing opioid (heroin) withdrawal syndrome. His fingers on the right hand showed burn marks, indicative of his chasing smack practice. There were a few injection marks. Systemic examination reveals no abnormality.

K. Mental status examination

Among certain patients where psychiatric illness is being suspected, a thorough mental examination may be needed.

L. Laboratory evaluation

These include urine testing for presence of substances, haemogram, liver function tests and kidney function tests. Some of the abnormalities are caused by a particular substance and these are knows as biological markers which help in identifying heavy use.

Diagnosis: In the end, the collected information is to be analyzed to identify the problem and arrive at a diagnosis. Following this, treatment plan is made and favourable and unfavourable factors for success of the treatment should be enlisted.

Documentation: This involves writing the history and physical examination findings, summary and diagnosis and treatment plan. This is for record keeping as required by the clinic. This information sheet acts as baseline for further review.

Conclusion: History taking remains the most important task in assessment of substance abuse disorders. With only repeated practice one can become fully conversant with the issues in collecting information with ease. Assessment is not just about establishing diagnosis but also have holistic approach and to identify other ongoing stressors, positive and negative factors that help the patient in his attempt to abstain from substances. Substance abuse disorders cause immense hazard to the patient, family and society at large. A good treatment plan depends on good assessment.

Suggested reading material:

1. Galanter M, Kleber HD, eds. The American Psychiatric Press Textbook of Substance Abuse Treatment, American Psychiatric Press, Washington D.C.; 1999.
2. Lowinson J, Ruiz P, Millman R, Langrod J, eds. Sub-stance abuse, A comprehensive textbook, 4th ed. Bal-timore: Lippincott Williams and Wilkins; 2005.
3. The ICD-10 Classification of mental and behavioral disorders (Clinical descriptions and diagnostic guidelines). WHO, Geneva. A.I.T.B.S Publishers; Indian Edition 2007.

Suggested slide material

Slide 1

Introduction

- Experimental use
- Harmful use
- Dependent use
- ICD-10 Criteria

Slide 2

- Screening
- Basic assessment
- Specialized assessment

Slide 3

- Clinical history of substance use details
- Common complications of substance use
- Presence of psychiatric illness
- Physical examination
- Mental status examination
- Laboratory investigations

Slide 4

Factors that determine good motivation are

- Seeking treatment on his own
- Accepting substance use related problems
- Past history of abstinence
- Willingness to take treatment
- Adherence with the treatment plan

Slide 5

Interview schedule-(key data items)

A. Socio-demographic profile

Name, age, sex, marital status, qualification, occupation, type of family and place of residence.

B. Details of substance use

1. Age of initiation
2. Various substances
3. Frequency of substances used
4. Quantity of substance taken usually (usual dose)
5. Time lag since the dose last used (last dose)
6. Need to increase the quantity of substance consumed in order to produce the same effect (tolerance)
7. Effects and signs and symptoms of intoxication
8. Presence/ absence of physiological/psychological symptoms and signs when the particular substance is not taken/ less than the usual amount of substance is being taken (withdrawals)
9. Compelling need/ urge to take the substance

Slide 6

C. Complications associated with substance use

1. Physical: long term health hazards associated with substance use
2. Psychological: chronic mental effects of continuous use of substance
3. Financial: losses suffered/debts incurred
4. Occupational: frequent absenteeism at work, constant change of job, memos is-sued, periods of unemployment

5. Familial – social: frequent fight with spouse/ other family members, neglect of responsibility at home, social outcast
6. Legal: involvement in illegal activities to sustain substance use, arrests/ charges on ac-count of substance use, caught driving under intoxicated state, drinking brawl.

Slide 7

D. High risk behaviours: presence of injection use/ unsafe sexual practices

1) Injection risk: sharing of needles/ sharing syringes/ water used for rinsing
2) Sexual risk: contact with commercial sex workers, unprotected sexual intercourse

Slide 8

E. Past abstinence attempts:

1. Number of attempts made
2. Duration of each attempt
3. Reasons for abstinence
4. Nature of treatment sought: pharmacological, psychological or combined
6. Reasons for relapse

Slide 9

F. Level of motivation

- Whether seeking treatment by self or brought forcibly by family member;

G Presence of co-morbid psychiatric illness

- Affective disorder, psychotic disorder and personality disorder/ traits.

H. Presence of family history of substance use disorder

I. Personal history:

- Education level, marriage, children, occupation, hobbies

Slide 10

J. Physical examination

- Vital signs – Pulse, Blood pressure, Respiratory rate
- Systemic examination – Cardiovascular, Respiratory, Abdominal and Nervous system

K. Mental status examination

L. Laboratory investigations

Pharmacotherapy in Substance Use Disorder

4

Ramandeep and Anju Dhawan

Summary: *The physical and psychological sequelae experienced consequent to stopping/reducing the amount of substance used after a period of prolonged usage is known as withdrawal symptoms. Medicines are needed to control these. Long term medicines are also needed to reduce harmful usage of psychoactive substances and minimize chances of relapse.*

Introduction

Whenever a patient tries to stop or even cut down the substance use, the first problem he faces is varying degree of physical and psychological discomfort. The degree of discomfort experienced depends on the type, amount and duration of substance use. The time to onset of discomfort may vary depending on the half life of that substance. This is the 'phase of withdrawals' and generally lasts for initial few days to weeks.

The second problem faced is the risk of relapse. A person may restart his substance use over next few months due to various factors. In addition, patient may require pharmacotherapy for comorbid medical and psychiatric conditions, if any.

The role of pharmacotherapy is to help the patient deal with both the short term and long term problems mentioned above: control of withdrawal symptoms and help patient maintain abstinence for long periods. While the need of medication in phase of withdrawals is clear to most people, the requirement of long term medication is often questioned by patients, family members and even the medical and nursing fraternity.

Is long term medication really required ?

Addictive disorders are relapsing in nature. Patients abstain and restart substance use. They ''go and come back'' repeatedly, referred to as the ''revolving door phenomenon''.

Even though withdrawals do not persist beyond few days, there is persistence of strong urge to take substance (known as craving).

Neurobiological changes as a result of long term substance use takes a long time to normalize. Patient may need some form of treatment till his socio-occupational functioning is regained. Long term medication allows patient to focus on social and occupational aspects rather than substance-seeking.

Hence, the patient is not ''cured'' after the withdrawal phase is over. Rather he commonly requires long term pharmacotherapy so that his chances of returning to substance are minimized. In clinical practice, few patients with very short substance use history and good motivation may not be given long-term pharmacotherapy and are maintained ''Drug-Free''. The research supporting use of such method is minimal.

Barring this subgroup, most patients are given pharmacotherapy till their treatment goals are met which may take few months to more than a year. The kind of medicines used and their dosing will be discussed in greater detail later in the chapter.

Broad principles of treatment

Treatment goals

The ultimate treatment goal is total abstinence. However, it may not be achievable in all cases. The next goal is to minimize the health-related, social and economic harm caused by substance (harm minimization). It can be done by using safer forms of substance; safer route; safer paraphernalia; reduction of the medicine doses or substance-using days along with imparting education.

The rationale is that despite the continuing substance use, the risk to which patient is exposed is significantly lessened. Harm minimization acknowledges that there is a broad spectrum of damage and the risks are hierarchical (less severe to most severe).Thus the most damaging consequences should be given priority in management.

Remember: Goals of treatment differ from patient to patient. It is very important to set the goals after discussion with patient rather than impose upon.

Treatment Goals

- Abstinence
- Harm minimization
- Improved Physical and Psychological health
- Improved socio-occupational functioning
- Reduced Involvement in Illegal activities
- Reduced Burden on Family
- Improved quality of life

Treatment setting

The treatment can be delivered on out patient basis (OPD) as effectively as inpatient setting.

Selection criteria for OPD treatment:

1. Patients with mild to moderate dependence
2. Medically stable patient
3. Good social support
4. Patients ready for frequent follow-up in OPD
5. Willing to give body fluids for examination to confirm abstinence
6. Patients with poor motivation
7. With anticipated disciplinary problems

In contrast, following patients are preferred for In-patient setting:

1. Those who are unable to abstain on OPD basis
2. Those having severe withdrawals (current or past history)
3. Those with medical complications
4. Co-morbid psychiatric/medical illness
5. Out-station patients
6. Poor social support
7. Patient in crisis

Remember: Both settings can be equally effective provided one chooses appropriately.

Phases of treatment

I. Phase of Withdrawals
II. Maintenance phase

I. Phase of Withdrawals

Traditionally it was referred to as 'detoxification phase' but the term was a misnomer and it is replaced by 'phase of withdrawals' nowadays. This is the initial phase of treatment of substance dependence and includes

- Treatment of withdrawal symptoms
- Assessment and treatment of medical and psychosocial complications
- Building up of mutual trust and therapeutic relationship with patient

Methods used

The treatment of withdrawals is done as follows:

1. Gradual reduction of the substance.
2. Abrupt cessation of the substance of abuse and administration of specific medications.

The medications used are:

1 Substances which have similar pharmacological effects as the original substance of use, can be given in the equivalent doses e.g. benzodiazepine for alcohol withdrawal; buprenorphine for heroin withdrawal. The patient experiences minimal withdrawals as a result.

2 Substances which have pharmacological properties specifically to suppress symptoms of withdrawal, e.g.clonidine suppress hyper adrenergic symptoms of opiate withdrawal.

3 Provide general symptomatic relief, e.g. sedatives, anti-emetics, antidiarrheals and analgesics.

4 By and large, abrupt total cessation of the primary substance of dependence and prescription of a medicine with similar properties is the widely accepted method. The medicine is then gradually tapered over few days to weeks.

5 Treating doctor needs to review the dosage schedule according to the withdrawal symptoms and periodic assessment is required throughout the withdrawal phase.

6 Prolonged usage is, however, not recommended as these medicines themselves have abuse liability. Use of IV fluids and parenteral substances to control withdrawal is not recommended, until there are specific indications, e.g. presence of severe dehydration or some medical complications.

Duration of withdrawal phase

It depends on several factors:

- Type of substance use (e.g. more in heroin than cannabis users)
- Degree and duration of dependent use
- Treatment setting (faster in Inpatients)
- Subjective ability to tolerate withdrawals.

Opioid detoxification requires approximately 2 weeks though duration may be longer in OPD setting. Alcohol and benzodiazepines detoxification is generally over in 1-2 weeks. Certain substances like cannabis produce minor and short lasting withdrawals and may not require medication

Treatment of withdrawal symptoms

A. Alcohol withdrawal:

A group of sedative/hypnotic drugs (Benzodiazepines) are the medicines of choice in management of alcohol withdrawal. Usually divided daily doses of 20-40 mg of diazepam or 40-80 mg of chlordiazepoxide are required. The dose may be higher depending on severity of withdrawals. The dose of benzodiazepines is gradually tapered off over next 7-10 days. Oral administration of thiamine is necessary in all the patients for prevention of alcohol related neuorlogical complications, viz. Wernicke's encephalopathy.

In patients with mild to moderate dependence, loading dose of benzodiazepine may be given. Hence, patient is given 20 mg diazepam every 2 hourly till sedated on first day of withdrawal. As the half-life of diazepam is long, the patient is comfortable and requires no further doses from next day onwards. This shortens the withdrawal phase.

During this phase, the patient must be monitored closely for withdrawal symptoms e.g tremors, anxiety, insomnia etc.The blood pressure and pulse rate should be recorded daily if the patient is admitted .The orientation of patient should be checked because some times during alcohol withdrawal patient may slip into a potentially life-threatening complication e.g. Seizures or Delirium tremens. Early symptoms of latter are severe alcohol withdrawals (generalized tremors) coupled with disorientation to time, place and person. It is a medical emergency and treatment of choice is intravenous diazepam, which needs to be given in doses of 10-20 mg every 30-60 minutes till patient is sedated or signs and symptoms of withdrawal subside.

B. Opioid withdrawal

The starting dose of medication needs to be decided according to amount of opioid consumed by a patient converted into equivalent doses of compound used for detoxification. Subsequent doses needs to be adjusted according to the severity of withdrawal symptoms which peak during 2nd-3rd day and generally lasts for 2 weeks. Usually the doses required are 1.2-4.0 mg sublingual buprenorphine or 6-10 capsules of dextropropoxyphene (65mg) initially and tapered off gradually after third day. Usually, medicines

are required for two weeks, though it may be somewhat longer in OPD setting. Certain withdrawal symptoms like insomnia, restlessness and mild body aches persist even after two weeks, and can be managed symptomatically by sedatives and non-narcotic analgesics as well as non-pharmacological treatments.

Methods for accelerating the treatment of withdrawal phase are also available but have not been shown to provide any additional benefit.

Opioid withdrawal in contrast to alcohol withdrawal poses no risk of being life threatening. However, it is immensely discomforting for the patient. Patient should be monitored for common withdrawals like sneezing, running eyes and nose, diarrhea, body aches and sleep disturbances. Blood pressure, pulse rate and sleep duration should be recorded. Careful medical examination in addition to screening for hepatitis B, C and HIV is required in injection substance users specially if there is h/o sharing needle/syringes.

C. Sedative-hypnotic withdrawal

Sedative hypnotic withdrawal is managed by gradual tapering of the substance of dependence. In cases of mild to moderate dependence, an outpatient treatment regime with gradual reduction in doses can be carried out in well motivated patients. In patients with severe dependence, particularly with dependence on short acting benzodiazepines, indoor detoxification is preferred. In indoor setting, the substances can be tapered off at a rate of 10% daily. In patients dependent on short acting benzodiazepine (e.g alprazolam), risk of withdrawal seizures and delirium should be kept in mind and to prevent these potentially life threatening conditions, treatment is started with equivalent doses of long acting benzodiazepines(e.g diazepam), which then should be tapered off as usual. Usually, it takes 2-3 weeks for treatment of withdrawal phase.

D. Multiple substance withdrawal

In patients, where dependence to more than one substance has been clearly identified, the specific medication for each category of the substance of dependence should be given. Frequently, patient requires inpatient treatment and the period of detoxification is longer than in patients with single substance dependence.

Agents used to treat withdrawal phase

Opioid withdrawal: Buprenorphine, Dextropropoxyphene, Clonidine

Alcohol withdrawal: Long acting benzodiazepines (Chlordiazepoxide/ Diazepam)

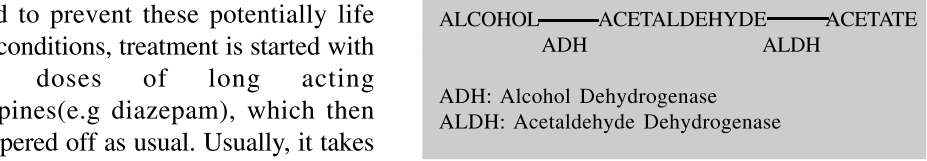
Benzodiazepine withdrawal: Shift to long acting benzodiazepines

Nicotine withdrawal: Nicotine gums and Nicotine Transdermal patch

General management during withdrawal: Analgesics/Sedatives/Anti emetics and Anti diarrhoeals.

II. Maintenance phase

The need for long term medication has already been discussed at the beginning of the chapter. One important limitation is that till date specific medications to treat cannabis, cocaine or amphetamine abuse are not available . Treatment of these substances relies on non-pharmacological modalities along with some general medications for sleep/pain.



ADH: Alcohol Dehydrogenase
ALDH: Acetaldehyde Dehydrogenase

A. For Alcohol use disorders

Deterrent agents (Disulfiram)

Disulfiram is the most commonly used deterrent in clinical practice. Disulfiram irreversibly inhibits the activity of a particular enzyme in the body (called as aldehyde dehydrogenase -ALDH). Alcohol normally is broken down to acetaldehyde in the body and the above mentioned enzyme further breaks acetaldehyde. In absence of this enzyme activity, there is accumulation of toxic levels of acetaldehyde in liver and systemic blood circulation, which causes a lot of unpleasant symptoms if a person takes alcohol. This has been termed as disulfiram ethanol reaction (DER). Usually patient experiences nausea, vomiting, headache, redness, flushing, fall in BP, and even coma may occur. (This is potentially fatal).

Side effects: Patient may experience drowsiness, gastric irritation and uncommonly, hepatotoxicity, peripheral neuropathy, skin reactions and psychosis. Side effects are not very common and patients can be monitored for early detection in case side effects occur. All patients need to be monitored with regular 3 monthly liver function tests and once a year ophthalmology check-up for rare ophthalmologic side effects (optic atrophy). Symptoms suggestive of numbness and tingling in extremities should be asked in follow up visits. Generally, Disulfiram is avoided in patients who tend to be impulsive, suffering from psychiatric illness in which patient is incapable to give consent or in pregnant women. Disulfiram therapy should be initiated only after the patient and the family member has been informed about the rationale for its use as well as the necessary precautions. An informed consent of patient is a necessary prerequisite and it should include:

1. Education about the signs and symptoms of DER, and the actions required to be taken if they notice these signs or symptoms.
2. It should be explained that DER can occur with alcohol intake even in small doses.
3. Precautions to avoid all alcohol containing substances e.g certain cough syrups,after shave lotions,perfumes and vinegar
4. It has to be emphasized that there is a possible risk of DER up to 14 days after last dose of disulfiram.

It is a good practice that the patients be provided small cards containing the signs and symptoms of DER and necessary first aid methods in case of occurrence of DER.

Treatment of DER: This should be treated as an emergency.
The fall in blood pressure should be controlled on a priority basis and patient should be monitored for irregular heart rate. If DER is mild, assurance and oral fluids suffice. In patients with moderate or severe DER, intravenous fluids and, in some patients, dopamine infusion is necessary to control the severe hypotension. Rest is mainly supportive treatment and close monitoring of the patient.

Remember: Family members frequently ask for prescription of Disulfiram without knowledge of patient. Under no circumstances should it be started without obtaining patient's consent Disulfiram is not given forcibly or as means of punishing patient for taking alcohol. It is suitable for those patients who are motivated for leaving alcohol and acknowledge that the motivation level may at times fluctuate. Disulfiram will therefore act as a deterrent in the high risk situations. DER, if experienced, will cut down the positive reinforcement effects of alcohol. Disulfiram is available as 250 mg tablets and the usual dose is 1-2 tablets/day.

Anti-Craving Agents:

Acamprosate is thought to reduce the 'craving' that is experienced by alcohol dependent patients. Acamprosate has a chemical structure similar to that of amino acid neurotransmitters such as gamma-amino butyric acid (GABA) and glutamate, and evidence suggests that it acts by stabilising the imbalance of neurotransmitters which is seen in alcohol dependency. Acamprosate is available in 333 mg strength tablets and is given as 2 tablets three times a day. It is important to note that unlike Disulfiram, Acamprosate does not lead to any reaction with alcohol. Acamprosate is well tolerated. Adverse events were mostly seen early in treatment and were usually mild and transient in nature in the form of nausea, diarrhoea, abdominal pain and uncommonly irregular heart rate. Acamprosate should not be taken by people with kidney problems or allergies to the substance.

Naltrexone used primarily in opioid dependence has been found to reduce craving for alcohol through its effect on opioid receptors. It is thought to reduce reinforcing effects of alcohol. The dose is 50 mg per day.

Fluoxetine, used primarily in depression, has also shown benefit and can be preferred in patients with concomitant depression.

Alcohol: Long term pharmacotherapy

A. Deterrent: Disulfiram, Calcium Carbimide, Metronidazole,

B. Anti Craving: Acamprosate, Naltrexone, Fluoxetine

Acamprosate 333 mg; Naltrexone 50 mg; Fluoxetine 20/40 mg

B. For Opioid use disorders

OPIOID: Long term pharmacotherapy

- Opioid Agonist Substitution

Methadone (Not available in India)

Buprenorphine, Morphine

- Antagonist therapy

Naltrexone

Agonist substitution and maintenance:

Agonist is an agent which acts at same opioid receptors and thereby producing similar psychoactive effects. Dole and Nyswander in 1964 introduced the concept of substitution as long term treatment for opioid dependence. Some suggest that it might be appropriate to target at rehabilitation rather than total abstinence in these patients. It was recommended that narcotic medication, if used in these patients to satisfy their craving, will help in controlling illicit substance use and related behavior thereby making them accessible to rehabilitation. Methadone is the most commonly used agonist substitution agent for opioid dependent patients in the USA and Europe. In India, historically, substitution and maintenance program had been practiced through opium registry, wherein registered opium addicts were given a certain amount of tincture opium till registration of new cases was discontinued in 1959.

Buprenorphine (2-8 mg/day) and Morphine (60-360mg/day) has been used in our set-up successfully as maintenance agents.

Maintenance generally lasts between 6months to two or more years.

Many people do not feel comfortable with the idea of maintenance therapy and may raise reservations about the moral and ethical issues involved in such a treatment strategy. However, it is important to understand that all the patients may not be able to achieve total abstinence and due to long standing substance use, may require some form of agonist substance as a substitute. Harm minimization is the underlying principle as exemplified below:

Philosophy of Agonist Substitution:

- **Heroin**: Illicit, medically unsafe, short acting drug of unknown purity/potency, multiple administrations, IV. use, associated criminal activities.
- **Agonist drug**: Medically safe, long acting drug, known purity/ potency, once daily, combined with psychosocial rehabilitation.

The merits of and arguments in support of substitution maintenance treatment are:

- Reduction in illicit substance consumption.
- Avoidance of medical complications due to impurities in street preparations
- Avoidance of the complications of parenteral administration and overdose.
- Better nutritional and health status.
- Decrease in criminal behavior.
- Improvement in social behavior and psychological well being.
- Improvement in inter-personal and family relationships
- Increased productivity
- Better Quality of life
- Decreased family burden
- Cost effective

Remember: While taking agonist maintenance, patient should be asked for any withdrawals or craving as well as experience of significant euphoria/ drowsiness/ intoxication.

The dose of agonist is carefully titrated and kept sufficient enough to control craving and withdrawals and yet not enough to produce euphoria/ intoxication.

Regular Urine Screening is a must in order to ensure compliance and rule out the continuing use of illicit substances.

Buprenorphine

Buprenorphine is a partial agonist at same brain receptors as opioids and produces similar but sub-maximal effects. The prolonged action of buprenorphine makes it effective when dispensed in once daily dosage or even every 2-3 days. Buprenorphine is available in sublingual preparation (2/4 mg). The tablet must be placed under the tongue and allowed to dissolve. Chewing and swallowing the tablet will make it less effective. It dissolves within 2–8 minutes after placing it under the tongue. The effects begin within 30–60 minutes of taking the dose and peak within 2–4 hours, lasting between 4 hours to 3 days, depending on the dosage. Side effects of buprenophine are sedation, drowsiness and constipation. Tolerance to these effects can be expected to develop during continued buprenorphine therapy. No apparent health risk has been reported and it is relatively safe. Liver damage and pregnancy must be ruled out before starting.

Nurses must supervise the proper intake of medication and it must be seen that the tablet is completely dissolved before the patient leaves. There is a risk of illegal diversion and intravenous

administration by substance using population. Injecting the tablet is dangerous, and can lead to severe vein damage, blood clots and other health complications. Hence, plain buprenorphine is given supervised by a trained nurse and not allowed to be taken home.

A new formulation containing combination of Buprenorphine and Naloxone has recently been approved and made available in India. It has added advantage that it is inactive in case taken intravenously and hence can be given as ''take home".

Antagonist therapy (Naltrexone)

Opioid antagonists are substances that bind to opioid receptors in the brain but do not produce opioid like effects. If an individual stabilized on opioid antagonist consumes an opiate agonist e.g. heroin, he will not experience the euphoric effects as the opioid receptors are already blocked and hence not available. In this manner, substance seeking behavior fades away as no euphoria is experienced despite substance intake. This phenomenon helps the patient in achieving a drug free life style.
Introduction of Naltrexone in the early 1980s, which is effective orally, with long duration of action and minimal side effects, has revolutionized this approach.

Naltrexone, available as 50 mg tablets, is well absorbed orally from the GI tract.

There are three common schedules for administration:

- Daily (50 mg/day),
- Twice a week (150 mg on Mondays and 200 mg on Thursdays)
- Thrice a week (100 mg on Mondays and Wednesdays, and 150 mg on Fridays)

Naltrexone therapy should be started, only after detoxification phase has been completed. This is necessary as there is a risk of precipitation of severe withdrawal features if the patient has consumed an opioid in the past 2-3 days. Confirmation of abstinence for past 3 days is absolutely important while starting first dose of Naltrexone.However once started and patient stabilized on Naltrexone, the continued use of heroin would not have any effect at all in usual doses.

The common side effects of naltrexone are mild opioid withdrawal like symptoms (nausea, abdominal pain, dyspepsia), skin rash and derangement in liver function test.

The only important contraindication of naltrexone therapy is the presence of hepatic failure.Baseline liver function tests are mandatory before starting naltrexone therapy as is their regular monitoring. The duration of naltrexone therapy has been recommended to be at least 6-12 months.Naltrexone therapy is beneficial in patients with a high level of motivation.
Naltrexone blocks the effects of narcotics and heroin. However, large doses of heroin or opioids taken over Naltrexone can lead to overdose. Respiratory depression, coma and even death may occur.

Selection criteria for Agonist:

- Long duration of substance use (> 3-5 years)
- Minimal abstinence period or unsuccessful attempts (2 or more)
- No regular occupation
- Poor social support
- Willing to come regularly and give urine for screening for substance use

Selection criteria for Antagonist:

- Young adults
- Short duration of opioid use
- Past history of significant abstinence
- High motivation
- Professionals like doctors, dentists etc.
- No co-morbid psychopathology
- Good social support

Patient should be involved actively in the treatment plan and the available options should be discussed with him.

C. For Benzodiazepine Dependence- no medication is yet available for long term maintenance

D. For Nicotine Dependence

Use of Nicotine Chewette (available in 2/4mg) makes the treatment easier .It is advised to chew it very slowly to facilitate slow release of nicotine and can be used every 2-3 hourly initially and tapered off in next few weeks. Nicotine transdermal patches are available in India and can be used. It is possible to tide over this period with intensive psychological intervention in addition to nicotine chewette.

Bupropion is the first non-nicotine agent to be approved for treatment of nicotine dependence. It is an antidepressant also found to be effective for abstinence from nicotine. Precise mechanism of action is not known. It reduces the craving, controls the withdrawal symptoms and blocks the reinforcing properties of nicotine. It is available in 150 mg and started at 150 mg for first week and increased to 300 mg in next week .Dosing is between 300-600mg/day.It has to be started 2 weeks prior to quit date as it usually takes time to onset of action.Side effects include dry mouth, insomnia, anxiety, tremors and a small risk for seizures. Bupropion should be used cautiously in patients receiving substances that reduce the threshold for seizures. The treatment has to be continued for few months (possibly more than 6 months).

Naltrexone is shown to reduce craving for nicotine. Recently another substance by name of Varenicline has been reported to be treatment for use in nicotine dependence

Issues related to termination of treatment:

As already discussed above, various treatment goals must be met before stopping medication. Generally, it means treatment can continue from 6 months to more than a year. Socio-occupational rehabilitation is an integral part of treatment process and this aspect should be discussed with patient as well as family members. The patient must be assessed comprehensively before planning for termination of treatment. Patient and family members are advised to remain in contact with treatment centre and continue the follow-up visits even after being off-substances. The patient is also clearly advised as well as encouraged to come back as soon as possible in case of relapse.

Substance use treatment and Anti-retroviral therapy

Substance users are often affected by multiple co-morbid medical and psychiatric conditions, including HIV infection. HIV/AIDS is more prevalent in substance use disorder patients as compared to general population. The use of parenteral route and sexual risk factors play a major role. The treatment staff must be aware of issues involved in concurrent treatment of substance use disorders and Highly Active Anti-Retroviral Therapy (HAART) for HIV-infected substance users.

An increasing number of potential interactions between medications to treat substance abuse and HAART have been evaluated. Such interactions can result in diminished efficacy of substance abuse medications or HAART treatment, medication toxicity, or both. Interactions between HAART and methadone may precipitate symptoms of over sedation or withdrawal. Zidovudine (used as part of HAART) toxicity, such as anemia, nausea, and headaches, may occur when zidovudine and methadone are used concurrently while no significant interaction has been reported with Buprenorphine. Similarly, no significant interaction of HAART has been reported with Disulfuram and Naltrexone.Evidence is lacking that use of heroin, cocaine, or marijuana interact with HAART. Concomittamt use may, however, diminish HAART effectiveness in some persons by diminishing adherence to prescribed regimens.

Responsibilities of nurse in pharmacotherapy

The nurse serve as a key member of the health care team in the both detoxification and rehabilitation treatment. Nurses must know appropriate use of medications. They should be aware about action, indications, interaction with other substances, potential side effects and countra- indications.

During detoxification phase

- Remain alert for the signs and symptoms and severity of withdrawal symptoms.
- Maintain 5R's of medication administration: right patient, right time, right dose, right medicne, and right route.
- Monitor the patients physiological status and to provide appropriate medication without unduly alarming the patient.
- Identify the manipulative behavior of certain patients and should not reinforce their substance seeking behavior.
- Careful documentation and proper checking of the medicines should be done in each shift and adequate stocks to be maintained.
- Educate the patients about the duration of treatment and the precautions they have to take while taking medicines (like disulfiram).

During maintenance phase

- Ensure patient renews the treatment regime consulting with the treating doctor.
- Supervise that medications has been taken by the patient properly to avoid misuse(i.e. injecting the tablets after dilution)
- Careful documentation and adequate stocks of medicines to be maintained.
- Educate the patients about the need for medication compliance
- Assess for any lapses, or relapse- inform the treating physician for further evaluation and management.
- Use harm minimization strategies for IDUs

Conclusion

Pharmacotherapy is required to help control the withdrawal symptoms, treatment of co morbid illness (if any) and to prevent relapse. Medication should be properly chosen, supervised and monitored at regular intervals. Compliance to treatment and regularity of follow-up is crucial to success of any treatment. Treatment goals are multiple and include the medical, social, occupational goals and aims at improving overall quality of life. Pharmacotherapy is required for few months to more than a year depending on the achievement of treatment goals. The achievement of treatment goals is the important criteria to be fulfilled before the termination of long-term treatment.

Suggested reading materials

1. American Psychiatric Association: Practice Guidelines for the Treatment of Patients with Substance Abuse Disorders: Alcohol, Cocaine, Opioids. American Journal of Psychiatry, 1995, 152 (Suppl.): 1-59
2. Blaine JD, ed. Buprenorphine, AlternativeTreatment for Opioid Dependence. NIDA D.C, 1992.
3. Dhawan A,Kumar.Long term treatment of opiod dependence syndrome.In:Lal R(Ed)Substance Use Disorder Manual for Physicians, National Substance Dependence Treatment Centre,A.I.I.M.S,2005
4. Fudala PJ, Charles O'Brien PO.Buprenorphine for the treatment of opioid addiction.In:Lowinson JH,Ruiz P,Millman RB, Langrod JG (eds.) Substance Abuse- A Comprehensive Textbook- fourth edition, Lippincott Williams and Wilkins, USA, Maryland,2005.
5. Fudala PJ, Greenstein RA, Charles O'Brien PO.Alternative pharmaotherapies for opioid addiction. In: Lowinson JH,Ruiz P,Millman RB, Langrod JG(eds.) Substance Abuse- A Comprehensive Textbook- fourth edition, Lippincott Williams and Wilkins, USA, Maryland,2005.
6. Hughes JR.Nicotine related disorders. In: Sadock BJ,Sadock VA(eds.) Comprehensive Textbook of Psychiatry- seventh edition, Lippincott Williams & Wilkins, 2000
7. Jaffe JH, Jaffe AB. Opioid related disorders. In: Sadock BJ,Sadock VA (eds.) Comprehensive Textbook of Psychiatry-seventh edition, Lippincott Williams & Wilkins, 2000.
8. Ray R, Dhawan A. Oral Buprenorphine Substitution Therapy. Report submitted to Research Monograph 121. US Department of Health and Human Services Washington, UNODC, ROSA, 2004.
9. Schuckit MA. Alcohol related disorders. In: Sadock BJ,Sadock VA(eds.) Comprehensive Textbook of Psychiatry- seventh edition, Lippincott Williams & Wilkins, 2000.

Suggested slide material

Slide1

Role of nurse in pharmacotherapy

During detoxification phase

- Assess and manage withdrawal symptoms appropriately
- Maintain 5R's of medication administration
- Identify the manipulative behavior of certain patients and should not reinforce their drug seeking behavior.
- Careful documentation and stock maintance
- Educate the patients about the action side effects, duration of treatment and special precautions

Slide2

Role of nurse in pharmacotherapy (contd.)

During maintenance phase

- Ensure treatment compliance
- Ensure the medicines are not misused
- Careful documentation and adequate stocks of medicines to be maintained.
- Evaluate any lapses, or relapse

  and do intervention accordingly
- Harm minimization forIDUs

Slide 3

Role of Pharmacotherapy

- Short-term: Control of withdrawal symptoms
- Long-term: Help patient maintain abstinence over a long term.
- Medication may be needed to treat co-morbid illness

Slide 4

Need for Long-term medication

- Addictive disorders are relapsing in nature (revolving door phenomenon)
- Persistence of strong urge to take substance (Craving).
- Brain changes take a long time to normalize.
- Socio-occupational functioning is regained gradually.

Slide 5

Treatment Goals

- Abstinence (Cessation of drug use)
- Harm minimization (Reduction in drug use or associated harms)
- Improvement in Physical and Psychological health
- Improvement of socio- occupational functioning
- Reduced Involvement in Illegal activities
- Reduced Burden on Family
- Improved quality of life

  "Achievement of these goals should guide the duration of long-term pharmacotherapy"

Slide 6

Treatment setting-1:

- The treatment can be on out-patient or In-patient basis
- No difference in long-term course and outcome between both settings

Selection criteria for OPD treatment:

a) Patients with mild to moderate dependence,
b) Medically stable patient
c) Good Social support
d) Patients ready for frequent follow-up in OPD
e) Willing to give fluids for examination to confirm abstinence
f) Patients with poor motivation and with anticipated disciplinary problems

Slide 7

Treatment setting-2

In-patient setting:

a) Those who are unable to abstain on OPD basis,
b) Those having severe withdrawals(current or past history)
c) Those with medical complications
d) Co-morbid psychiatric/medical illness
e) Distant patients with poor social support

Slide 8

Phases of treatment

I. Phase of Withdrawals

II. Maintenance phase

Phase of Withdrawals-1

Goals:

a) Treatment of withdrawal symptoms
b) Assessment and treatment of medical and psychosocial complications
c) Building up of mutual trust and therapeutic relationship with patient

Slide 9

Phase of withdrawals-2

The medications used are as follows:

a) Those which have similar pharmacological properties and effects as the substance
b) Those which have specific pharmacological properties to suppress symptoms of withdrawal
c) Provide general symptomatic relief, e.g. sedatives, anti-emetics, anti-diarrheals and analgesics.

Slide 10

Medications for Phase of withdrawals:

- **Alcohol withdrawal**: Long acting benzodiazepines (Chlordiazepoxide / Diazepam)
- **Opioid withdrawal**: Buprenorphine, Dextropropoxyphene, Clonidine
- **Benzodiazepine withdrawal**: Shift to long acting benzodiazepines and taper
- **General**: Analgesics/Sedatives/Anti-emetics /Anti-diarrhoeals

Slide 11

Alcohol-Withdrawal management

- Substitution with Benzodiazepines (diazepam: 20 – 40 mg; chlordiazepoxide: 40 – 80 mg)
- Titrate dose as per withdrawal monitoring
- Gradual tapering over next 7-10 days
- Thiamine supplementation
- Monitor for complicated withdrawal: seizures, delirium tremens

Slide 12

Opioid-Withdrawal management

- Divided doses of:

  1.2 to 4 mg of buprenorphine OR

  6 to 12 capsules of dextropropoxyphene
- Taper after 3rd day
- Gradual tapering (10% daily)
- Sedative – hypnotic; Analgesics

Slide 13

Medications for Maintenance phase:

- **Alcohol dependence**

  A. *Deterrent:* Disulfiram, Calcium Carbimide

  B. *Anti Craving*: Acamprosate, Naltrexone
- **Opioid dependence**

  A. Opioid Agonist Substitution

  Methadone (Not available in India)

  Buprenorphine, Morphine

  B. Antagonist therapy

  Naltrexone

Slide 14

Alcohol Dependence-1

- **Disulfiram:**
  - Inhibits the enzyme aldehyde dehydrgenase
  - Accumulation of acetaldehyde leads to unpleasant experiences (DER)
  - 250-500mg/day

    Side effects: drowsiness, gastric irritation and uncommonly hepatotoxicity, peripheral neuropathy, skin reactions and psychosis
  - Informed consent

Slide 15

Alcohol Dependence-2

- **Acamprosate:**
  - Reduce craving
  - 333mg 4-6 tab/day
  - Side-effects: nausea, diarrhea, abdominal pain, irregular heart beat
  - Not to be given in kidney dysfunction
- **Naltrexone**
  - Reduces craving
  - 50mg/day
  - Monitor for hepatotoxicity

Slide 16

Philosophy of Agonist Substitution:

Harm Minimization:

- **Heroin**: Illicit, medically unsafe, short acting drug of unknown purity/potency, multiple administrations, IV. use, associated criminal activities.
- **Agonist drug**: Medically safe, long acting drug, known purity/ potency, once daily, combined with psychosocial rehabilitation.

Slide 17

Harm Minimization

- Reduction in illicit drug consumption.
- Avoidance of medical complications due to impurities in street preparations
- Avoidance of the complications of parenteral administration
- Better nutritional and health status.
- Decrease in criminal behavior
- Decreased family burden

- Improvement in social behavior and psychological well being.
- Improvement in Inter-personal and family relationships

Slide 18

Antagonist therapy (Naltrexone)

- Bind to opioid receptors in the brain without opioid like effects.
- Block the euphoric effects of opioids
- 50 mg/day
- Side-effects: nausea, abdominal pain, dyspepsia, skin rash and derangement in liver function tests.

Slide 19

Selection criteria for Agonist:

- Long duration of drug use (> 3-5 years)
- Minimal abstinence period or unsuccessful attempts (2 or more)
- No regular occupation
- Poor social support
- Willing to come regularly and give urine for screening for substance use

Slide 20

Selection criteria for Antagonist:

- Young adults
- Short duration of opioid use
- Past history of significant abstinence
- High motivation
- Professionals like doctors, dentists etc.
- No co-morbid psychopathology
- Good social support

Slide 21

Nicotine Dependence

- **Nicotine Chewette**
  - 2/4 mg
  - Every 2-3 hourly
  - Gradual tapering over few weeks
- **Nicotine transdermal patch**
- **Bupropion**
  - First Non-nicotine agent for long term therapy
  - Reduces craving
  - 300-600mg/day
  - Onset of action takes 2 weeks
  - Side effects: dry mouth, insomnia, anxiety, tremors and a small risk for seizures.

Slide 22

Conclusion:

- Multiple treatment goals
- Variety of pharmacotherapies available
- Patient should be carefully chosen for a particular pharmacotherapy
- Regular monitoring and compliance
- Long-term pharmacotherapy –few months to more than a year
- Termination of treatment after the treatment goals are met

Annexure 1

CONSENT FOR THE ADMINISTRATION OF DISULFIRAM

As approved by National Institute of Drug Abuse (NIDA)

By accepting disulfiram therapy, I acknowledge the need for assistance in solving a drinking problem. I also understand that, with my full cooperation in this therapy, I am most likely to achieve successful recovery. It has been explained to me and I understand the effects which disulfiram can trigger if I should consume even a small amount of alcohol in any form. These symptoms include flushing, nausea, vomiting, thirst, low blood pressure, and possible convulsions. I understand that this reaction may occur up to 2 weeks after I discontinue disulfiram.

It has also been explained to me that the safe use of this in pregnancy has not been established. I understand that sexually active women taking disulfiram should be practicing a medically effective, reliable method of birth control I understand that if I were to become pregnant, it is recommended that I terminate disulfiram therapy.

I also understand that my family members will be supervising my medications.

DISULFIRAM ETAANOL REACTION: (DER)
Even a small amount of alcohol taken in any form (vinegar, cough syrup, mouthwash, after shave lotion and back rub) while on disulfiram may produce redness of the face, throbbing in the head and neck, headache, breathing difficulties, stomach distress, vomiting, sweating, thirst, chest pain, palpitation, giddiness, weakness, sensation of surroundings revolving around you, blurred vision and confusion. Very rarely, in severe reactions there may be a decrease in breathing, shock, acute heart failure, unconsciousness, convulsions and death.

SIDE EFFECTS OF DISULFIRAM
Side effects of Disulfiram taken alone may include drowsiness, numbness in extremities, metallic taste and / or allergic skin reaction. Rarely it may derange liver function test needing regular monitoring of LFT.

SIGNATURE OF PERSON TO RECEIVE DISULFIRAM
DATE & TIME

REFERENCES

SIGNATURE OF WITNESS
DATE

SIGNATURE OF COUNSELING PHYSICIAN
DATE

Morphine sulphate

Therapeutic actions

- Principal opium alkaloid;
- Acts as agonist at specific opioid receptors in the CNS to produce analgesia, euphoria, sedation;
- The receptors mediating these effects are thought to be the same as those mediating the effects of endogenous opioids (enkephalins, endorphins).

Indications.

- Relief of moderate to severe acute and chronic pain
- Used in opiod dependence as opiod agonist
- Preoperative medication to sedate and allay apprehension, facilitate induction of anesthesia, and reduce anesthetic dosage
- Analgesic adjunct during anesthesia
- Intraspinal use with microinfusion devices for the relief of intractable pain

Contraindications/cautions

- Contraindications: hypersensitivity to narcotics; diarrhea caused by poisoning until toxins are eliminated; during labor or delivery of a premature infant (may cross immature blood—brain barrier more readily); after biliary tract surgery or following surgical anastomosis; pregnancy; labor (respiratory depression in neonate; may prolong labor).

- Use cautiously with head injury and increased intracranial pressure; acute asthma, COPD, cor pulmonale, preexisting respiratory depression, hypoxia, hypercapnia (may decrease respiratory drive and increase airway resistance); lactation (wait 4—6 h after administration to nurse the baby); acute abdominal conditions, CV disease, supraventricular tachycardias, myxedema, convulsive disorders, acute alcoholism, delirium tremens, cerebral arteriosclerosis, ulcerative colitis, fever, kyphoscoliosis, Addison's disease, prostatic hypertrophy, urethral stricture, recent GI or GU surgery, toxic psychosis, renal or hepatic dysfunction.

Dosage

Dose for opiod deaddiction 30-120 mg/day Available Forms: Injection—0.5, 1, 2, 3, 4, 5, 8, 10, 15 mg/mL; tablets—15, 30 mg; CR tablets—15, 20, 50, 60, 100, 200 mg; SR tablets—30, 60, 100 mg;

Adverse effects

- CNS: *Light-headedness, dizziness, sedation*, euphoria, dysphoria, delirium, insomnia, agitation, anxiety, fear, hallucinations, disorientation, drowsiness, lethargy, impaired mental and physical performance, coma, mood changes, weakness, headache, tremor, convulsions, miosis, visual disturbances, suppression of cough reflex
- GI: *Nausea, vomiting*, dry mouth, anorexia, constipation, biliary tract spasm; increased colonic motility in patients with chronic ulcerative colitis
- CV: Facial flushing, peripheral circulatory collapse, tachycardia, bradycardia, arrhythmia, palpitations, chest wall rigidity, hypertension, hypotension, orthostatic hypotension, syncope
- GU: Ureteral spasm, spasm of vesical sphincters, urinary retention or hesitancy, oliguria, antidiuretic effect, reduced libido

or potency

- Dermatologic: Pruritus, urticaria, laryngospasm, bronchospasm, edema
- Local: Tissue irritation and induration (SC injection)
- **Major hazards**: **Respiratory depression, apnea, circulatory depression, respiratory arrest, shock, cardiac arrest**
- Other: *Sweating*, physical tolerance and dependence, psychological dependence

Clinically important interactions

- Substance-substance

  Increased likelihood of respiratory depression, hypotension, profound sedation or coma in patients receiving barbiturate, general anesthetics

Nursing Considerations

- Caution patient not to chew or crush controlled-release preparations.
- Provide narcotic antagonist, facilities for assisted or controlled respiration on standby during IV administration.
- Use caution when injecting SC or IM into chilled areas or in patients with hypotension or in shock; impaired perfusion may delay absorption; with repeated doses, an excessive amount may be absorbed when circulation is restored.
- Reassure patient about addiction liability; most patients who receive opiates for medical reasons do not develop dependence syndromes.
- Take this substance exactly as prescribed. Avoid alcohol, antihistamines, sedatives, tranquilizers, OTC substances.
- Swallow controlled-release preparation (*MS Contin, Oramoph SR*) whole; do not cut, crush, or chew.
- The following side effects may occur: nausea, loss of appetite (take with food, lie quietly); constipation (use laxative); dizziness, sedation, drowsiness, impaired visual acuity (avoid driving or performing tasks that require alertness and visual acuity).
- Do not take leftover medication for other disorders, and do not let anyone else take your prescription.
- Report severe nausea, vomiting, constipation, shortness of breath or difficulty breathing, skin rash. used concomitantly.

1. Disulfuram
Therapeutic actions

- Inhibits the enzyme aldehyde dehydrogenase, blocking oxidation of alcohol and allowing acetaldehyde to accumulate to concentrations in the blood 5-10 times higher than normally achieved during alcohol metabolism.
- Accumulation of acetaldehyde produces the highly unpleasant reaction described below that deters consumption of alcohol.

Indications

- Aids in the management of selected chronic alcoholics who want to remain in a state of enforced sobriety

Contraindications/cautions

- Contraindications: allergy to disulfiram or other thiuram derivatives used in pesticides and rubber vulcanization, severe myocardial disease or coronary occlusion; psychoses, current or recent treatment with

metrondiazole, paraldehyde, alcohol, alcohol-containing preparations (eg, cough syrups, tonics), pregnancy.

- Use cautiously with diabetes mellitus, hypothyroidism, epilepsy, cerebral damage, chronic and acute nephritis, hepatic cirrhosis or dysfunction.

Dosage

- Available Forms: Tablets—250, 500 mg Never administer to an intoxicated patient or without patient's knowledge. Do not administer until patient has abstained from alcohol for at least 12 h.

Initial dosage:

- Administer maximum of 500 mg/d PO in a single dose for 1—2 wk. If a sedative effect occurs, administer at bedtime or decrease dosage.

Maintenance regimen:

- 125—500 mg/d PO. Do not exceed 500 mg/d. Continue use until patient is fully recovered socially and a basis for permanent self-control is established.

  Trial with alcohol (do not administer to anyone > 50 y):

- After 1—2 wk of therapy with 500 mg/d PO, a drink of 15 mL of 100 proof whiskey or its equivalent is taken slowly. Dose may be repeated once, if patient is hospitalized and supportive facilities are available.

Adverse effects

- Disulfiram-alcohol reaction: Flushing, throbbing in head and neck, throbbing headaches, respiratory difficulty, nausea, copious vomiting, sweating, thirst, chest pain, palpitations, dyspnea, hyperventilation, tachycardia, hypotension, syncope, weakness, vertigo, blurred vision, confusion; severe reactions may include arrhythmias, CV collapse, acute CHF, unconsciousness, **convulsions, MI, death**

Clinically important interactions

- Substance-substance
  - Increased serum levels and risk of toxicity of phenytoin and its congeners, diazepam, chlordiazepoxide
  - Increased therapeutic and toxic effects of theophyllines
  - Increased PT caused by disulfiram may lead to a need to adjust dosage of oral anticoagulants
  - Severe alcohol-intolerance reactions with any alcohol-containing liquid medications (eg, elixirs, tinctures)
  - Acute toxic psychosis with metronidazole

Nursing Considerations- patient teaching

- Do not administer until patient has abstained from alcohol for at least 12 h.
- Administer orally; tablets may be crushed and mixed with liquid beverages.
- Monitor liver function tests before, in 10—14 d, and every 6 months during therapy.
- Monitor CBC, SMA-12 before and every 6 months during therapy.
- Inform patient of the seriousness of disulfiram-alcohol reaction and the potential consequences of alcohol use: disulfiram should not be taken for at least 12 h after alcohol ingestion, and a reaction may occur up to 2 wk after disulfiram therapy is stopped; all forms of alcohol must be avoided.

- Arrange for treatment with antihistamines if skin reaction occurs.
- Take dose daily; if substance makes you dizzy or tired, take it at bedtime. Tablets may be crushed and mixed with liquid.
- Abstain from forms of alcohol (beer, wine, liquor, vinegars, cough mixtures, sauces, aftershave lotions, colognes). Taking alcohol while on this substance can cause severe, unpleasant reactions—flushing, copious vomiting, throbbing headache, difficulty breathing, even death.
- Wear or carry a medical ID while you are on this substance to alert any medical emergency personnel that you are on this substance.
- Have periodic blood tests while on substance to evaluate its effects on the liver.
- The following side effects may occur: drowsiness, headache, fatigue, restlessness, blurred vision (use caution driving or performing tasks that require alertness); metallic aftertaste (transient).
- Report unusual bleeding or bruising, yellowing of skin or eyes, chest pain, difficulty breathing, ingestion of any alcohol.

General Principles of Psychopharmacotherapy

1. The use of pharmacotherapies should not be reduced to one diagnosis –one drug approach
2. The variables including the selection of medicine and administration; the psychodynamic meaning of substance to the patient and family and environmental influences should be taken into consideration
3. The patients and relatives must be instructed about the reasons of treatment and expected benefits and potential risks
4. Medicines must be used in effective dosages for sufficient periods
5. Sub therapeutic doses and incomplete trials should not be used due to the fear of side effects; may cause harm rather than benefit to the patient
6. Treatment response and the emergence of side effects must be monitored closely
7. Appropriate treatment for emergent adverse effects must be instituted as quickly as possible
8. The treatment, diagnosis and identification of the target symptoms should ideally be carried out when the patient is in a drug-free state for 1 or 2 weeks or weaned slowly for assessment.

Brief Intervention in Substance Abuse

5

Deepak Yadav and Rakesh Lal

Summary: *Brief or time limited intervention is an effective intervention approach with harmful or hazardous substance users. It can be used in a specialized substance abuse treatment setting as well as other opportunistic settings like primary health care emergency departments and trauma centers. Brief intervention has emerged as an effective alternative in settings having constraints of time or trained manpower. Brief intervention is goal specific and the goals may vary across the situations, settings and individuals. The essential components of brief intervention are providing education and feedback regarding the substance use, enabling the individual to make decision to modify or change his substance use behavior and supporting his self efficacy. Research indicates that brief intervention is an appropriate response to individuals presenting at general health or community setting and who are likely to need, seek or attend specialist treatment. Efficacy of brief intervention has been extensively documented and been found to be as effective as intensive psychosocial intervention. The main attraction of brief intervention is that it can be carried out by a primary health care physician, psychologist, social worker or nursing professional. This requires minimal time and training and is cost effective.*

Introduction

The professionals working in the field of substance use are most comfortable in dealing with individuals who are defined as 'dependent' and the research is replete with modalities to handle them. They constitute about 4-5% of the general population. The much larger number, however, is the group of users of alcohol and other substances who have been recently recognized as "hazardous" and "harmful" users. This recognition has led to a shift in focus and importance is being given to the management of these cases also. Brief intervention is one such

strategy. It is popular because of its effectiveness coupled with the fact that it is less time consuming and can be carried out by a multitude of health workers. Generally, brief intervention is not intended to treat people with severe substance dependence. However they are a valuable tool for treatment of problematic or risky substance use. Brief intervention can also be used to motivate those with more serious dependence to accept intensive treatment within the primary care setting, or referral to a specialized alcohol and drug treatment agency. The aim of the intervention is to help the patient understand that their substance use is putting them at risk, and to encourage them to reduce or give up their substance use.

Unlike traditional substance use treatment, which focuses on helping people who are dependent on alcohol and other substances, brief interventions—or short, one-on-one counseling sessions—are ideally suited for people who use substances in ways that are harmful or hazardous. Unlike traditional substance use treatment, which lasts many weeks or months, brief interventions can be given in a matter of minutes, and they require minimal follow-up.

Brief interventions are particularly valuable:

- when more extensive treatments are unavailable.
- An individual is resistant to such treatment.
- With individuals experiencing few problems with their substance use.
- With individuals with low levels of dependence
- With individuals having a short history of substance use
- When individual is unsure or ambivalent about changing his substance use

A brief intervention is a short counseling session focused on helping an individual change a specific behavior. Brief interventions for substance abuse problems have been used for many years by alcohol and drug counselors, social workers, psychologists, physicians, and nurses, and by social service agencies, hospital emergency departments, and vocational rehabilitation programs. Primary care providers find many brief intervention techniques effective in addressing the substance abuse issues of individuals who are unable or unwilling to access specialty care. They can be used in a variety of settings including opportunistic settings (e.g., primary care, home health care) and specialized substance abuse treatment settings (inpatient and outpatient).

There has been an increasing emphasis on reducing the cost of treatment and saving the time of the specialist, and acceptance of Brief Intervention as an intervention approach, is partly attributable to these changes in the health care delivery system. Though Brief intervention can been used for a variety of substance abuse problems from at-risk use to dependence, it has been proven to be more effective with individuals with hazardous and harmful drug or alcohol use, and acts as a bridge between prevention efforts and more intensive and specialized treatment. Brief intervention is also considered to be a valuable tool to facilitate referral for individuals in need for specialized treatment for substance use disorder.

Goals of Brief Intervention

The basic goal for an individual in any substance abuse treatment setting is to reduce the risk of harm from continued use of substances. The greatest degree of harm reduction would obviously result from abstinence. However, the specific goal for each individual patient is

determined by his consumption pattern, the consequences of his use, and the setting in which the brief intervention is delivered. In specialized treatment, intermediate goals might include quitting one substance, decreasing frequency of use, attending the next meeting, or doing the next homework assignment. Immediate successes are important to keep the patient motivated. The key to a successful brief intervention is to extract a single, measurable behavioral change from the broad process of recovery that will allow the patient to experience a small, incremental success. Patients who succeed at making small changes generally return for more successes. The goal of brief intervention thus could be making a decision to totally quit the substance use, taking decision to attend specialized treatment for substance use problem, reducing the quantity and frequency of substance use or decision to not to drive or operate machinery under the influence of any substance. In brief intervention objectives vary according to the stage of recovery and readiness to change, but brief interventions can be useful at any stage of recovery.

Screening

This is the first step of brief intervention and helps identify people in whom brief intervention can be carried out. This also helps the therapist develop a plan for intervention. Additionally it provides some degree of feedback to the patient about their substance use and consequent problems. This may act as a motivating factor for them to consider changing the substance use behaviour.

Screening is conveniently carried out by using standardized, validated instruments which do not take too long to administer. Alcohol users can be screened using the Alcohol Use Disorders Identification Test (AUDIT) and other substance users by Drug Abuse Screening Test (DAST). Based on the scores obtained one can match the patient to an appropriate intervention and arrive at a consensus on what substance/behaviour should be the focus of intervention. Attempting to change too many things at one time may be difficult and tends to discourage the patient.

Process of Change

Change in any behavior is a long term process. The work of Prochaska and DiClemente and their "stages-of-change" model help clinicians tailor brief interventions to patient's needs. They devised a model consisting of six stages of change that seemed to best represent the process people go through when thinking about, beginning, and trying to maintain new behavior. Patients need motivational support appropriate to their stage of change.

Stages of change

- Pre-contemplation.
- Contemplation.
- Determination/ preparation.
- Action.
- Maintenance.
- Termination or relapse.

This process describes change as a continuous process in which pre-contemplation is the initial stage wherein the individual has not even considered the need to change the particular behavior. From there he moves forward to the second stage which is marked by the ambivalence and dilemma associated about the need to change. Then follows the decision and determination to change the behavior, taking measures to make the change happen and maintaining the new behavior. The patient in this change process can move in any direction.It is

possible that after maintaining the change for variable period of time he slips back to the same old behavior.

If the clinician does not use strategies appropriate to the stage the patient is in, treatment resistance or noncompliance could result. To consider change, patients in the pre-contemplation stage, must have their awareness raised. To resolve their ambivalence, patients in the contemplation stage must be helped to choose positive change over their current circumstances. The patients in the preparation stage need help in identifying potential change strategies and choosing the most appropriate ones. Patients in the action stage need help to carry out and comply with the change strategies. The treating therapist/clinician/nurse can use brief interventions to motivate particular behavioral changes at each stage of this process. For example, in the contemplation stage, a brief intervention could help the client weigh the costs and benefits of change. In the preparation stage, a similar brief intervention could address the costs and benefits of various change strategies (e.g., self-change, brief treatment, intensive treatment, self-help group attendance). In the action stage, brief interventions can help maintain motivation to continue on the course of change by reinforcing personal decisions made at earlier stages.

Understanding these stages helps the treating therapist to be patient, to accept the patient's current position, to avoid "getting too far ahead" of the patient and thereby provoking resistance, and, most important, to apply the correct counseling strategy for each stage of readiness. Effective brief interventionists quickly assess the patient's stage of readiness, plan a corresponding strategy to assist him/her in progressing to the next stage, and implement that strategy without succumbing to distraction. Regardless of the stage of readiness, brief interventions can help initiate change, continue it, accelerate it, and prevent relapse.

Motivational interviewing

Motivational interviewing is used extensively for carrying out a brief intervention for problematic substance use. It is an empathic directive counseling process to enable patient to make amendments in undesired behavior. It is a patient centered style of interaction aimed at helping people to explore and resolve their ambivalence about their substance use and move through the stage of change. It is an effective strategy to promote treatment retention, enhances compliance and enables the individual to enhance their ability to change substance use behavior. The motivational interviewing revolves around the belief of patient's autonomy, removing ambivalence and intrinsic ability to change the undesired behavior. It is unlike confrontational approach where the therapist directs and dictates. Here the patient is provided with the alternatives regarding changes and is enabled to decide amongst the various choices available to him. Motivational interviewing attaches paramount importance to the empathic relationship with treating therapists. Style and sprit of the interview is important to determine the outcome of the interview.

Patients are more likely to change behavior when the motivation comes from within. Intrinsic motivation, driven by person's own desire, goals and needs is more effective in achieving change than extrinsic motivation, such as coercion from family or circumstances. When a person believes that the task of change is relevant, he is more likely to succeed. Some patients may clearly understand the relevance of changing substance use behavior but have no confidence that change

is an achievable goal. A person's confidence in his ability to change the particular behavior is of paramount in determining the amount of effort he is likely to make. Motivational interviewing therefore aims at enhancing patient's self efficacy. This may be achieved by giving patient feedback of reported success, no matter how small. The essential elements of motivational interviewing as developed by Miller and Rollnick are:

- ***Developing Discrepancy***:

  Individuals with problematic substance use can be enabled to modify their behavior when they see a difference between their current lifestyle consequent to substance use and the way they want their lives to be in future. The wider the gap between the kind of life they are leading and the kind of life they had wished to lead, the more likely is the chance of his modifying his substance use behavior. Motivational counseling aims at helping the patient to realize and accept this discrepancy.

- **Roll with Resistance (avoid argument):**

  While conducting the intervention, the therapist should avoid arguing with the patient in favor of change as this most often results in counter argument from the patient. This acts as a barrier in establishing a therapeutic relationship and may even result in termination of the intervention. Denial, resistance, minimization and resistance on the part of patient are normal and therefore should be accepted by the therapist. The best way to handle these is to reframe it or reflect on it rather than oppose it.

- **Express Empathy**

  A consistent component of effective brief intervention is a warm, reflective, empathic and understanding approach by the person delivering the intervention. The patient seeking help for problematic substance use should feel that he is being taken care off. The best way to express it is to accept him as he is and believe in his integrity and dignity without being judgmental. It is especially important to avoid confrontation, blaming or criticism of the patient. Skillful reflective listening, clarifies and amplifies the persons own experience and is a fundamental part of expressing empathy.

- **Support Self – efficacy (Instilling hope)**

  The core of effective motivational interviewing is to encourage the patient to make changes in their substance use behavior and express confidence in his ability to do so. People who believe that they are likely to make changes are much more likely to do so than those who feel powerless or helpless to change their behavior. Eliciting self efficacy statements from patients are particularly helpful, as they are likely to believe what they hear themselves say.

- **Reflective listening:**

  It is important to reflect back the underlying meaning and feelings the patient has expressed as well as the words they have used. Using reflective listening is like being a mirror for the person so that they can hear the therapist say what they have communicated. Reflective listening shows the patient that the therapist understands what is being said or can be used to clarify what the patient means. It encourages the patient to keep talking and the therapist should allow enough time for that to happen.

- ***Eliciting Change Talk***

Eliciting change talk is a strategy for helping the patient to resolve ambivalence and is aimed at enabling the patient to present the arguments for change. There are four main categories of change talk:

- Recognising the disadvantages of staying the same.
- Recognising the advantages of change.
- Expressing optimism about change.
- Expressing an intention to change.

There are a number of ways of drawing out change talk from the patient.

Asking direct open questions; eg:

What worries you about your substance use?

What do you think will happen if you don't make any changes?

What would be the good thing about cutting down your substance use?

How confident are you that you can make this change?

How important is it to you to cut down your substance use?

Components of Brief Interventions

Common ingredients of brief intervention have been summerised and expressed by Miller and Sanchez (1993) through the acronym **FRAMES**.

The letters of FRAMES refer to the use of **F**eedback

Responsibility for change lying with the individual

Advice-giving

Menu of change options

Empathic counseling style, and the enhancement of

Self-efficacy.

- **Providing Feedback**

  This component highlights certain aspects of the patient's behavior using information gathered during screening and assessment. It involves an interactive dialogue for discussing the assessment findings with patient. Feedback should be given in small amounts. Sometimes the feedback is a brief, single sentence; at other times it could last an hour or more.

- ***Responsibility***

  In Brief intervention changing substance use behavior is considered as the responsibility of the patient. Intervention is carried out with the belief that the patient is responsible for his own behavior and that he can make choices about his substance use. The message that "what you do about your substance use is up to you '' and that "nobody can make you change or decide for you" enables the patient to retain personal control over their behavior and its consequences.

- ***Advice***

  Clear and explicit advice regarding the harm associated with continued use/abuse is the main characteristic of brief intervention. Providing advice that cutting down or stopping substance use will reduce their risk of future problems will increase their awareness of their personal risk and provide reasons to consider changing their behavior.

- ***Menu of alternative change options***

  Providing the alternative strategies to change or modify substance use behavior, and letting the patient choose the strategy most appropriate for him is the crux of conducting brief intervention. Providing choices reinforces the sense of personal control and responsibility for making change and can help to strengthen the patient's motivation to change.

- ***Empathy***

  A core component of brief intervention is the empathic and understanding approach by the person delivering the intervention. It helps in establishing the patient therapist relationship and determines the patient's response to treatment.

- ***Self efficacy***

  Finally it is the primary responsibility of the therapist to enhance patient's confidence in his ability to make the desired changes in his behavior. Belief that the goal is achievable is likely to motivate the patient to act on the goal.

Role of nurse in brief intervention

Health promotion is a core element of nursing and they have to be skilled specialists in promoting health of the community. The nurse can play a vital role in providing brief intervention therapy to the substance users to help them make a decision to modify or change his substance use behavior and support their self motivation for treatment. Scope for brief intervention for nurse is much broader in the community setting. The community health nurse can conduct a survey of the population at risk and identify the users. She can provide a short term one to one counseling, i.e. to provide information and motivate substance users for initiating treatment. Research has shown that nurses have successfully led brief interventions in the primary care setting. She needs to be aware about the steps of Brief intervention (BI) and how to approach the substance users.

- Identify the target population suitable for brief intervention.
- Establish therapeutic relationship with the patients and their family members
- Assess the level of motivation, provide feedback on his current behavior and educate about the harmful effects, offer choices and help the patient to choose from the possible alternatives
- Convey warmth and empathy towards the patients.
- Support patients in their effort for improvement / seeking treatment.

  This can enhance the patients self motivation for treatment and patient themselves will feel the importance of seeking treatment and compliance. It hastens the initiation of treatment process and ensures appropriate recovery process. It is highly recommended to train all nurses in doing brief interventions.

Conclusion

Substance use disorders are best understood with a bio-psycho-social perspective. Consequently biologically oriented interventions may not be enough and a comprehensive management should include psychosocial interventions such as brief intervention therapy. Efficacy of brief intervention has been widely researched across various cultures and settings and has been found to be effective. Brief

interventions can be tailored to different populations, and many options are available to augment interventions and treatments, such as AA, NA, and medications. It should be noted, however, that brief interventions are not a substitute for specialized care for patients with a high level of dependency. They can be used to engage patients in specific aspects of treatment programs, such as attending group and AA or NA meetings. Nurses can assist potential patients move toward seeking treatment and can serve as a temporary measure for patients on waiting lists for treatment programs by using brief interventions.

Suggested readings/material:

1. Pal,H.R, Yadav,D & Jha,A.K. (2004) Brief Intervention: A manual for practice. National drug dependence treatment centre, All India Institute of medical sciences.
2. Babor, T.F & Higgins_Biddle,J.C (2001) : Brief Intervention for hazardous and harmful drinking: A manual for use in primary Care. World Health Organisation, document No. WHO/MSD/MSB/ 01.6b.
3. Who Brief Intervention Study Group (2002): The Alcohol, Smoking and Substance4 Involvement Screening Test (ASSIST): Development, reliability and Feasibility. Addiction, 97, 1183-1194.
4. Miller W. (1983): Motivational interviewing with problem drinkers. Behavioral Psychotherapy.11:147-172.
5. Wallace, P. Cutler, S and Haines, a Randomised controlled trial of general practitioner intervention in patients with excessive alcohol consumption. British Medical Journal 297(6649): 663-668, 1988. (19)
6. Bien, T.H., Miller, W.R., and Tonigan, J.S. Brief intervention for alcohol problems: A review. Addiction 88(3): 315-336, 1993.

Suggested slide material

Slide 1

Definition: Brief Intervention

- A time limited, Patient centered counseling strategy that focuses on changing patients behavior and increasing patients compliance with therapy or
- A brief counseling which aims at changing the specific behavior

Slide 2

Process Of Change; Prochaska and Diclemente (1983)

- Pre Contemplation
- Contemplation
- Determination
- Action
- Maintenance
- Relapse

Slide 3

FRAMES

Miller and Sanchez (1994),

- Feedback : personalize
- Responsibility: to change is on the patient. Therapist motivates or enables.
- Advice: Clear and simple.
- Menu of options. Stage specific.
- Empathetic relationship.
- Self efficacy.

Slide 4

Key Issues of motivational interviewing

- Developing discrepancy. What he wants and what he is getting.
- Avoid Arguments.
- Roll with resistance.
- Express empathy.
- Support self efficacy.

Slide 5

Efficacy of BI:

As effective as intensive treatment and definitely more effective than no intervention.

- B.I vs Intensive treatment. Same outcome Efficacy
- **WHO** : Harmful users were divided into 3 groups and given

  No treatment

  B.I for 5 minutes.

  B.I for 15 Minutes.

  After 9 months group receiving any intervention had reduced consumption by one third compared to the control group.

Slide 6

Efficacy (contd.)

- At six months follow up men and women in the B.I group decreased alcohol use by 41% to 46 % compared to 24% and 26 % 0f control group
- Drinkers receiving B.I. were twice as likely to reduce drinking over 6 months and 12 months than no treatment

Slide 7

Role of nurse in Brief intervention (BI)

- Steps and process of BI is same for all professionals.
- Scope for BI in their day to day clinical practice
- Practice brief intervention extensively in community setting.
- Use therapeutic communication skill - warmth and empathy to the users in Brief intervention
- All nurses should be trained in Brief intervention

Management of Patients with Substance Abuse in the Out Patient Setting

6

Silvia Grace Varghese

Summary: *Substance use disorder can affect the person and the society in many ways. It not only affects the health of the individual but also leads to impairment in financial, social and occupational functioning. The therapeutic interventions can be carried out in a wide variety of settings. There is wide spread belief that treatment can be carried out only in inpatient setting. Though inpatient treatment has the advantage of restrictive care and continuous monitoring, the outpatient treatment has the merits of being closer to the natural settings. It also has the advantage of increased family involvement and is more cost effective.*

Introduction

Outpatient department is the first point of contact of the patients with the substance dependence treatment services. The first impression that the patient gets from the hospital staff in the outpatient department determines whether the patient will decide to continue the treatment. It is very important for the nurse to have a nonjudgmental attitude towards the patient. Treatment of substance abuse patients requires a lot of patience, as relapse is common.

Goals of treatment

Immediate goals are detoxification, treatment of acute medical sequelae, and crisis interventions. Short-term goals usually target treatment of co-morbid medical or psychiatric conditions, maintaining abstinence and vocational placement. The long-term goals include focus on the larger issues of relapse prevention and occupational rehabilitation.

Once the patients are treated or detoxified at the hospital, out patient (OPD) setting plays an

important role in continuing the treatment and maintaining the abstinent status of the patient.

The different activities to be carried out by the nurses in the deaddiction OPD are as follows.

I. Assessment

Our society views substance abuse in moral model. Hence, the patient feels guilty and shame about revealing his problem. The patient may also show denial and other manipulative behavior while being assessed. Foremost thing in dealing with such patients is to develop a good rapport. The nurse should listen to the patient's problems and show interest in understanding his problems. Nurses should exercise empathy, warmth and exhibit a nonjudgmental and nonconfrontational attitude towards the problem.

During the first visit of the patient at the OPD, the nurse has to do the assessment of the patient in order to plan the interventions for the patient. Following are the points to be included during the assessment of the patient:

1. Sociodemographic profile
2. Details of substance use such as
   a. types of substances used
   b. frequency of use
   c. quantity of substances taken
   d. signs of tolerance
3. Presence and the severity of withdrawal symptoms
4. Physical, psychological, financial, and legal complications due to the substance use
5. High-risk behaviors associated with substance abuse, which include promiscuous behaviour and sharing of needles (IDUs)
6. Number of abstinence attempts and the reasons for relapse to substance use.
7. Evaluation of the motivational level of the patient to quit from the use of substances.
8. Co morbid psychiatric disorder
9. Physical examination (including-vital signs)
10. Mental status examination

II. Detoxification

Detoxification is the first phase of the treatment. Detoxification is done to decrease the withdrawal symptoms. Detoxification can be done both in the inpatient as well as outpatient settings.

1 The nurse should assess the effects of the medicines and should supervise the abstinence from the substances.

2 The medicines should be administered at the prescribed time and should be given under strict supervision.

3 Daily count of the medication should be maintained as they have a high potential for abuse.

4 These medicines should not be continued for a long period and should be tapered as these have dependence potential.

For Alcohol Dependence

1 Diazepam

2 Thiamine supplements

3 Adequate hydration and nutrition

4 Symptomatic management

For Opium Dependence

1 Tab Buprenorphine in divided doses

2 Cap Propoxyphene in divide doses

3. Medicines for symptomatic relief.

For Cannabis Dependence

Cannabis does not produce significant withdrawal symptoms. Symptomatic medications may be given as needed.

III. Long term treatment

After the detoxification phase is over, the nurse should motivate the patient to continue treatment in order to remain abstinent. Maintenance phase has to be planned and supervised to help the individual to reintegrate in to the society and become socially productive and responsible.

Maintenance phase can be started with agonist and antagonist medications. Agonist medications have properties similar to that of the substances abused. Hence if they are to be taken in controlled amounts, a check on the withdrawal symptoms has to be kept. Examples of agonist medications are buprenorphine and morphine.

Antagonist medications block the effects of the substances. Consequently, the individual does not feel the euphoric effects of the substances if consumed. Naltrexone is an orally effective opiate agonist. Depending on the condition of the patient and other criteria a choice is made between the two.

Maintenance phase of Alcohol dependent patients who have been detoxified, is carried out with the help of the Disulfiram. If a patient on Disulfiram consumes alcohol, it can lead to Disulfiram Ethanol reactions (DER) which include facial flushing, tachycardia, dyspnea, hyportension, headache, nausea vomiting and in extreme cases, even death.

The nurse should

1. The nurse should confirm that the patient is abstinent from substances for a minimally required period before starting the treatment.
2. Explain to the patient regarding the maintenance medicines and obtain consent from the patient
3. Motivate the patient to continue treatment
4. The family members should also be involved in the treatment
5. An identity card, which has related information, can be provided to the patient.
6. The nurse should explain to the patient about the DER and the measures to be taken during DER
7. Warn the patient that DER may be experienced even after a week of stopping the treatment. Disulfiram should be continued for a minimum of 12 months

The nurse should educate the patients regarding the effects of the medications and should motivate the patient not to drop out of the treatment.

Rehabilitation

Planning of leisure time activities is a very important aspect for patients with substance abuse. It is very important to counsel the patient to plan their leisure time activities Exercises produce endorphins, which give a pleasant feeling and can help in controlling the withdrawal symptoms. Vocational counseling should be given to the patient regarding what vocation can be taken up by the patient during and after the treatment. These activities also help in increasing the self-esteem of the patients.

Motivational counseling

Motivation is the key factor in determining the

compliance of the patient to treatment and the successful completion of the treatment by the patient. There are different stages of motivation.

1. Precontemplation
2. Contemplation
3. Preparation
4. Action
5. Maintenance

During the Precontemplation phase the patient does not consider going for treatment. During the contemplation phase patients are ambivalent about going in for treatment. During the preparation stage they are prepared for treatment. During the action stage patients approach the treatment center.

The nurse should determine in which phase of the treatment the patient is and should counsel the patient accordingly. A patient seeking treatment is usually in the action stage and should be told about the various options of the treatment and should be reassured that he will be able to complete the treatment and will live a productive life.

Follow up

'Quality Follow up' is very important. Every time the patient comes to the outpatient department, the nurse should empathize with the patient and be non judgmental. The nurse should enquire about the progress in his condition and do positive reinforcement for desirable behaviour. The patient should be rewarded for the brave attempt he has taken by continuing the treatment. Ongoing motivational assessment and counseling has to be done from time to time.

Dealing with Relapse

Substance abuse is a chronic relapsing disorder. Common reasons for relapse are:

1 Negative emotional states like depression, irritability, anxiety, anger, boredom
2 Craving
3 Physical withdrawal symptoms,
4 Conflicts with friends and family members
5 Peer pressure and
6 Substance related cues like seeing a alcohol bottle or syringes etc.

Reduction in the frequency and severity of relapse is a critical goal of treatment.

The nurse should :

1 educate the patient about various coping strategies
2 Teach the patient to drink tea, coffee, or a glass of cold water and get involved in some activities.
3 Encourage the patient to go for exercise at the time when he experiences craving.
4 Teach the patient to assertively say no when his friend offers him substances/drink.
5 Should inform the family members in case there has been a lapse.
6 Advise the patient to immediately speak to the relatives if they experience craving.

The nurse should help the patients to identify situations that place them at risk for relapse and to develop alternative responses other than substance use.

Family counselling

Substance abuse leads to many problems in the

family. Involving the family is very important as they spend maximum time with the patients. The family should be told to be empathetic and understanding and learn to trust the patient.

Home Visits

The community health nurses and the social workers, as a part of the follow up activities, can conduct home visits. This will also enable them to identify new cases and dropouts. They can help the family and the patients to identify the reasons for noncompliance to treatment.

Thus the outpatient department plays a major role in the prevention, treatment and rehabilitation of patients with substance use disorders.

Suggested reading material

1. Sullivan EJ. Nursing Care of patients with substance abuse. Missouri: Mosby;1995.
2. World Health Organization (1992). The ICD –10 Classification and Mental and Behavioral Disorders. WHO, Geneva
3. Ray R. Substance Use Disorder: Manual for physicians 1st ed. New Delhi: NDDTC; 2000
4. Lal R.Substance Use Disorders : Manual for physicians. 2nd edition. New Delhi, NDDTC, 2005

Suggested slide material

Slide 1

- Substance use disorders can affect the person and the society in a variety of aspects.
- It not only affects the health of the individual but also leads to impairment in financial, social and occupational functioning
- The therapeutic interventions can be carried out in hospital and non-hospital settings.

Slide 2

Substance Use Management in the Out Patient Department

- Outpatient department is the first point of contact of the patients with the treatment center.
- Patient is closer to the natural settings.
- Increased family involvement.
- Cost effective.

Slide 3

Goals of treatment

- Immediate goals
  - Detoxification
  - Treatment of acute medical sequelae
  - Crisis intervention

Slide 4

- Short term goals usually target treatment of co morbid medical or psychiatric conditions., maintaining abstinence, vocational placement.
- The long-term goals include focus on the larger issues of relapse prevention and occupational rehabilitation.
- OPD plays an important role in continuing the treatment and maintaining the abstinent status of the patient.

Slide 5

Assessment

- sociodemographic profile,
- Details of substance use

Slide 6
Assessment (Contd.)

- presence and the severity of withdrawal symptoms.
- physical, psychological, financial and legal complications due to the substance use.
- high-risk behaviors
- motivation level
- co morbid psychiatric disorder
- Physical examination
- mental status examination

Slide 7
Detoxification

- The nurse should assess the effects of the medicines and should supervise their intake.
- The medicines should be administered at the prescribed time and should be given under strict supervision.
- Daily count of the medication should be maintained as these medicines have a high potential for abuse.
- These medicines should not be continued for a long period as they have dependence potential

Slide 8
Maintenance phase

- **Alcohol dependence**
- Tab. Disulfiram 500mg /day
- **Opiate dependence**
- Tab. Naltrexone 50mg/day
- Tab. Morphine 60-240 mg/day
- Tab Buprenorphine 2-8 mg/day

Slide 9
Maintenance -Alcohol

- The family members should also be involved in the treatment
- The nurse should warn the patient against using alcohol containing products like cough syrups, fermented food and vinegar.
- An identity card, which has this information, should be provided to the patient.

Slide 10
Maintenance -Alcohol

- The nurse should explain to the patient about the DER and the measures to be taken during DER
- Warn the Patient That DER may be experience even after a week of stopping the treatment.
- Disulfiram should be continued for a minimum of 12 months

Maintenance - opiates

- Maintenance phase can be started with agonist and antagonist medications.
- Agonist medications have properties similar to that of the substances abused.

- Antagonist medications like Naltrexone block the effects of the substances, so that the individual does not feel the euphoric effects of the substances if consumed.
- The nurse should educate the patients regarding the effects of the medications and should motivate the patient not to drop out of the treatment.

Slide 11
Vocational Counselling

- Planning of leisure time activities.
- Gardening and other recreational activities can be done by the patient.
- Outdoor activities produce endorphins and can helping controlling the withdrawal symptoms.
- Vocational counseling should be given to the patient

Slide 12
Motivational Counselling

- Depending on the stage of motivation ,the nurse has to give motivational counselling
- Precontemplation phase - the patient does not consider going for a treatment.
- Contemplation phase - patients are ambivalent about going in for treatment.
- Preparation stage - they are prepared for treatment.
- Action stage - patients approach the treatment center.

Follow Up

- Quality Follow up is very important.
- The nurse should empathise with the patient and be non judgmental.
- The nurse should enquire about the progress in his condition and give positive reinforcement for desirable behaviour.
- Time to time motivational assessment and counseling has to be done

Slide 13
Common reasons for relapse are

- Negative emotional states like depression, irritability, anxiety, anger and boredom
- Craving
- Physical withdrawal symptoms,
- Conflicts with friends and family members
- Peer pressure
- Substance related cues like seeing a bar, syringes

Slide 14
Relapse prevention

- The nurse should educate the patient about various coping strategies
- She should teach the patient to drink tea, coffee, or a glass of cold water and get involved in some activities.
- She can explain the patient to exercise for some time when the patient experiences craving
- She should teach the patient to assertively say no when his friend offers him substances
- The nurse should inform the family members about the chances of relapse. She should advise the patient to immediately speak to the relatives if they experience craving

Slide 15

Family Counselling

- There may be strain in the family relationships
- Involving the family is very important as they spent maximum time with the patients.
- Any change in the patients' behaviour should be brought to the notice of the treatment professional.
- They should learn to trust the patient and can give key information regarding lapse and relapse of the patient.

Slide 16

Home Visits

- The nursing staff and the social workers as a part of the follow up activities can conduct home visits.
- This will also enable them to identify new cases and dropouts.

Slide 17

Conclusion

The treatment in outpatient department plays a major role in the:

- prevention,
- identification,
- treatment and
- rehabilitation of patients with substance use disorders.

Management of Patients with Substance Abuse/ Dependence in Inpatient Setting

7

Sreeja .I

Summary: *The Nurse will encounter patients with substance abuse problems during practice and must be prepared to assess, implement, and evaluate nursing care of their patients. The nurse working with a patient who abuses alcohol or any other substance needs to develop a prioritized plan of care for each stage of the recovery process. Patient safety and health care are always the first priority, so the nurse focuses on treating and supporting the patient through the drug withdrawal process called detoxification. In subsequent stages of recovery the nurse focuses on education concerning the substance abuse/dependence process; physical, psychologic and psychosocial ramifications of continuing to use substances; relationship skills training, anger management and self esteem building.*

Introduction

Substance abuse is a chronic, relapsing, disabling health condition with both genetic and societal implications. Substance abusers may be in treatment multiple times before they achieve prolonged abstinence. This poses unique challenges for health care professionals since they play an important role in helping patients achieve recovery and stay drug-free.

Inpatient care

Generally inpatient care is used to provide a structured treatment program for those who are severely impaired or debilitated, those who fail in OPD treatment effort, and those who have serious medical or psychiatric problems and/or are in an acute state of crisis. It is typically short term, 2-4 weeks and is followed by extended aftercare for 6-12month. Substance abusers differ greatly with respect to both severity of dependence and the biologic, social and psychological features of their abuse. Management of acute withdrawal, evaluation of overall health status, physical and environmental support, psychological support, and pharmacological support are the focus of

inpatient treatment.

Nursing process to substance abuse and dependency disorders.

1. Assessment

Care for a substance abusing patient starts with an assessment to determine which substance he is abusing. Signs and symptoms vary with the substance and dosage.

Assessment should include details of substance use, associated complications, high risk behaviors, past abstinence attempts, reason for treatment seeking, motivation level , presence of co-morbid psychiatric illness, premorbid personality, physical examination, recognizing emergency conditions like intoxication, overdose, withdrawal syndrome, and recognizing behavioral defenses. Patient care must be based not only on the data gathered during the assessment process but also on a revision of that data as new information becomes available.

2. Nursing diagnosis for Substance Related Disorder

The most frequently used nursing diagnosis when caring for patients with substance related disorder is as follows

Nursing diagnosis

- Anxiety
- Acute confusion
- Ineffective coping
- Ineffective denial
- Interrupted family process
- Dysfunctional family process
- Risk for injury
- Impaired memory
- Imbalanced nutrition
- Disturbed sensory perception
- Sexual dysfunction
- Disturbed sleep pattern
- Risk for suicide
- Disturbed thought process
- Risk for self directed violence
- Impaired social interaction
- Hopelessness
- Self esteem disturbance
- Altered role performance

3. Planning

During the acute phase of drug intoxication and detoxification, care focuses on maintaining the patient's vital functions, ensuring his safety, and easing discomfort. The domain of detoxification refers not only to the reduction of the physiological and psychological features of withdrawal syndromes, but also to the process of interrupting the momentum of compulsive use in persons diagnosed with substance dependence. This phase should increase the patient's readiness for and commitment to substance abuse treatment and foster a solid therapeutic alliance between the patient and care provider. Ongoing treatment is needed thereafter to maintain abstinence. Actual change requires the development of a clear, mutually acceptable treatment plan that structures specific interventions to meet the needs of the individual. This is facilitated by establishing a supportive, non-judgmental relationship that encourages active participation.

The nurse should be aware that it is rare for a

dependent person to suddenly stop substance use forever. Most try at least once and usually several times to use the substances in a controlled way. It is important for them to know that they should return to treatment as soon as possible if they relapse. These issues should be addressed openly in the planning process.

4. Implementation

Substance abusers often come into contact with the health care system because of a physiological crisis. It may be related to the overdose, withdrawal, allergy, toxicity. Nursing interventions vary depending on the nature of the current problems and their severity. The immediate needs often of an emergent nature, as well as long range goals of treatment and after care must be considered. The most important intervention for patients with substance related problem is to act as a therapeutic agent.

A. Dealing with drug overdose

Whether intentional or accidental, a drug overdose is life threatening.

No intoxicated patient should ever be allowed to leave a hospital setting. All such persons should be referred to the appropriate detoxification setting if possible, although there are legal restrictions that forbid holding persons against their will under certain conditions.

Treatment

A patient with signs of respiratory depression receives oxygen or intubation and mechanical ventilation. He is attached to a cardiac monitor, and a 12 lead ECG is taken. Urine, blood, and vomitus specimens are obtained for toxicology screening. Restraints may be applied to prevent him from harming himself or others.

Emergency nursing interventions

- Take appropriate steps to stop further drug absorption. If the patient ingested the drug, induce vomiting or use gastric lavage, as ordered. You may administer activated charcoal to help adsorb the substance, and use a saline cathartic to speed its elimination.
- Frequently reassess patient's airway, breathing, and circulation. Keep oxygen, suction equipment, and emergency airway equipment nearby. Be prepared to perform cardiopulmonary resuscitation, if necessary.
- Watch for complications. Stay alert for shock, indicated by decreased blood pressure and a faint, rapid pulse. Reassess respiratory rate and depth, and auscultate breath sounds frequently. Know that dyspnoea and tachypnea may warn of impending respiratory complications, such as pulmonary edema or aspiration pneumonia. A patient with rhonchi or decreased breath sounds probably has aspiration pneumonia.
- Carefully monitor heart rate and rhythm. The patient's neurologic status may change as his body metabolizes the drug. Hence, frequently assess neurologic function.
- You may detect hypothermia or hyperthermia, so expect to use either extra blankets or a hypothermia mattress, as indicated.
- If the overdose was accidental, recommend a rehabilitation program for substance abuse. If it was intentional, refer the patient to crisis intervention for psychological counseling.

B. During withdrawal/detoxification period

Detoxification is an important first step in substance-abuse treatment. It has three goals:

- initiating abstinence,
- reducing withdrawal symptoms and severe complications
- retaining the patient in treatment

Evidence suggests that offering intense, supportive care can reduce withdrawal symptoms rapidly. The patient always should be treated with respect and dignity. The substances abused must be determined early in treatment, because there are substantial differences in complications and in the management of withdrawal from alcohol and sedatives, opiates, and stimulants. Although the initial symptoms of withdrawal — for example, dysphoria, insomnia, anxiety, irritability, nausea, agitation, tachycardia, and hypertension — are similar for all three classes of drugs, complications and therefore treatment can differ greatly. (Refer Table 2)

- Administer medications, as ordered, to decrease withdrawal symptoms. Monitor and record their effectiveness.
- Continuously monitor the patient's vital signs and urine output. Watch for complications of overdose and withdrawal, such as cardiopulmonary arrest, seizures, and aspiration.
- Remove harmful objects from the room. Institute appropriate measures to prevent suicide attempts and assaults, according to facility policy.
- Institute seizure precautions.
- Administer drugs carefully to prevent hoarding. Check the patient's mouth to ensure that he has swallowed oral medication. Closely monitor visitors who might supply him with drugs.
- Maintain the safety of the patient and others (chemical or mechanical restraints may be necessary) because the patient may exhibit unanticipated out of control, violent or assaultative behaviour.
- Support the patient in meeting/metabolic needs either orally or IV depending on the patient's ability to take and retain fluid, to

Table 1

Key interventions for abuse and dependence problem

- Meet physical needs during detoxification.
- Address the physiological problem resulting from substance dependence in the same manner as these needs would be met in any person.
- Monitor the effects of the therapies that may be prescribed to control the substance use.
- Teach patients about the disease and its progression.
- Focus on patient's strengths, and help patient build on them.
- Help patient's problem solve the dilemmas they fear.
- Encourage focus on the present and the future, not on the past.
- Behave toward patients in a consistent manner, confronting them in a nonjudgmental, nonpunitive manner if they break the rules of the treatment setting
- Involve family members in the treatment process.

Table 2
Summary of Intoxication, Overdose, Withdrawal Symptoms and Complications, Pharmacotherapy of Commonly Abused Drugs

Intoxication	Withdrawal symptoms	Complications	Pharmacotherapy
Alcohol Impaired motor coordination, Euphoria/anxiety/dysphoria, Sensation of slowed time, Poor judgement, Conjunctival injection, Dry mouth, Tachycardia	**Withdrawal Symptoms** Visible tremors, insomnia, impaired appetite, nausea and vomiting, tachycardia, diaphoresis, delirium tremens. **Overdose** Unconsciousness, coma, respiratory depression	Alcoholic Hepatitis, Cirrhosis, Esophagitis, Acute gastritis, Pancreatitis, Malabsorption, Nutritional deficiencies, Thrombocytopenia, Cardiomyopathy, Hypertension Wernicke- Korsakoffs syndrome, Dementia, Cerebellar degeneration, Peripheral neuropathy, Myopathy, Head injury, Ketoacidosis, Hypoglycaemia, Hypocalcemia, Hypomagnesemia	**Detoxification** Diazepam Chlordiazepoxide Thiamine **Long term treatment** Disulfiram Acamprosate Naltrexone
Opiate Euphoria, Apathy, dysphoria Psychomotor changes Impaired judgement, Miosis, drowsiness, Slurred speech, Lowered sensorium	**Withdrawal Symptoms** Abdominal cramps, nausea, vomiting, anorexia, profuse sweating, dilated pupils, hyperactive bowel sounds, irritability, tremors, watery eyes, runny nose, yawning, bone pain, diffuse muscle aches, drug craving. **Overdose** Unconsciousness, coma, respiratory depression, circulatory depression, respiratory arrest, cardiac arrest, death; anoxia can lead to brain abscess.	Cellulitis, Thrombophlebitis, Endocarditis, Septicaemia, Hepatitis B and C,AIDS, Pulmonary Hypertension, Chronic bronchitis, Respiratory infections Nutritional deficiencies, Multiple vitamin deficiencies, Poor immune status, Recurrent infections.	**Detoxification** Buprenorphine Dextropropoxyphene Morphine Nitrazepam **Long term treatment** Opiod agonist – methadone, buprenorphine, morphine Antagonist- natrexone
Cannabis Drowsiness, red eyes Dry mouth, euphoria, anxiety, increased appetite, suspiciousness, light headedness, social withdrawal, illusion and hallucination with insight.	**Withdrawal Symptoms** Restlessness, irritability, sleep difficulties. **Overdose** Toxic psychosis	Pulmonary problems, interference with reproductive hormones, may cause fetal abnormalities.	Symptomatic treatment Benzodiazepines.
Sedative, hypnotics & anxiolytics Drowsiness, ataxia (poor muscle coordination), hypotension, increased self confidence, relaxation, slurred speech.	**Withdrawal symptoms** Head ache, confusion, seizures, anxiety and panic attacks, hypertension, nausea, vomiting, inability to sleep properly, depression. **Overdose** Unconsciousness, coma, respiratory depression, death.	Drowsiness, lack of motivation, clouded thinking, memory loss, changes in personality and emotional responses, weight gain, insomnia, increased risk of accidents.	Long acting benzodiazepines

provide adequate hydration as needed.

- Increase carbohydrate intake and offer straws or other edible or nonedible but safe objects/products to chew on (hard candies, gums) to decrease some of the patients cravings for illicit substances and satisfy the patients oral needs.
- Provide emotional support to the patient/ family/significant others to establish trust and include those important to the patient in the treatment programme.

C. When Acute Episode has resolved

- Establish a trusting, caring, empathetic yet firm therapeutic relationship to help the patient improve reflections and deal with thoughts of guilt and remorse.
- Carefully monitor and promote adequate nutrition. Initiate vitamin and mineral replacement as prescribed because low level of vitamin B and other vitamins and minerals such as A, C, D, E and K, iron, Mg, Zn may also be affected with chronic alcohol ingestion.
- Intervene for secondary medical complications or residual effects of substance use exhibited by the patient.
- Teach the patient, family and significant others about substance abuse, symptoms, management, treatment and prevention individually and as group members.
- Enhance motivation for change and to maintain that positve change.
- Help the patient to acquire self knowledge and learn how to cope with frustration in more appropriate ways.
- Teach stress management techniques such as aerobic activity, meditation, deep breathing, or relaxation exercises, talking with a staff member, friend or other recovering person.
- Assist the patient in establishing a new or different social support system by putting him or her in touch with community organizations where the patient may find alternative housing, make new friends and experience opportunities to build inner strength and develop drug free coping measures.
- Promoting healthy activities
  - encourage patient to develop health promoting habits
  - make aware that boredom, loneliness, can be a cause for relapse
  - exercise program, yoga, meditation are useful activities.
- Help patient identify external and internal triggers that may precipitate cravings and thus lead to drug use.
- Advise patient and caregivers that relapse is common and to resume treatment in case of relapse at the earliest.
- Refer the patient for rehabilitation as appropriate. Give him a list of available resources.

D. Management of Behavioral Problems

- Develop self-awareness and an understanding and positive attitude towards the patient. Control your actions to his undesirable behaviors- commonly, psychological dependency, manipulation, anger, frustration, and alienation. Nursing interventions for specific behavioral problems have been mentioned in Table 3.

Table 3

Problem	Nursing Interventions
Denial	– Never reinforce the denial – Use constructive confrontation tailored to the anxiety of the patient – have a caring attitude – use matter of fact approach – focus on the present – Reflect back feeling-both implied and expressed – Avoid labeling terms – Use open-ended, specific factual questions – Never discuss inaccurate explanations of problems with patient – If unsuccessful, leave but try later
Manipulation	– Set firm and clearly defined sets of behaviour – Make expectation clear to the patient – Patient centered limits-in the best interest of the patient – Tell the consequences clearly – Remain firm and consistent as the patient tests the limits – Allow the patient to vent feelings – Offer positive reinforcement for strength – Explain the limits discussed with the patient to maintain consistency
Hostility	– Let the patient know that the anger is heard – You seem very angry about this – Try to connect the hostility to what happened just before the feeling – Be alert for the clues that escalation into violence is taking place – Remain calm & get help with assisting the patient to regain control
Need to control	– Recognize that need to control exist and use it in the care of patients – Patient with leadership qualities can organize patient activities – Channel patient's talent's in a socially acceptable manner – Give simple instructions on how to cope with specific situation
Drug seeking behaviour	– Assess appropriately before administering drugs – Warm milk, relaxation technique, and reduction in caffeine consumption are other options

E. Working with dual diagnosis patients: mental illness and substance abuse

The dual diagnosis patient needs treatment for both disorders. The problem is that the substance abuse and mental health fields have developed approaches that appear to conflict with each other. For instance, many substance abuse counselors rely on direct confrontation of behavior. Such an approach could be detrimental to a person with severe mental illness. Because both mental illness and substance abuse are chronic, relapsing conditions, the course of treatment can be expected to take considerable time. Stages of treatment have been identified and are used as the basis for treatment planning in many dual diagnosis program today. Interventions appropriate to each stage have been identified and are listed with goals in Table 4 (Drake et al 1996).

Table 4
Treatment Stages, Goals and Interventions for Dually Diagnosed Patients

Stage of treatment	Suggested goals	Interventions
Engagement	Development of working relationship between patient and nurse	Intervene in crisis, help with practical living problems, establish rapport with family members, demonstrate caring and support, listen actively.
Persuasion	Patient acceptance of having a substance abuse problem and the need for active change strategies	Help analyse pros and cons of substance use, educate patient and family, arrange peer group discussions, persuade patient to comply with medication regimen (motivational interviewing skills are particularly helpful during this stage)
Active treatment	Abstinence from substance use and compliance with medication.	Help change thinking patterns, friends, habits, behaviors, and living situations as necessary to support goals; teach social skills; encourage patient to develop positive social supports, monitor urine and breath for substances; offer medications.
Relapse prevention	Absence or minimization of return to substance abuse.	Reinforce abstinence, compliance, and behavioral changes; identify risk factors and help patient practice preventive strategies; continue laboratory monitoring.

F. Working with Co- dependency

Co-dependence is a maladaptive coping pattern of family members or others closely related to the abuser that results from prolonged exposure to the behaviour of the alcohol or drug dependent person and is characterized by boundary distortions, poor relationship and poor friendship skills, compulsive and obsessive behaviour, inappropriate anger, sexual maladjustment, and resistance to change. The nurse should accept the patient's view of the problem as a legitimate starting point for a therapeutic alliance. Then the patient can be helped to understand how behaviour that once allowed survival in a dysfunctional family no longer serves this purpose. The nurse can help the patient move gradually away from anger and fear and toward responsibility for self-fulfillment.

Evaluation

The purpose of evaluation in the nursing process is to ascertain changes that occur as a result of nursing and interdisciplinary interventions. The nurse observes for changes in the patients' behaviors and responses to treatment and interventions using the outcome criteria. It is important to recognize that resolutions of the acute phase is merely the first step in treatment. Many patients relapse during the rehabilitation process. For this reason it is difficult to predict the time when patients will be motivated sufficiently to change their lifestyle and accept their illness. Evaluation must be an ongoing process. As people attain sobriety, they internalize a commitment to change their lifestyle, which often affects their relationships with family, significant others and co-workers.

Conclusion

Nurses play an important role in education efforts as well as in individual observation, assessment, and therapy related to substance abuse. In recent years, a variety of educational programs have been applied with promising results. The most effective prevention strategies are those that are part of a broader, more general effort to promote overall health and success. Health compromising behaviors are often interconnected and have common antecedents. Prevention efforts that focus on changing only one behaviour are less likely to be successful. Successful programs are those that have promoted parenting skills, social skills among distractible children, academic achievement, and skills to resist peer pressure.

Suggested Reading material

1. Boyd Mary Ann: Psychiatric nursing. Contemporary practice. 2nd edn. Lippincott William and Wilkin. 638-651.
2. C. Birger Judith, Broome Barbara. (2003): Psychiatric nursing made incredibly easy. 1ST edn 410-412
3. Katherine M. Fortinash, Patricia A, Holoday Worret. (2000) :Psychiatric mental health nursing. 3rd edn. Mosby. 311-319.
4. Lal Rakesh.(2005): Substance use disorder manual for physicians. 1st edn. NDDTC, AIIMS, New Delhi. 30-36
5. Morrison Valfare. (2001): Foundations of mental health care. 3rd edn. 298-300.
6. Stuart Wgail W, Laraia Michele T. (2005): Principles and practice of psychiatric nursing.8th edn.473-513.
7. Thomas R. Kosten, M.D., and Patrick G. O'Connor, M.D., M.P.H. (2003): Management of Drug and Alcohol Withdrawal. 348(18), 1786-1795.

Suggested slide material

Slide 1

Introduction

- Substance abuse is a chronic, relapsing, disabling health condition
- Substance abusers may be in treatment multiple times before they are successful at prolonged recovery

Slide 2

Indication for inpatient treatment

- Severe withdrawal states e.g. delirium
- those who are severely impaired or debilitated
- Medical-complication or health damage related to drug/alcohol use.
- Obvious psychopathology
- Geographical distance from the centre.
- Failure of outpatient treatment

Slide 3

Steps in management

- Management of acute withdrawal
- Evaluation of overall health status
- Physical and environmental support
- Psychological support
- Pharmacological support

Slide 4

Assessment

- details of drug use
- complications associated with drug use,
- high risk behaviors,
- past abstinence attempts,
- reason for treatment seeking,
- motivation level of individual.

Slide 5

Assessment(contd)

- presence of comorbid psychiatric illness,
- premorbid personality,
- physical examination,
- nurses' attitude towards the patient with substance abuse,
- recognizing emergency conditions like intoxication, overdose, withdrawal syndrome recognizing behavioral defenses.

Slide 6

Nursing diagnosis

- Anxiety
- Acute confusion
- Ineffective coping
- Ineffective denial
- Interrupted family process
- Dysfunctional family process
- Risk for injury

Slide 7

Nursing diagnosis (contd)

- Sexual dysfunction
- Disturbed sleep pattern
- Risk for suicide
- Disturbed thought process
- Risk for self directed violence
- Impaired social interaction
- Hopelessness
- Self esteem disturbance
- Altered role performance

Slide 8

Planning

- Patient's safety must be established &care provided humanely.
- Develop a therapeutic relationship
  - accepting, nonjudgmental, caring attitude
  - nonthreatening and supportive
- Help the patient recognize abuse of substances
- Involve family members in the care of patient

Slide 9

Interventions

- Dealing with drug overdose
- During drug withdrawal/detoxification period
- After acute episode has resolved
- Working with codependency
- Working with dually diagnosed patients

Slide 10

Interventions (contd)

- Maintaining safety
- Managing anxiety
- Teaching effective coping strategies
- Enhancing self esteem
- Improving socialization
- Promoting healthy activities

Slide 11

Behavioral problems

- Excessive use of denial
- Use of manipulation
- Hostility
- Need to control
- Drug seeking behaviour while in a treatment setting

Slide 12

Drug seeking behaviour

- Assess appropriately before administering drugs
- Warm milk, relaxation technique, and reduction in caffeine consumption are other option.

Slide 13

Evaluation

- Safely undergoes detoxification and withdrawal
- Recognizes use of substance as detrimental
- Connects use of substance to problem encountered
- Patient and family agreed to continued treatment

Emergency Management of Substance Overdose and Withdrawal

8

Praveen Aggarwal & Sudipto Choudhary

INTRODUCTION

Substance abuse is a common problem in today's world. The emergency department (ED) may be the initial or the only point of contact with the health care system for these patients. ED staff regularly encounters patients seeking treatment for alcohol or substance abuse related problems. The initial evaluation may seem routine, yet these patients have multiple physical and emotional issues that should be addressed. The ED personnel should strive to identify patients who might benefit from appropriate referrals for drug and alcohol problems. Substances of abuse include alcohol, cocaine, opiates, amphetamines, and hallucinogens.

A substance abuser may visit an ED due to several reasons (Table 1). Amongst all these, overdose is the commonest reason for attending ED.

Table 1. Common reasons for emergency department visits by a substance abuser

- Overdose (accidental or suicidal)
- Withdrawal
- Accident or injuries
- Seeking detoxification

SUBSTANCE ABUSE AND DEPENDENCE

Common Clinical Features

Substance abuse is defined as the problematic use of alcohol, tobacco, or illicit drugs. Dependence can be defined as the continued use of mood-altering agents despite negative medical or social consequences. Patients can present with "red flags" suggesting a substance abuse (Table 2).

Table 2. Common features suggestive of substance abuse

Symptoms:

- Frequent absences from work or school
- Frequent accidents
- Depression or anxiety
- Labile hypertension
- Epigastric distress
- Diarrhea
- Sexual dysfunction
- Sleep disorders

Signs:

- Hand tremors
- Alcohol smell on breath
- Tender hepatomegaly
- Conjunctival irritation
- Features of chronic obstructive lung disease

Approach to a Patient with Substance Abuse

After initial ABC (airway, breathing and circulation), attention should be paid to specific problem of overdose or withdrawal. Associated accidents must always be considered in all patients. A comprehensive evaluation is essential to guide the treatment of a patient with a substance use disorder (Table 3).

Table 3. Evaluation of a patient with substance abuse

- Detailed history of patient's past and present substance abuse
- Effects of substance use on the patient's cognitive, psychological, behavioral, and physiological functioning
- History of psychiatric treatments and outcomes
- Family and social history
- General medical and psychiatric history and examination
- Screening of blood, breath, or urine for substance used
- Other laboratory tests to help confirm the presence or absence of conditions that frequently co-occur with substance use disorders

SUBSTANCE OVERDOSE

General Principles of Management

Coma is one of the most common presentations in emergency department settings. It may be caused by a variety of disorders, which broadly can be categorized as metabolic and structural diseases. Drug overdose must be considered in any patient who presents with coma. Common drugs involved include opioids, benzodiazepines and tricyclic antidepressants. Provision of meticulous supportive care, identification of patients requiring treatment with an antidote, and the appropriate use of methods limiting poison absorption or increasing elimination, remain the cornerstones of management.

Resuscitation and Stabilization

Treatment of cardiac arrest in the poisoned patient should generally follow advanced cardiac life support (ACLS) guidelines. However in certain circumstances, a different approach may be required. eg, early use of hypertonic sodium bicarbonate in cardiac arrest associated with tricyclic antidepressant (TCA) poisoning. The initial priority in poisoned patients is the standard resuscitation (airway, breathing, and circulation). Inadequate ventilation may require an oropharyngeal airway and bag-mask ventilation, and if required, intubation and mechanical ventilation. In patients with altered level of consciousness, cervical spine should be immobilized.[3,4]

Hypotension should be treated using intravenous crystalloids with an initial bolus of 10–20 ml/kg. If hypotension is resistant to IV fluids or appropriate antidotes, central venous pressure should be monitored to guide further IV fluids. Inotropic agents like norepinephrine

or dopamine should be considered in patients in whom hypotension is not corrected.

Arrhythmias associated with poisoning should generally be treated initially with correction of acidosis, hypokalemia or hypoxia. In TCA poisoning, sodium bicarbonate is useful for correcting arrhythmias.

Continuous seizures should be treated using a benzodiazepine (lorazepam 4 mg IV or diazepam 5–10 mg IV initially). It is important to estimate blood sugar by a bedside method in all patients to exclude hypoglycaemia. Resistant seizures should be treated with general anaesthetic sedation (barbiturates) and supportive care.

Rectal temperature should be obtained in all patients. Patients with core temperatures of greater than 39°C should be treated aggressively with cool IV fluids and active cooling measures

History, Examination and Simple Investigations

History

The history should address the **"Five Ws":**

who—the patient's age, weight, relationship to others present and gender;

what—the name and dosage of medication(s) or substances of abuse, co-ingestants and amount ingested;

when--the time and date of ingestion;

where—both the route of poisoning (e.g., ingestion or injection) and the geographic location where the poisoning occurred, and

why—whether intentional or unintentional, and associated details. In addition, a detailed past medical history should be obtained. Particular attention should be devoted to eliciting a history of alcoholism, and renal or hepatic disease.

Examination

Important examination findings should include vitals (pulse, blood pressure, temperature and respiration), neurologic functions, cardiopulmonary and abdominal status, and breath odor. Particular attention should be paid to associated injuries. Based on the examination findings, it may be possible to define a syndrome associated with certain poisons known as a toxidrome. Important toxidromes[4] indicating overdose with various drugs of abuse are listed in Table 4. Pupillary reflex to light is commonly utilized in patients presenting with coma. It must be remembered that non-reactive pupils may occur in patients with drug overdose and are, therefore, not synonymous with brain death.

Investigations

Important investigations include blood sugar, urea, electrolytes, arterial blood gas analysis. An ECG may detect occult cardiac conduction abnormalities of diagnostic and prognostic importance

Use of Antidotes

Naloxone can be safely used as a diagnostic tool in unconscious patients. Flumazenil is an antidote for benzodiazepine overdose, though it is not recommended as an empirical therapy in comatose patient of unknown cause currently. Patients who have a history of seizures may develop uncontrolled seizures after receiving flumazenil. Flumazenil may be administered in a selective group of patients who are not agitated and have a normal ECG.

Table 4:

Toxidrome	Clinical Features	Examples
Narcotic	Miosis, CNS depression, coma, bradycardia, hypothermia, respiratory depression	Opioids
Sympathomimetic	Sweating, tremors, tachycardia, hypertension, hyperthermia, mydriasis, tachypnea, agitation, hyperalert, seizures	Amphetamines, cocaine
Sedative-hypnotic	CNS depression, confusion, stupor, coma, bradycardia, hypotension, hypopnea, miosis, hyporeflexia, bradycardia, hypotension, hypopnea, miosis, hyporeflexia	Benzodiazepines
Hallucinogenic	Hallucinations, depersonalization, agitation, Hyperthermia, tachycardia, hypertension, nystagmus, mydriasis	Phencyclidine, LSD

Non-specific Treatment

It involves removal of the unabsorbed poison from the gut (gut decontamination) and increasing the excretion of absorbed poison from the body. Gut decontamination includes induction of emesis, gastric lavage, use of activated charcoal and cathartics, and whole bowel irrigation.

Recommendations on Gut Decontamination

The Position Statements on the use of gut decontamination procedures state that gastric emptying should not be considered unless the patient has ingested a potentially life-threatening amount of a drug within the last 60 minutes. Cathartics are not advised in any patient with drug overdose. Activated charcoal is not available in India.

Gastric lavage

If the patient is unconscious, intubate the patient before passing a lavage tube. Gastric lavage should be continued till the return fluid is clear and free of drug particles. In adults and children above 6 years, tap water is sufficient for lavage. However, in children below the age of 6 years, saline at body temperature should be used for lavage. This will prevent hyponatremia and hypothermia. The lavage fluid should be preserved in a clean bottle. It should be sealed with glue tape with signature of the physician along with label with details of the patient and to be preserved or sent to lab as per the policy of the hospital.

Diuresis

Urinary excretion of most drugs is not enhanced significantly by infusing fluids rapidly. Infusing large amount of intravenous fluids can produce electrolyte and fluid imbalance. At present, forced diuresis is not recommended in the management of acute poisoning cases. Alkaline diuresis is of value in limited number of poisonings. On the other hand, acid diuresis should not be attempted in any patient including those with amphetamine poisoning.

Specific Overdoses

Opioids

Heroin is by far the most commonly abused opiate. Other drugs of abuse in this category include methadone, morphine, codeine, oxycodone, fentanyl (China white), and black tar (a potent form of heroin). Complications of chronic use are primarily infections and include skin abscess at an injection site, cellulitis, mycotic aneurysms, endocarditis, noncardiogenic pulmonary edema, HIV, and hepatitis.

Clinical Features

Signs of intoxication are decreased respiratory rate, pinpoint pupils and decreased level of consciousness. Mixed pharmacological effects arising from preparations containing an opioid and a stimulant drug (heroin and cocaine combination - "speedball") may cloud this typical clinical picture.

Dextropropoxyphene is more likely to lead to death after overdose than other opioids. It can produce QRS prolongation and negative cardiac inotropy. All patients with opioid poisoning, particularly those who have ingested a compound containing opioid and paracetamol, should have plasma paracetamol concentration measured.

Management

Provision of an adequate airway and ventilation, and the appropriate use of naloxone remain the most important aspects in treatment of acute opioid toxicity. In life threatening acute opioid toxicity, naloxone should be administered intravenously or via an endotracheal tube. The initial dose of naloxone is 0.1-0.4 mg unless the patient has respiratory depression when a dose of 2 mg should be given. If no response occurs in 1-2 minutes and there is no precipitation of withdrawal features, a dose of 2 mg should be given every 1-2 minutes up to a total of 10 mg. If there is no response to 10 mg dose, opioid overdose is unlikely. The effects of naloxone diminish within 2-3 hours; so patients must be monitored for at least 24 hours after a heroin overdose and 72 hours after a longer acting drug such as methadone. If re-sedation develops, an infusion of naloxone should be started at a dose 2/3rd the initial dose per hour. Patients who have ingested long acting opioids (such as methadone) may require naloxone infusions for up to 72 hours.

Benzodiazepines

Benzodiazepine toxicity commonly produces drowsiness, dysarthria, ataxia, nystagmus, and confusion. After benzodiazepine ingestion, symptoms and signs are usually mild, well tolerated, and resolve within 24 hours. Large overdoses of benzodiazepines can produce mild hypotension and respiratory depression. Benzodiazepine overdose is less well tolerated in patients who have ingested a significant quantity of another CNS depressant (including alcohol), those with chronic obstructive airway disease, and elderly patients.

The mainstay of treatment is supportive care. Flumazenil is a benzodiazepine antagonist acting on the GABA receptor. It is not recommended in most patients with benzodiazepine overdose. It may be given in rare cases when airway and ventilatory support are not available and the ingestion of any other drugs has been excluded. The dose is 0.1-0.2 mg IV over 30-60 seconds; this may be repeated every 1-2 minutes up to 1 mg.

Cocaine

Cocaine (coke) abuse is increasing in India especially amongst the urban youth. It is commonly snorted using a currency note or plastic/glass straw. The average lethal dose by inhalation is about 750-800 mg. This is subject to significant individual variation because deaths have occurred with as little as 25 mg applied to the mucous membrane or the snorting of a single line in recreational use where the average dose of 1 line is 20 mg.

Clinical Manifestations

Acute cocaine intoxication may present with sweating, tachycardia, tachypnea, seizures and hypertension. Complications of acute and chronic use can include myocardial ischemia or infarction, stroke, pulmonary edema, and rhabdomyolysis.

Cocaine-related chest pain might be musculoskeletal, respiratory, or cardiac in origin. Cocaine-related myocardial infarction (MI) occurs in 6% of patients who present with chest pain after using cocaine. It has been reported to occur in first time as well as habitual users. Troponin concentrations are more sensitive and specific in diagnosing MI in such cases.

Management

Seizures should be controlled with diazepam. Ventricular arrhythmias require 0.5 to 1.0 mg of propranolol intravenously. The management of cocaine-related MI differs from that of classic MI. Beta-blockers are contraindicated as unopposed alpha-receptor stimulation may worsen coronary artery spasm and systemic hypertension. Thrombolytics should not be used routinely as they will not overcome coronary artery spasm and can increase the risk of intracranial hemorrhage associated with hypertension secondary to cocaine use. First line agents used in the treatment of cocaine-related MI are oxygen, benzodiazepines, nitroglycerine (sublingually or intravenously) and aspirin.

Amphetamines

Methamphetamine is one of the commonly abused amphetamines. It is also referred to as 'speed', or 'glass'. MDMA (methylenedioxymethamphetamine) or ecstasy is also becoming increasingly popular amongst urban youth. Since this substance is commonly used at dance parties, raves, and nightclubs, it is often referred to as one of the "club drugs." It is favored over other recreational drugs, such as marijuana, lysergic acid diethylamide (LSD), methamphetamine, and opiates, because it is believed to enhance social interaction.

Clinical Manifestations

Acute intoxication with amphetamines presents with signs of sympathetic nervous system stimulation, tachycardia, hypertension, hyperthermia, sweating, tremors, anorexia, insomnia, mydriasis (dilated pupils) and occasionally seizures. Confusion, aggressiveness, changes in libido, anxiety,

delirium, paranoid hallucinations, panic states, and suicidal and homicidal tendencies occur, especially in mentally ill patients. It can also produce grossly elevated core body temperature, rigidity of body, myoclonus, rhabdomyolysis (muscle necrosis) and acute renal failure.

Management

Management is symptomatic and includes correction of fluid and electrolyte imbalance, and control of seizures and hyperthermia. Severe hypertension can be treated with labetalol or nitroprusside. For agitation, benzodiazepines such as diazepam, lorazepam or midazolam may be used.

Hallucinogens

Phencyclidine (PCP) and lysergic acid diethylamide (LSD) are the two commonly abused hallucinogens.

Clinical Manifestations

Abuse of hallucinogens may produce nystagmus, flushing, sweating, distortions of body image, disorganization of thinking, and feelings of estrangement. Overdose may produce hyperthermia, increased secretions, respiratory depression, severe hypertension, seizures, rhabdomyolysis and coma.

Management

Supportive measures for coma, convulsions, and respiratory depression should be instituted. There is no specific antidote.

Alcohol Intoxication

In low concentrations, alcohol acts primarily on inhibitory centers resulting in disinhibition. At higher doses, alcohol inhibits excitatory centers. People may show effects ranging from impairment of rational thinking to absence of motor coordination (Table 5). Another feature of alcohol intoxication is hypoglycemia, particularly in children.

Table 5. Features of alcohol intoxication

Blood alcohol concentration (mg/dl)	
Features	
20-30 mg/dl	Slight increase in talkativeness
30-60 mg/dl	Impairment in skillful tasks
60-100 mg/dl	Very talkative, louder speech, less cautious, slow reaction time
200 mg/dl	Sedated, slurred speech, clumsiness,reduced responsiveness, and considerable intellectual impairment
300–400 mg/dl	Semiconscious or unconscious

Assessment of level of intoxication

The gold standard measure is the blood alcohol concentration (BAC). Breath alcohol meters are a quick and reliable method of estimating BACs. The assessment should also include consideration of differential diagnosis of altered mental state in the acutely intoxicated patient.

Management

Any patient presenting with alcohol intoxication should have a prompt assessment of blood glucose levels. Alcoholic patients found to be hypoglycemic should initially receive thiamine before correction of hypoglycemia. Hypoglycemia is treated by 25 g of IV glucose

(50 ml of 50% dextrose) followed by a continuous infusion of 5% or 10% dextrose. Alcohol is associated with trauma and serial BACs can help differentiate what may be attributable to alcohol. Patients with altered level of sensorium should be nursed in lateral position to avoid aspiration. If aggressive behavior continues, low doses of a short acting benzodiazepine (e.g. lorazepam) may be used.

Inhalant Abuse

Inhalant abuse is a prevalent and often overlooked form of substance abuse in adolescents. The method of delivery is inhalation of a solvent from its container (sniffing or sorting), a soaked rag (huffing), or a bag (bagging). Solvents include almost any household cleaning agent or propellant, paint thinner, glue, and lighter fluid. Inhalant abuse typically can cause a euphoric feeling and can become addictive. Acute effects include sudden sniffing death syndrome, asphyxia, and serious injuries. Chronic inhalant abuse can damage cardiac, renal, hepatic, and neurologic systems.

Treatment is generally supportive, because there are no reversal agents for inhalant intoxication. The use of sympathomimetics (e.g., epinephrine, norepinephrine) should be avoided in patients with ventricular fibrillation. Beta-blockers should be administered early to protect the catecholamine-sensitized heart.

SUBSTANCE WITHDRAWAL

Opioid Withdrawal

Emergence of withdrawal symptoms varies with half-life of the particular opioid; within 6-12 hours after the last dose of morphine/hydromorphone/ oxycodone or 72-96 hours following methadone. They subside within 2-6 weeks.

Clinical Features

Features of opioid withdrawal include yawning, sweating, nausea, diarrhea, crampy abdominal pain, coughing, lacrimation, mydriasis, rhinorrhea, twitching of muscles, piloerection, restlessness, diffuse body pain, insomnia as well as mild elevations of body temperature, respiratory rate, and blood pressure. Unlike withdrawal from alcohol or benzodiazepines, opioid withdrawal is not life threatening.

Management

Methadone 10-25 mg twice a day is the drug of choice in many western countries. After several days, the drug is decreased by 10 – 20% of the original daily dose each day. Comfort can be enhanced by administering alpha-2-adrenergic agonist clonidine (0.1-0.2 mg orally every 6-8 hours). However this medicine is not currently available in the country. Currently either Buprenorphine (1.2 – 4mg) or Dextropropoxyphene (6 – 12 capsules of 65 mg) are used for control of withdrawal symptoms.
The initial dose is calculated depending on the amount of opioid consumed over the past 24 hours converted into the equivalent dosage of the compound used for detoxification. Subsequent doses are adjusted depending on the severity of withdrawal symptoms which peak during the 3rd to 7th day in case of heroin. Thereafter the medicines are gradually tapered off. Usually medicines are needed for 2-3 weeks. Certain symptoms like insomnia, restlessness and mild body aches may persist and are managed symptomatically with sedatives and non-narcotic analgesics. Non-pharmacological interventions like relaxation therapy and yoga also benefit some patients.

In accelerated detoxification low doses of naltrexone are given to precipitate withdrawals and these are controlled with clonidine in usual or higher doses than that used for controlling hypertension. This method reduces the detoxification period to 4-5 days.

Benzodiazepine Withdrawal

A withdrawal syndrome generally occurs only after three or more weeks of continuous use. Depending on the drug's half-life, symptoms start one to five days after the last dose, peak within 10 days, and subside after one to six weeks.

Clinical Features

The features usually include increased anxiety and autonomic instability (heightened sensitivity to light and sound, increased heart rate and blood pressure level, tremulousness, diaphoresis). The most serious acute withdrawal symptoms are seizures and delirium tremens, which most commonly occur with abrupt discontinuation.

Treatment

Treatment is initiated if the patient develops tremors, elevated body temperature, agitation or delirium. At six-hour intervals, the patient is given a benzodiazepine in a dosage equivalent to that of the benzodiazepine that has been abused. Generally, a longer-acting benzodiazepine such as Chlordiazepoxide or Diazepam is used, and the initial dosage is titrated downward according to blood pressure elevation, pulse rate, temperature and psychotic symptoms.

Benzodiazepines should not be discontinued abruptly because of the risk of seizures. If a person is dependent on a short acting benzodiazepine, he should immediately be switched to a long acting one. A daily reduction of approximately 10% is usually adequate.
In the majority of cases control of withdrawal symptoms is accomplished in approximately 2 weeks.

Alcohol withdrawal

Symptoms of alcohol withdrawal may range in severity from mild tremors to seizures and can be life-threatening. The goals of treatment are to relieve the patient's discomfort and prevent the development of more serious symptoms.

Clinical Features

Features of withdrawal occur due to over activity of the autonomic nervous system (a part of nervous system that helps a person manage response to a stressful condition). The features of withdrawal typically appear between 6 and 48 hours after a patient stops or reduces alcohol consumption (Table 6). Mild features include feeling nervous without a drink or not being able to function effectively until the first drink of the day. The clinical features increase in intensity over several hours to a few days and then diminish over 24 to 48 hours.

Table 6. Alcohol withdrawal syndrome in relation to time of onset after alcohol cessation

Severity of withdrawal	Time of appearance after withdrawal	Features
Mild withdrawal syndrome	6-12 hours	Nausea, vomiting, headache, difficulty in concentration, insomnia, tremors, sweating, palpitations, anxiety and mild agitation
Alcoholic	12-24 hours	Visual and

hallucinosis		auditory hallucinations; normal sensorium
Alcohol withdrawal fits	24-48 hours	Generalized tonic-clonic seizures
Delirium tremens	48-72 hours	Hallucinations (predominately visual), low grade fever, disorientation and clouding of consciousness, increased respiration, tachycardia, hypertension, severe agitation,

Convulsions may occur in nearly 25 percent of patients. Causes other than alcohol withdrawal should be considered if seizures are focal, if there is no definite history of recent abstinence from drinking, if seizures occur more than 48 hours after the patient's last drink, or if the patient has a history of fever or trauma.

Delirium tremens (DT) is the most serious syndrome associated with alcohol withdrawal and occurs in about 5% of patients with withdrawal symptoms. Hypokalemia, hypomagnesaemia and hypophosphatemia are common in delirium tremens. Death occurs in 5% of cases and is usually due to arrhythmias or pneumonia. Older age, pre-existing pulmonary disease, core body temperature greater than 104ºF, and coexisting liver disease are associated with a greater risk of mortality. Besides alcohol withdrawal, delirium can be produced by several conditions (Table 7). Many drugs have been associated with delirium, but the most common deliriants include high dose narcotics, benzodiazepines, and anticholinergic medications. In any patient presenting with delirium, it is essential to review all the medications and look for a temporal relationship between the use of drugs and onset of delirium.

Table 7. Causes of delirium

Extracranial

- Infections (e.g., pneumonia)
- Metabolic (e.g., liver failure)
- Drug intoxication or withdrawal
- Alcohol intoxication or withdrawal
- Anoxia (e.g., cardiac or respiratory failure)
- Hypoglycemia
- Hypothermia

Intracranial

- Space-occupying lesion (e.g., tumour)
- Concussion of brain
- Meningitis and encephalitis
- Cerebrovascular accidents

Alcohol withdrawal should be differentiated from withdrawal syndromes produced by other drugs. Opioid withdrawal is associated with a normal mental status, no fever and infrequent seizures. Withdrawals associated with benzodiazepines usually progress slowly and the frequency of seizures is higher which tend to appear later, generally around 7th day compared to around 2nd day in alcohol withdrawal.

Evaluation

After initial stabilization, the severity of alcohol withdrawal should be established from history and physical examination. Significant points to be enquired in the history include quantity of alcohol intake, duration of alcohol use, time since last drinking episode, alcohol withdrawal in the past, presence of concurrent medical conditions, and use of other agents. It is important to

remember that several medical conditions commonly coexist with alcoholism and can exacerbate symptoms of alcohol withdrawal or complicate its treatment. These conditions include arrhythmias (irregular heart rate), congestive heart failure, liver disease, infections and brain involvement (including subdural hematoma and meningitis). An assessment should be made for any fluid and electrolyte disturbances. Some patients have dehydration due to vomiting, diarrhea and sweating while others may have excessive fluids in the body.

Management

General Management

Patients dependent on alcohol may have deficiency of thiamin (vitamin B1), which gets precipitated if dextrose is administered. Deficiency of thiamine may produce Wernicke encephalopathy, a condition characterized by severe confusion, abnormal gait, and paralysis of eye muscles. If treatment of this condition is delayed, irreversible dementia can occur (Korsakoff syndrome). Therefore, patients with alcohol withdrawal should receive thiamine as soon as treatment is started. The dose of thiamine is 100 mg per day, initially given by intramuscular or intravenous route (most of the preparations available in India can be administered only by intramuscular route). Thereafter, the oral route is used.

Patients with mild features of withdrawal with no underlying medical condition and no past history of seizures or delirium tremens can be safely discharged after initial observation for a few hours. These patients can be dealt with by rest, relaxation, and reassurance, and providing reduced lighting along with good nutrition and fluids. Supportive care alone does not prevent development of seizures or delirium tremens in patients with moderate to severe symptoms. Further, there is some concern that providing only non-pharmacological care to patients with moderate-to-severe alcohol withdrawal may lead to alcohol-induced neurotoxicity which may produce seizures during future withdrawal (kindling).

Pharmacological Management

Pharmacological treatment of alcohol withdrawal syndrome involves the use of medications that are cross-tolerant with alcohol.

Benzodiazepines: Benzodiazepines are the drug of choice for managing withdrawal symptoms. The selection of a specific benzodiazepine for a specific patient is primarily made on the basis of clinical factors (age of patient, occurrence of prior seizures and status of the liver).

Diazepam is the drug of choice for management of withdrawal symptoms due to its long half life. Lorazepam, a medicine with a shorter half life is the preferred drug in the elderly and those with liver failure. Intramuscular preparation is also available.

Management of severe alcohol withdrawal symptoms is done by administering 10 mg of diazepam hourly until either the symptoms are suppressed or patient is very drowsy. Often only 1 to 2 days of medication are required. Alcohol withdrawal scales like the Clinical Institute of Withdrawal Assessment for Alcohol, revised (CIWA-Ar) helps to guide the usage of benzodiazepines according to the severity.

Beta-blockers: Beta-adrenergic receptors play an important role in the regulation of the autonomic nervous system and may therefore influence the occurrence and severity of some withdrawal symptoms. These agents help in

reducing elevated pulse and blood pressure. They may be useful as adjuncts to benzodiazepines. Adjunctive treatment with a beta blocker should be considered in patients with coronary artery disease, who may not tolerate the strain that alcohol withdrawal can place on the cardiovascular system.

Anti-convulsants: In most cases, benzodiazepines are the drugs of choice for alcohol withdrawal. Carbamezapine may be an effective alternative to benzodiazepines in the treatment of alcohol withdrawal syndrome in patients with mild to moderate symptoms, especially in patients with seizure disorder.

Treatment of Delirium Tremens

To begin with, attention should be paid to detection and management of co-existing medical conditions. This includes maintaining water and electrolyte balance, correcting metabolic disturbances, and control of infections.

The environment should be made safe by removing objects with which patient could harm self or others.

The optimum pharmacological therapy for the treatment of delirium tremens is somewhat controversial. Some clinicians use benzodiazepines to reduce autonomic hyperactivity, the risk of seizures and agitation. However, benzodiazepines may contribute to the aggressive behavior and confusion that are elements of delirium tremens. Antipsychotic medications may be used in low doses to treat delirium tremens. The onset of action is usually rapid, with improvement seen in hours to days. Haloperidol is often used because it lacks the excessive sedation and hypotensive effects of benzodiazepines. Low dose haloperidol (1-10 mg/day) is adequate for most patients. In severe behavioral disturbance haloperidol may be given intramuscularly or intravenously. However, antipsychotic medications can cause increased susceptibility to seizures and increased restlessness.

Treatment of Alcohol Withdrawal Seizures

Alcohol withdrawal seizures not related to delirium tremens usually subside with only supportive treatment. However, up to one-third of patients with untreated seizures subsequently develop delirium tremens. Hence, all patients with seizures should be treated. Patients with no past history of alcohol withdrawal seizures require administration of benzodiazepines. Prophylactic use of phenytoin does not appear to prevent the occurrence of alcohol withdrawal seizures. However; phenytoin may be useful in combination with a benzodiazepine for preventing an initial seizure in patients who have a past history of seizures.

Indications for Admission

The indications for admitting a patient are given in Table 8.

Table 8. Indications for hospital admission

- Severe withdrawal symptoms
- Withdrawal seizures
- Delirium tremens
- Multiple previous withdrawals
- Concomitant psychiatric illness
- Concomitant medical illness
- Recent high levels of alcohol consumption
- Pregnancy

Role of Nurse

The first priority in managing emergency is to maintain ABC-airway, breathing and circulation.

To maintain a patent airway

- o Straighten or tilt the neck back
- o Suction if necessary
- o Prepare for endotracheal intubations if indicated
- o Continuously assess the airway patency, respiration, capillary refill, vital signs and mental status of the patient
- o Administer oxygen if indicated
- o Keep patient quiet and ensure a comfortable environment
- o Maintain fluid and electrolyte balance as indicated and administer IV fluids and emergency medication as prescribed.

To prevent further complications

- o Perform gastric lavage where ever indicated till the return fluid becomes clear
- o Assess for any physical injuries on admission
- o Continuously assess level of consciousness
- o Maintain NPO status to prevent aspiration
- o Promote safety- elevate the side rails.
- o Maintain calm atmosphere and decrease environmental stimuli
- o Reassure the patient when he/she gains consciousness.

- **Legal responsibility**

- o Finish the MLC requirements
- o Collect and the sample of the gastric lavage, left over drugs and store appropriately
- o Send the collected specimen to laboratory for investigation.
- o Careful documentation should be done in all the records.
- o Make sure appropriate referral is done.
- o Facilitate transfer to ward if hospitalization is required or discharge the patient when the condition stabilizes.

- **Psychosocial care**

- o Develop rapport and trustful relationship
- o Reasssure the patient and relatives
- o Help the patient to calm down
- o Give needed information as and when required
- o Counsel as and when required
- o Do Referral
- o Do motivational counseling
- o Advise use of identification card

CONCLUSION

Abuse of several drugs and substances is an important problem in clinical practice. The patients may present in an emergency room or in an outpatient department. An underlying medical problem or injury must be considered and excluded in all such cases. Supportive treatment in the form of ensuring adequate ventilation and circulation is essential before proceeding further in managing such cases. The use of antidotes should be considered in patients with opioids and benzodiazepine overdose. In withdrawal syndromes, physical, and if required chemical restraints using a benzodiazepine should be considered. The outcome is excellent if these steps are followed in managing patients with overdose or withdrawal.

Suggested slide material

Slide 1

Common reasons for emergency department visits by a substance abuser

- Overdose (accidental or suicidal)
- Withdrawal
- Seeking detoxification
- Accident or injuries

Slide 2

Evaluation of a patient with substance abuse

- Detailed history of patient's past and present substance abuse
- Effects of substance use on the patient's cognitive, psychological, behavioral, and physiological functioning
- History of psychiatric treatments and outcomes
- Family and social history
- General medical and psychiatric history and examination
- Screening of blood, breath, or urine for substance used
- laboratory tests to help confirm the presence or absence of conditions that frequently co-occur with substance use disorders

Slide 3

Suggestive symptoms to suspect substance abuse on assessment

Symptoms:

- Frequent absences from work or school
- Frequent accidents
- Depression or anxiety
- Labile hypertension
- Epigastric distress
- Diarrhea
- Sexual dysfunction
- Sleep disorders

Signs:

- Hand tremors
- Alcohol smell on breath
- Tender hepatomegaly
- Conjunctival irritation
- Features of chronic obstructive lung disease

Slide 4

General principles of management of substance overdose

- Drug overdose must be considered in any patient who presents with coma.
- Provision of meticulous supportive care
- Identification of patients requiring treatment with an antidote
- Appropriate use of methods limiting poison absorption or increasing elimination

Slide 5

Management of drug overdose

- Administration of antidote
- Gastric lavage

o Intubate the patient before lavage if unconscious

- Fluid electrolyte balance

Slide 6

Sign and symptoms of delirium tremens

- Occurs within 48-72 hrs
- Hallucinations (predominately visual)

- Low grade fever
- Disorientation and clouding of consciousness
- Increased respiration
- Tachycardia
- Hypertension
- Severe agitation,

Slide 7

Management of delirium tremens

- Maintaining fluid and electrolyte balance
- Correcting metabolic disturbances
- Control of infections
- Provide safe environment by removing objects with which patient could harm self or others.
- Low dose Haloperidol (1-10 mg/day)
- In severe behavioral disturbance haloperidol may be given intramuscularly or intravenously.

Slide 8

Indications for hospital admission

- Severe withdrawal symptoms
- Withdrawal seizures
- Delirium tremens
- Multiple previous withdrawals
- Concomitant psychiatric illness
- Concomitant medical illness
- Recent high levels of alcohol consumption
- Pregnancy

Slide 9

Role of nurse in emergency management

- Maintain a patent airway
    - o Straighten or tilt the neck back
    - o Suction if necessary
    - o Prepare for endotracheal intubations if indicated
    - o Continuously assess the airway patency, respiration, capillary refill,
    - o Monitor vital signs and mental status of the patient
    - o Administer oxygen if indicated
    - o Maintain I/O record

Slide 10

Role of nurse in emergency management

- Keep patient quiet and ensure a comfortable environment
- Administer IV fluids and emergency medication as prescribed.
- To prevent further complications
    - o Perform gastric lavage till the return fluid becomes clear
    - o Assess for any physical injuries on admission
    - o Continuously assess level of consciousness
    - o Maintain NPO status to prevent aspiration
    - o Promote safety- elevate the side rails. Constant observation
    - o Reassure the patient as he gains consciousness.

Slide 11

Role of nurse in emergency management

- Psychosocial care
    - o Develop rapport and trustful

relationship

- o Reassure the patient and the relatives
- o Help the patient to calm down
- o Give needed information as and when required
- o Counsel as and when required
- o Do Referral
- o Do motivational counseling
- o Advise use of identification card

Slide 12
Legal responsibility of nurse

- o Finish the MLC requirements
- o Collect and the sample of the gastric lavage, left over drugs and store appropriately
- o Send the collected specimen to laboratory for investigation appropriately labeled.
- o Careful documentation should be done in all the records.
- o Make sure appropriate referral is done, transfer to ward if required admission or discharge the patient as the condition stabilizes.

Suggested readings material

1. Mercy DJ. Recognition of alcohol and substance abuse. Am Fam Physician 2003; 67:1529-32,1535-6.
2. Greene SL, Dargan PI, and Jones AL. Acute poisoning: understanding 90% of cases in a nutshell. Post grad Med J 2005; 81:204–216.
3. General management of poisoning. In: Diagnosis and Management of Common Poisoning, Eds. Aggarwal P, Wali JP, Oxford University Press, Delhi, 1997; 1-18.
4. Management of acute poisoning. In: Principles and Practice of Emergency Medicine, Eds. Aggarwal P, Murmu LR, Yadav CS, BI Publications Pvt Ltd, Delhi, 2005; pp 322-331.
5. Antidepressants. In: Diagnosis and Management of Common Poisoning, Eds. Aggarwal P, Wali JP, Oxford University Press, Delhi, 1997; 109-116.
6. Gahlinger PM. Club Drugs: MDMA, Gamma-Hydroxybutyrate (GHB), Rohypnol, and Ketamine. Am Fam Physician 2004; 69:2619-2627.
7. Mason PJ, Morris VA, Balcezak TJ. Serotonin syndrome. Presentation of 2 cases and review of the literature. Medicine 2000; 79:201-209.
8. Lopatko O, McLean S, Saunders J, et al. Alcohol. In: Hulse W, White J, Cape G, eds. Management of alcohol and drug problems. Melbourne: Oxford, 2002:158–211.
9. Anderson CE, Loomis GA. Recognition and prevention of inhalant abuse. Am Fam Physicians 2003; 68:869-874.
10. Upthegrove RA, Naik PC. Pharmacological management of opiate withdrawal. Hosp Med 2001; 62:277, 280-281.
11. Rickels K, Schweizer E, Case WG, Greenblatt DJ. Long-term therapeutic use of benzodiazepines. I. Effects of abrupt discontinuation. Arch Gen Psychiatry 1990; 47:899-907.
12. Busto U, Sellars EM, Naranjo CA, Cappell H, Sanchez-Craig M, Sykora K. Withdrawal reaction after long-term therapeutic use of benzodiazepines. N Engl J Med 1986; 315:854-859.
13. Moskowitz G, Chalmers TC, Sacks HS, Fagerström RM, Smith H. Deficiencies of clinical trials of alcohol withdrawal. Alcohol

Clin Exp Res 1983; 7:42-46.

14. Mayo-Smith MF. Pharmacological management of alcohol withdrawal: A meta-analysis and evidence-based practice guideline. JAMA 1997; 278:144–151.
15. Saitz R, Mayo-Smith MF, Roberts MS, Redmond HA, Bernard DR, Calkins DR. Individualized treatment for alcohol withdrawal: A randomized double-blind controlled trial. JAMA 1994; 272:519–523.
16. Malcolm R, Myrick H, Roberts J, Wang W, Anton RF, Ballenger JC. The effects of Carbamezapine and Lorazepam on single versus multiple previous alcohol withdrawals in an outpatient randomized trial. J Gen Intern Med 2002; 17:349-55.
17. Brown TM, Boyle MF. ABC of psychological medicine: Delirium. Br Med J 2002; 325; 644-647.
18. Saitz R, O'Malley SS. Pharmacotherapies of alcohol abuse: Withdrawal and treatment. Med Clin North Am 1997; 81:881-907.
19. Rothstein L. Prevention of alcohol withdrawal seizures: The roles of d-phenylhydantoin and chlordiazepoxide. Am J Psychiatry 1973; 130:1381-1432. 20.
Myrick H, Anton RF. Treatment of alcohol withdrawal. Alcohol Health Res World 1998; 22:38-43.
21. Williams SH. Medications for treating alcohol dependence. Am Fam Physicians 2005; 72:17775-1780.
22. Banys P. The clinical use of disulfiram (Antabuse): a review. J Psychoactive Drugs 1988; 20:243-261.
23. Srisurapanont M, Jarusuraisin N. Opioid antagonists for alcohol dependence. Cochrane Database Syst Rev; 2005(1):CD001867.

Psychosocial Treatment methods for substance Use disorder: Role and Responsibilities of Nurse

9

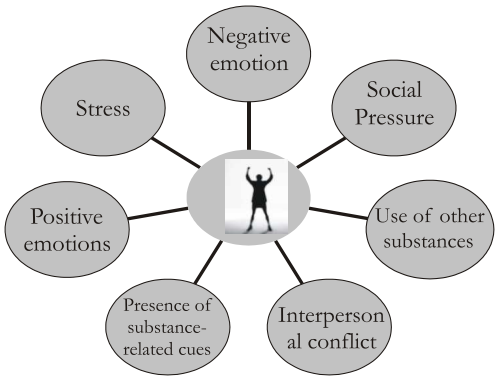
Christopher Sudhaker

Summary: *Psychosocial management of the patient with substance use disorder and their family is as important as pharmacological management. Psychosocial treatments are delivered in the form of advice, counseling, psycho-education, interactive sessions, group therapy, role-playing, feedback, skills training and providing emotional and social support. Such treatments may be professionally guided brief or extended interventions or self-help approaches. As part of the mental health team, nurse's role may be as therapist or important member of the team. The goal of a nurse in delivering psychosocial treatment is to make the patient achieve maintenance of abstinence from substance, return to the mainstream of life, and promotion of well being of patient and the family. In the primary care setting, the need for brief interventions and motivational interviewing would be a useful technique since many patients enter these programs unwillingly or at best with motivation to deal with the immediate crisis and placate those responsible for getting them into treatment.*

Introduction

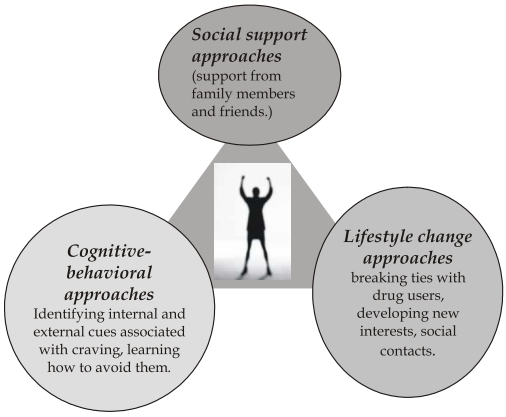
Psychosocial Treatment is using psychological and social (psychosocial) strategies for treating the patient with psychiatric disorders including substance use disorder. There are several types of psychosocial treatments and each strategy offers a different level and type of support to persons recovering from substance use disorder. **Psychosocial Treatments** are non-pharmacological interventions. However psychosocial interventions can enhance the effectiveness of pharmacological treatment by increasing medication compliance, retention in treatment, and acquisition of skills that reinforce the effects of medication

High-risk situations or factors preceding relapse



1. **Stress.** Everyday hassles cause stress and greatly increases vulnerability to relapse.
2. **Negative emotions.** A wide range of 'negative' emotional states can precipitate relapse. These include anger, anxiety, depression, frustration, or even boredom.
3. **Positive emotions.** Good feelings that come from socializing can sometimes trigger relapse. In other cases, substance use might be used as a reward or a means of celebration.
4. **Interpersonal conflict.** Relapse is often due to conflict with family members and other individuals. This may particularly manifest as lack of trust by family members despite the patient being substance free for a period of time. The resultant anger or frustration may act as a strong precipitant for relapse.
5. **Social pressure.** Being trapped in a social network in which other people use substance is especially risky.
6. **Use of other substances.** Use of any one intoxicant substance can trigger cravings for the primary substance of abuse or undermine self-control.
7. **Presence of drug-related cues**. Environmental cues (e.g., drug paraphernalia) elicit strong craving in some people who are trying to maintain abstinence, and may even cause a 'conditioned' withdrawal syndrome.

Strategies of psychosocial treatment in substance use disorder



Psychosocial treatment for substance use disorder focuses on maintenance of **abstinence** and relapse prevention issues. Three major strategies used are

1. **Social support approaches**. These focus on the patient's need for emotional support from family members and friends. This can play a vital role in relapse prevention
2. **Lifestyle change approaches.** Helping patients develop and sustain new social identities as drug-free individuals, including breaking ties with drug users, developing new interests, pleasures and social contacts.
3. **Cognitive-behavioral approaches.** Identifying internal and external cues associated with craving (desire) and then learning how to avoid them, or, if they do occur, to prevent them from turning into a full-blown relapse.

Motivational stages

1. Precontemplation
2. Contemplation
3. Preparation
4. Action
5. Maintenance
6. Relapse or recurrence.

During **precontemplation** individuals do not feel impelled to do anything about their behavior, perhaps as a result of denial or selective exposure to information. As they become aware a problem exists, they enter the **contemplation** stage which is characterized by conflict and dissonance. **Preparation** is defined as a time when the individual drug user formulates action plans and is serious about his intention to alter behavior. **Action** is a period when overt changes are made, after which successful individuals enter the **maintenance** stage when new behaviors are strengthened and consolidated. The individual who does not relapse during this stage eventually exits the change system to termination, or in other words favorable long-term outcome. Most people do not immediately sustain the new changes they are attempting to make, and return to substance use. This is known as **relapse**.

It has been observed that progression through the stages follow a cyclical pattern. People may move back from action to contemplation and precontemplation before eventually achieving long-term resolution of the problem. 'Stages of Change' questionnaire and the 12 item 'Readiness to Change' scale have been developed to assess the stages of change for drug abusers.

Motivational Interviewing

During Motivational interviewing (MI), the individual is encouraged to reach his or her own decision about change, while the role of the therapist is simply to facilitate this process through clarification, advice when appropriate, accurate feed-back, and empathy. The aim of the therapy is to increase cognitive dissonance until a critical mass of motivation has been achieved and the individual is ready to move from pre-contemplation to action. At this point commitment to real behavior change is a likely outcome. Motivational interviewers operationally define motivation as the probability that a person will enter into, continue, and adhere to a specific change strategy and there is a strong emphasis on ambivalence resolution and the decisional balance. Essentially the patient begins to present his own argument for change rather than being directed by a coercive therapist, while it is the therapist's role to set in place the optimum conditions for change.

Motivational enhancement

Motivational enhancement is a patient centred, directive therapeutic style to resolve ambivalence and promote greater commitment to change. The multidimensional nature of motivation is highlighted by the three critical elements that a person is ready, willing and able to change. One can be able to change, but not willing. The willing component involves the importance a person places on changing and the ready component represents the final step in which the person finally decides to change a particular behavior. To instill motivation for change is to help the patient become ready, willing and able. The motivational style of counseling is useful not only in the initial stage, but also in the preparation, action, and maintenance stages as well.

Appropriate motivational strategies for each stage of change (Miller, 1999) could be as follows

Precontemplation: Establish rapport, build trust. Raise doubts or concerns in the person about substance using pattern. Explore the meaning of vents that brought the patient to treatment or the results of previous treatment. Elicit the patient's perception of the problem. Give factual information about the risk of substance use. Provide personalized feedback about assessment findings. Explore the pros and cons of substance use. Examine the discrepancies between the patient and others perception of the problem behavior. Express concern and keep the door open.

Contemplation*:* Normalize ambivalence; help the patient tip the decisional balance scale towards change by eliciting and weighing pros and cons of substance use and change. Change extrinsic and intrinsic motivation. Examine the patient's personal values in relation to change. Emphasize the choice of responsibility and self-efficacy. Elicit self motivational statements of intent and commitment. Elicit ideas regarding perceived self efficacy and expectations towards treatment. Summarize self motivational statements.

Preparation: Clarify the patient's own goal and strategies for change. Offer a menu of options. With permission, offer advice. Negotiate a change or treatment plan and behavior contract. Counter and lower barriers to change. Help the patient enlist social support. Explore treatment expectancies and the patient's role. Elicit what has worked in the past for him or others whom he knows. Assist the patient to negotiate finances, child care, work or other barriers. Have the person publicly announce plans to change.

Action*:* Engage the patient in treatment and reinforce the importance of remaining in recovery. Support a realistic view of change through small steps. Acknowledge difficulties for the person in early stages of change. Help in identifying high risk situation and develop appropriate coping strategies to overcome them. Assist in finding new reinforces of the change. Help in assessing whether the person has strong family and social support.

Maintenance*:* Help in identifying and sample drug free sources of pleasure. Support life style change. Affirm person's resolve and self efficacy. Assist in practicing the use of new coping strategies to avoid return to substance use. Maintain supportive contact. Develop a 'fire-escape' plan if the patient resumes substance use. Review long term goals.

Relapse Prevention

Relapse is precipitated by craving, which results in loss of control. Craving can be seen as a

cognitive interpretation of the feelings of arousal associated with drug-related stimuli. Researchers have also found that relapse is more likely in individuals who had few coping resources and who have encountered a relatively large number of risk situations.

During Relapse prevention therapy, the patient constructs a personal behavioral analysis and receives training in specific coping strategies. These can include:

- Broad-based skills training (behavioral rehearsal, assertiveness training),
- Cognitive reframing (coping with imaginary problems, reframing reactions to lapse),
- Lifestyle interventions (relaxation and exercise enhancement).
- Patients are taught to recognize early warning signals and made aware of decisions that can increase the possibility of relapse.
- Self monitoring to recognize drug cravings

The patient is encouraged to practice these strategies using rehearsal, role-play and homework tasks

Methods of Psychosocial Treatment used in substance use disorder

The psychosocial treatment methods can be divided arbitrarily into therapist mediated and non therapist mediated interventions as per the way it is delivered or organized. In some methods nurses can take the role of therapist

Therapist Mediated Interventions

Therapist mediated interventions can be of two types: brief intervention which is of shorter duration, and extended intervention which requires longer duration of therapy.

A. Brief Intervention

Brief intervention is a short counseling session focused on helping a person change a specific behavior. BI has proven to be effective in the management of individual with hazardous and harmful drug or alcohol use. The consistent features in BI have been summarized by Miller and Sanchez (1993) using the acronym

FRAMES:
Feedback
Responsibility
Advice
Menu of options
Empathy and
Self-efficacy (confidence for change).

The provision of giving personally relevant feedback after assessment such as individual's drug use and problems and associated personal risks is a key component of brief intervention. Personal responsibility is emphasized so as to bring about change in behavior. Advice about changing the substance taking behavior is given in a non judgmental manner. Alternative strategies to cut down or stop their substance use are given. Empathic counseling and understanding approach to encourage the patient's confidence so as to promote self- efficacy in their behavior is used. It is generally delivered by non specialists, involving 1-4 sessions. This addresses the motivation to change habits and is effective for early stage, non dependent users in primary care.

B. Extended Interventions (EIs) – Involving 5-12 sessions

1. Individual psychotherapy and group psychotherapy

   Often people verbalize that they are aware

of their problems, but their behavior doesn't change. This is due to intellectual insight rather than emotional awareness. People with substance use problems often take drugs or alcohol to cope with intolerable feelings, or to manage feelings of inadequacy. The ability to tolerate, manage and integrate difficult feelings can help them to come out of substance use disorder.

- **Individual therapy** is the most common format for psychotherapy. This therapy uses techniques from the psychodynamic (insight-oriented), cognitive, and behavioral approaches. In the individual psychotherapy, a psychotherapist meets a patient one or more times per week for about 50 minutes each meeting. Patients have the therapist's full attention during an individual session. This may make the patient feel more secure and safe. The individual format encourages patients to explore their difficulties in-depth.
- **Group psychotherapy:** In group psychotherapy, one or more therapists will be leading with a group of five to ten patients. Each session will be around 60- 90 minutes. Group therapy is often run in a 'support' or 'growth' mode, wherein the therapist will guide the patients in a discussion of things they are struggling with in their lives. The participants support one another, to find effective ways of managing problems, and get relatively equal chances to talk.

The treatment goals of individual/group psychotherapy are

- Establishing abstinence
- Establishing stable functioning
- Preventing relapse
- Addressing psychological issues

Strategies include

- Setting the resolution (decision) to stop substance use
- Teaching coping skills
- Changing reinforcement contingencies
- Fostering management of painful events or emotions
- Improving interpersonal functioning
- Enhancing social support

2. Family therapy

Family therapy is a collection of therapeutic approaches that share a belief in family level assessment and intervention. A family is a system, and in any system each part is related to all other parts. Consequently, a change in any part of the system will bring about changes in all other parts. Therapy based on this point of view uses the strengths of families to bring about change in a range of diverse problem areas, including substance abuse.

Family therapy in substance abuse treatment has two main purposes.

1. It seeks to use the family's strengths and resources to help find or develop ways to live without substances
2. It removes chemical dependency of both the patient and the family.

In family therapy, the unit of treatment is the family, and/or the individual within the context of the family system. The person abusing substances is regarded as a subsystem within the family unit – the person whose symptoms have severe repercussions throughout the family system. The familial relationships within this

subsystem are the points of therapeutic interest and intervention. The therapist facilitates discussions and problem solving sessions, often with the entire family group

It involves

- Establishing the context for a drug free life
- Ceasing substance abuse
- Managing the crisis and stabilizing the family
- Family reorganization and recovery.

4. Supportive-Expressive Psychotherapy

This 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.

5. Behavioral Therapy for Adolescents

The therapy aims to equip the patient to gain three types of control – Stimulus control, urge control and social control.

Therapeutic activities include

- Fulfilling specific assignments
- Rehearsing desired behaviors
- Recording and reviewing progress
- Using praise and privileges given for meeting assigned goals.
- Urine samples are collected regularly to monitor substance use.

6. Multidimensional Family Therapy (MDFT) for Adolescents:

This is an outpatient family-based substance abuse treatment for teenagers.

Treatment includes

- Individual and family sessions held in the clinic, in the home, or with family members at the house, school, or other community locations.
- During individual sessions, the therapist and adolescent work on important developmental tasks like developing decision-making, negotiation, and problem-solving skills.
- Parallel sessions are held with family members.
- Parents examine their own particular parenting style, and learning to distinguish influence from control, and to have a positive and developmentally appropriate influence on their child.

7. Community Reinforcement Approach (CRA) Plus Vouchers:

This involves

- Intensive 24-week outpatient therapy.
- The treatment goals are two-fold i.e. to achieve abstinence long enough for patients to learn new life skills that will help sustain abstinence, and to reduce alcohol consumption for patients who's drinking is associated with substance 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 substance use, receiving vocational counseling, and developing new recreational activities and social networks.

8. Day Treatment with Abstinence Contingencies and Vouchers:

- For the first 2 months, participants must spend time daily in the program, which provides lunch and transportation to and from shelters.
- Interventions include individual assessment and goal setting, individual and group counseling, multiple psycho-educational groups, and patient-governed community meetings.
- Individual counseling occurs once a week, and group therapy sessions are held three times a week.
- After 2 months of day treatment and at least 2 weeks of abstinence, participants graduate to a 4-month work component that pays wages that can be used to rent inexpensive, drug-free housing.
- A voucher system also rewards drug-free related social and recreational activities.

Non Therapist Mediated Interventions

These are essentially Self-Help Groups (SHGs); the commonest and popular ones being- Alcoholic Anonymous (AA), Narcotic Anonymous (NA), Cocaine Anonymous(CA) etc. The SHG is a group of individuals with similar problems who meet voluntarily to help each other to help themselves.

Other therapies like spiritual or religious therapies or support are also effective. For example, some of the Buddhist temples provide substance rehabilitation camp with significant success. Certain places in south Canara district, Karnataka, whole villages are alcohol free due to oath taken in the presence of religious/ spiritual leader or the deity after de-addiction.

Self help group and therapeutic community have been discussed in separate chapters in the manual elsewhere

Network Therapy

Three key elements are introduced into the Network Therapy technique. The first is cognitive behavioral approach to relapse prevention. Emphasis in this approach is placed on triggers to relapse and behavioral techniques for avoiding them. Second, support of the patient's natural social network is engaged in treatment e.g., peer support, family, friends and spouses. Third, drug-free rehabilitation is provided by mobilization of resources.

Role of Nurse

Nurses work closely with the patient, and thus have a great potential to exert a positive influence on their patients. Though the nurse plays a significant part in patient psychosocial therapy, their exact role is not well established in most of the psychiatric settings in India.

Basic role of nurses in the care of patient with substance abuse are:

- Delivery of selected psychosocial therapy
- Planning and coordinating of psychosocial treatments
- Teaching patient and family about the use of psychosocial treatment, and the benefits of compliance to the psychosocial treatments

Responsibilities

Assessment

Assessment of patient's substance abuse history, conducting physical examination, assessing coping strategies of the family, social support and resources.

Planning

- Planning the psychosocial treatment based on the need of patient and available resources.
- Plan for milieu treatment, group meetings psycho-education, AA meetings, psychopharmacology assessment and adjustment, and treatment of minor physical problems.

Implementation

- Respect patient preference for the initial psychosocial intervention approach, since no single intervention has developed as the treatment of choice.
- **Focus on strengths** to develop self-esteem and encourage healthy behavior
- Provide a variety of services such as patient education, relapse-prevention techniques and discharge planning.
- Provide supportive and safe environment for patients who need help regaining control of their lives.
- Encourage them to commit to change in their behavior through awareness or motivational enhancement programs.
- Educate patient to recognize and cope with urges to drink. For example, by training them to recognize what triggers drinking, how to manage negative moods using their positive coping methods (e.g. doing some art work, keeping them busy with other productive work) and to orient their social lives to something other than using substance.
- Coordinate the day-to-day care of the patient with intra and inter disciplinary team.
- Interact with patients, families and others to provide opportunities for teaching and support.
- Prepare the patients to return home or transfer to other supportive settings.
- Coordinate family meetings
- Promote collaboration, coordination and integration of inpatient and community settings with community psychiatric nurse, social worker, rehabilitation therapist, NGO's, self help groups
- Promote active involvement in Alcoholics Anonymous and Narcotics Anonymous groups

Evaluation: Monitoring the performance and effectiveness of the psychosocial therapy. Collecting specimens and monitoring biochemical values (amount of substance in blood and urine). Report and share the feedback with the team.

Suggested reading materials

- Haber J., Macmation AL., Huskins PP & Sideteau BF, (1992), Psychiatric Nursing St.Lious: Mosby's Publication
- Morrison M, Foundations of Mental Health Nursing (1997),St.Lious: Mosby's Publication
- Shea CA., Pelliter LR, Poster EC, Stuart GW& Verkey MP, (1999)Psychiatric & Mental health Care) St. Lious: Mosby's Publication
- Stuart GW., Laria MT, (2005) Principle& Practices of Psychiatric Nursing, St. Lious: Mosby's Publication

- Taylor CM, (1994) Essentials of Psychiatric Nursing Missouri: Mosby's Publication

Suggested Slide material

Slide 1
Psychosocial intervention

- Non-pharmacological intervention
- Enhance the effectiveness pharmacological treatment
- Increasing medication compliance
- Retention in treatment
- Acquisition of skills that reinforce the effects of medications

Slide 2

High risk factors for relapse

- Stress
- Negative emotions
- Interpersonal conflict
- Social pressure
- Use of other substances
- Presence of drug-related cues

Slide 3

Strategies of treatment

- Cognitive behavioral approach - Identifying internal and external cues associated with craving, learning how to avoid them
- Social approach - support from family members and friends
- Lifestyle change approach - breaking ties with substance users, developing new interests, social contacts

Slide 4

Psychosocial treatment

1. therapist mediated
   i. brief interventions
   ii. extended intervetions
2. non therapist mediated
   i. self help group
   ii. therapeutic community

Slide 5

Brief intervention

- FRAMES
  - Feedback
  - Responsibility,
  - Advice
  - Menu of options,
  - Empathy
  - Self-efficacy
- Delivered by non specialists
- Involve 1-4 sessions.
- Addresses the persons motivation to change habits
- Effective for early stage non dependent users in primary care.

Slide 6

Extended intervention

- Individual and group psychotherapy
- Family therapy
- Supportive psychotherapy
- Behavioral therapy for adolescents
- Multidimensional family therapy for adolescents
- Community Reinforcement Approach

Slide 7

Non therapist mediated intervention

- Self help group
- Alcoholic anonymous
- Narcotic anonymous
- Therapeutic community
- Network intervention

Slide 8

Role of nurse

1. Delivery of selected psychosocial therapy
2. Planning and coordinating of psychosocial treatments
3. Teaching patient and family about the use of psychosocial treatment and benefits of compliance to the psychosocial treatments
4. Respect patient preference for the initial psychosocial intervention approach, since no single intervention has developed as the treatment of choice.
5. Focus on strengths to develop self-esteem and encourage healthy behavior
6. Provide a variety of services such as patient education, relapse prevention techniques and discharge planning.
7. Provide supportive and safe environment for patients who need help regaining control of their lives.
8. Encourage them to commit to change in their behavior through awareness or motivational enhancement programs.
9. Coordinate the day-to-day care of the patient with intra and inter disciplinary team.

Harm Minimisation in Substance Use

10

Atul Ambekar and Yatan Pal Singh Balhara

Summary: Substance use, along with its associated behaviors, leads to many harmful consequences. Since substance use is a heterogeneous and dynamic condition, users go through various stages in their substance use career. Not all substance users are ready to abstain completely. However, they need help to reduce the harms or risks posed by their substance use, such as of HIV infection among injecting drug users (IDUs). For them, we need innovative, pragmatic and acceptable treatment approaches. This chapter is about a relatively recent concept, 'harm minimization'*, (also known as 'harm reduction' or 'risk-reduction') which aims at the prevention or reduction of the negative health consequences associated with substance use. Stemming from the public health philosophy, it aims at achieving the best possible within the constraints of the specific situation. By engaging in the treatment and reducing the adverse consequences of the substance use behaviour, it is of immense benefit to those for whom the treatment strategies aiming at complete abstinence might not work. Harm reduction is about the prevention or reduction of the negative effects of substances, both legal and illicit, on both – individuals as well as the community. Harm minimisation strategies see the substance use problem with a broad spectrum, i.e., with a gradation of the possible adverse consequences. For IDUs, Harm minimisation interventions like Needle Syringe Exchange Programmes and education on the safe injecting and sexual practices help by reducing the possible physical hazards like transmission of HIV and other blood borne infections. Moreover, engagement of IDUs in the harm minimisation treatment provides with an opportunity to*

intervene in other aspects of their life. Another harm reduction strategy - opioid substitution therapy - ensures the reduction in the physical, social, familial, legal complications associated with the use of an illicit substance like heroin. Though there have been some myths associated with these strategies, there is now ample evidence that these approaches help substance users in reducing the risk of various harmful consequences. Prioritisation of the harmful or risky behaviour and the assessment and management skills on the part of the therapist constitute an integral component for the effective delivery of harm minimisation services.

Introduction

Substance use is one of the major causes of morbidity and mortality worldwide. Indeed, with the advent of HIV epidemic, substance use – in particular injecting drug use (IDU) – is now seen as a major public health issue rather than just a social/ legal issue. This chapter will discuss briefly the concept of harm-minimisation as it applies to substance use. While harm minimisation for IDU will be the prime focus of this chapter, issues related to harm minimisation for other substances will also be discussed.

Concept of harm minimization:

Harm minimization, also known as 'harm reduction' or 'risk-reduction' is a relatively recent concept. While the concept has been used in the context of a variety of risky behaviours, it has been seen primarily as an intervention and management strategy for the individuals using psychoactive substances. The World Health Organisation (WHO 2003) defines harm reduction as a *concept aiming to prevent or reduce negative health consequences associated with certain behaviours*. In the context of substance use, at its most basic level, it entails – as the name implies – minimisation of harmful consequences of substance use, even though the substance use itself may continue. One of the major strengths of this concept is its inclusive and broad-based approach. Although initially there was limited consensus on the definition of the term harm reduction, of late there has been a general agreement that harm reduction refers to policies and programs that are aimed at reducing the harms from substances, but not substance use per se.

Harm reduction is about the prevention or reduction of the negative effects of substances, both licit and illicit, on both the individual as well as the community.

Abstinence from substances is not the highest or the most immediate priority in this approach. It is important to understand that, harm minimisation does not condone substance use but acknowledges that it occurs. It is a practical and pragmatic approach to deal with the problem. Harm minimisation strategies emphasize overall health and well being, encourage the use of available support networks and provide access to reliable and pertinent information.

While management of adverse physical consequences of substance use is important, harm minimization, rather than limiting itself to the adverse physical consequences of the substance use, encompasses issues of psychological, social and economic well being. It deals with social, financial, occupational and

mental health consequences of the continued use of the substance along with the minimisation of the physical harm. Harm reduction is a flexible approach that stresses understanding of the needs of the substance user, and responding to them in a flexible and realistic manner that is acceptable to the patient. (Table 1)

Table 1
The key features and principles of harm reduction include:

- The primary goal is reducing harm rather than substance use per se;
- It is built on evidence-based analysis;
- There is acceptance that substances are a part of society and will never be eliminated;
- It provides a comprehensive public health framework;
- Priority is placed on immediate (and achievable) goals;
- Pragmatism and humanistic values underpin harm reduction

Rationale of harm minimisation:

Substance use - A heterogeneous condition: Substance use is a chronic health problem characterised by a long course with multiple changes in the pattern of the substance use behaviour ranging from complete abstinence to heavy use. Hence, interventions required for such a heterogeneous condition also need to be multifaceted. Multiple relapses are a common phenomenon and considered inherent to the disorder. The treatment strategies aiming at complete abstinence from the substance might not work for a substantial proportion of individuals. The reasons for this may vary from an individual to another and include :

1. Some individuals may choose to continue using the substance, albeit in reduced amounts.
2. 'Protracted withdrawal symptoms', (i.e. symptoms which continue for a long duration after cessation of substance use).
3. Absence of a social or occupational support
4. Presence of a co-morbid psychiatric condition.

These individuals (who are not ready to give up substance use) continue to be exposed to certain harmful consequences of their substance use. Thus, for this group of patients, there is a need to adopt strategies that would do as much benefit as possible or at least reduce as much harm as possible. Thus harm minimisation strategies could be an answer to their problems

Harms which need to be reduced: While almost every form of substance use is associated with certain harmful consequences, it is the IDU with associated risk of HIV transmission, which is the most crucial public health issue. It is a well known fact that many individuals, who use substances through injectable route, share their injection equipments. Not only the equipments such as syringe and needle but other paraphernalia – vials, cookers, pots in which substances are mixed – are also shared, increasing the risk of HIV transmission. Thus, most crucial harm reduction issue has been to reduce the risk of HIV transmission through sharing injection equipment among IDUs.

Other examples of harms associated with substance use include :

(a) risky sexual behaviour (i.e. unprotected sex with multiple partners, sex in exchange for money, anal sex – with partner of either gender, sex associated with violence or force,

etc.) with associated risk of transmission of HIV and other sexually transmitted infections, and

(b) drunk driving with associated risk of accidents.

Some other examples of substance-related harm are overdose of the substance, suicide attempts, domestic violence, child abuse and neglect, etc.

How harm minimisation may help: Harm minimisation strategies see the substance use problem with a broad spectrum, i.e., with a gradation of the possible adverse consequences. Rather than looking at the complete absence of the substance as the only possible goal, they tend to make a hierarchy of the adverse consequences of the use of the substance and then intervene at the appropriate levels with the available and feasible resources. Harm reduction works on the premises that one should not be denied the benefits of the available services merely because he/she is not able to stop the substance using behaviour. Rather people should be offered the best possible services which would be of help to them, in spite of the ongoing substance use. These interventions are aimed at helping people minimise the harmful consequences of their behaviours, although they might not be able to bring these behaviours to an ideal 'nil' level.

The concept of harm minimisation stems from the public health philosophy. It acknowledges that some of the individuals are not able to completely give up substance use in spite of the adverse consequences. For them, harm minimisation is seen as a viable alternative. However, indulgence in these high risk behaviours is not a static condition but tends to be dynamic. Thus an individual not able to quit the behaviour at all at one point in time may be amenable to some reduction or modification in the behaviour. At a later stage the same individual might be able to quit it altogether. This needs to be kept in mind while planning any interventions for these individuals as one strategy chosen for an individual at a given time may need to be revised over time as per the needs.

The most impressive success of harm reduction has been control of the spread of HIV, mainly through the introduction of needle exchange.

Substance abuse control – where does harm minimisation fit:

Control of psychoactive substances is a constellation of three strategies:

1. Supply reduction
2. Demand reduction
3. Harm reduction

1. Supply reduction: Supply reduction aims to decrease the amount of the substance available, thereby leading to a decrease in substance use. The approaches employed to reduce supply of the substances include law enforcement mechanisms (such as police, customs, excise, and Narcotic-control departments) to prevent or intercept substance trafficking, illegal manufacture, supply and dealing of the substances of abuse. Identification and destruction of illegal production of the crops yielding the raw materials used in the manufacturing of these substances also reduces the availability of the furnished product. Illicit substance laboratories are also targeted to bring down the number of the manufacturing units of the substances. Licensing of the sale of certain substances like alcohol ensures a control, to an extent, over the number of vendors and the selling hours of the liquor. Similarly enforcement

of the laws prohibiting the sale of the substances of abuse to certain specific groups (like those under a specific age) is an attempt in the same direction. Additionally, prohibition of use of substances in public places also puts a check on the use of the substances.

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3. Harm reduction: Harm reduction aims at minimisation of the harmful consequences of the ongoing use of the substance. It does not look directly into the aspects of the reduction in the amount of the substances available for use or the actual use of the substance. Rather, it emphasizes the reduction in the potential adverse outcomes associated with substance use.

Like the previous two strategies, harm reduction approach can also be directed at the individual users, groups or the community.

Specific Harm reduction strategies:

A detailed description of all harm reduction strategies is out of scope for this chapter. This chapter will limit itself to two most commonly discussed and researched harm reduction strategies viz.

(a) agonist substitution programmes and

(b) needle-syringe exchange programmes.

A. Agonist substitution programmes

These programmes, known by a variety of names such as "agonist maintenance programme" or "oral substitution treatment" rely on the principle of substituting an illicit substance with a legal medication. For India, these programmes are very relevant since opioids are the most common substances injected.

Rationale for agonist substitution: All opioid substances act on specific opioid receptors in the brain. Thus, if an individual who is using one type of opioid substance (e.g. heroin) is given another medication with similar action (e.g. buprenorphine), it will occupy most of the receptors. If now the heroin is taken, it may not exert its effects since the receptors are already occupied by buprenorphine. This phenomenon is called 'cross tolerance'. Thus, an illicit substance of unknown purity and potency, used through a potentially harmful, injecting route, is substituted by a safe, legal medication with known purity and potency, used through a safe (sublingual) route. Consequently, the need to take the illicit, dangerous substance goes down.
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dependent on illegal opioid substances, administered buprenorphine for agonist maintenance treatment, remains dependent on opioids. The only difference is that now the person can fulfil his social/ occupational duties, since he doesn't have to worry about his next dose of the substance. He also doesn't have to go through the unpleasant withdrawal symptoms. Hence, though continuing to be dependent on opioids, he leads a productive, risk-free life. At a subsequent date, the individual may become ready to gradually taper and stop his maintenance medication.

Medications for agonist maintenance: . Though an ideal agent continues to remain elusive, **methadone, LAAM, buprenorphine** and **slow release oral morphine** have been the most researched agents. All of them have been shown to be effective in reducing use of illicit substances, risk of injecting (and subsequent HIV transmission) and the risk of overdose. These medications also reduce involvement in illegal activities and improve the socio-occupational functioning. They have been found to promote the transition to a fulfilling and healthy lifestyle.Table 2 lists the qualities of an ideal agonist maintainence medicine.

Table 2
An ideal medication for maintenance treatment of opioid dependence:

- Should be legal, easily available and inexpensive
- Should be safe and free of toxicity
- Should be long-acting
- Should have minimum abuse liability and dependence potential
- Should be easy to administer
- Should control the withdrawals from and need of illicit opioids effectively

B. Needle Syringe exchange programmes

Yet another well-researched, very effective, yet controversial harm-reduction strategy is Needle Syringe Exchange Programmes (NSEP). At its most basic level, this strategy involves supplying new, clean needles and syringes to IDUs, in exchange of old used, needles and syringes.

Rationale for Needle Syringe exchange programmes: It is a well-established fact that many IDUs share their injecting equipments. While there are multiple factors underlying the practice of sharing, the most important one is that many IDUs do not have access to affordable clean needles and syringes. Availability of new, clean injecting equipments, free-of-cost, provides the IDUs with an opportunity to protect themselves and their injecting partners from transmission of HIV. At the same time, this involvement in the programme could also be used to provide them other important services such as education about healthy practices, management of certain complications such as abscess or thrombophlebitis at the injection site, counselling and testing for HIV, referral to substance dependence treatment services etc. Thus, while as a stand-alone activity, NSEP protects IDUs from HIV, it also acts as a stepping-stone to provide various other services by ensuring an ongoing contact with the IDUs.
Such programmes have been found to be effective in reducing the sharing of injecting equipment among IDUs, and reducing the incidence of HIV sero-positivity among IDUs .

Safe injection facilities

At certain places, the concept of providing clean needles and syringes has been taken yet another step forward, to provide – not only the clean syringes or needles, but – a safe injection facility. Also known as 'injection rooms', in these

facilities, opportunities are provided to IDUs to inject pre-obtained illicit substances under the supervision of and/or by the medical staff. Most such facilities also provide sterile injecting equipments and interventions in the event of overdose. The scope of services could be broadened to also include primary health care, addiction counselling, and referral to external health and social services. Even though they have remained controversial, research has shown that there is no risk of these facilities being seen as encouraging substance use.

C. Other harm-reduction approaches:
Some of the other harm-reduction approaches could include:

I. Education to IDUs about safer injecting practices (such as using adequately cleaned and sterilised injecting equipments, if reuse and sharing are inevitable).

II. Alcohol harm reduction:

(a) Promoting designated-driver programmes: One of the major public health consequences of excessive alcohol use has been 'drunk-driving' resulting in accidents and subsequent injuries, mortalities and disabilities. If people who drink in groups are educated to designate one of them as the driver (who ensures not getting drunk, so that (s)he can drive everyone else safely home) the risk of accidents could be significantly reduced. In some countries, bars and night-clubs provide their visibly drunk patrons a free cab-ride back home.

(b) psychosocial approaches aimed at reducing the amount of alcohol consumed, in a safe manner such as moderation management or controlled drinking

Myths and controversies surrounding harm reduction

Though found to be very effective, almost all the strategies subsumed under harm reduction have been mired in controversies. One of the reasons behind these controversies is various myths surrounding harm reduction.(Table 3) As seen in the light of the evidence presented here and as reviewed in greater details by various other researchers, harm reduction strategies, if employed judiciously and with proper planning, have no risk of increasing any harm, and go a long way in protecting people and promoting safer behaviours.

Harm reduction In India

In India, IDU has been recognised as one of the contributory factors for spread of the HIV epidemic. In two states of India (Manipur and Nagaland), HIV epidemic is primarily IDU driven. In fact, as per the latest sentinel surveillance data, IDUs are the vulnerable group with highest (more than 10%) HIV prevalence in India (NACO 2006). For the purpose of HIV prevention among IDUs, many targeted interventions for IDUs are in place, which are being implemented by the NGOs and supported by the government. Most of these interventions involve education, counselling, referral and needle/syringe exchange services. Unfortunately, the coverage of the IDU population by these interventions has not been adequate. Similarly, agonist maintenance is also available at very few centres in the country. There is an urgent need to enhance the quality and coverage of harm reduction strategies in India.

Examples of the prioritisation of the behaviours for the purpose of harm minimisation:
Use of psychoactive substances is associated with multiple complications. The complications are related to the physiological effects of the substance on various body systems, the

Table 3: Harm Reduction: Myths and Facts
(NSEP=Needle Syringe Exhange Programmes)

Myth	*Fact*
NSEP does not reduce incidence of HIV among IDUs!	In an Ecological study of 81 cities worldwide comparing those with and without NSEP, the average seroprevalence **increased** by 5.9% per year in the 52 cities without NSEP's, while it **decreased** by 5.8% per year in the 29 cities with NSEP's (Hurley & Jolley 1997)
NSEP encourages and increases substance use!	Injection frequency has been, in fact, found to be reduced among NSEP participants (Watters 1994)
NSEP does not lead to reduction in sharing!	Multiple studies have shown that involvement in NSEP does lead to a reduction in sharing. Such evidence is available from western countries (Longshore 1998) and from our own neighbourhood, Bangladesh (DNC 2002)
NSEP discourages people from entering into substance treatment!	There is clear evidence that NSEP increases entry and retention into substance treatment programmes (Hagan et al 2000)

psychological effects of the substance and socio-occupational impairment. Additionally, injection drug use is also associated with the adverse consequences of the *mode of* use of the substance. These consequences, specific to injecting, may range from pain, extravasations of the substance at injecting site and local infections. Similarly, use of same needles and syringes on more than occasion would subject the user to the risk of local or systemic infection. Additionally, sharing of the injecting paraphernalia exposes the users at the risk of transmission of blood borne infections such as HBV, HCV and HIV among others. Moreover, while being under the influence of the substance one may indulge in high-risk sexual behaviour. The possible reasons of this behaviour could be loss of inhibition, cognitive impairment, impaired judgment or mere experimentation.

The harm minimization approach to the problem of substance use in general and injection substance use in particular would include the primary step of making a hierarchy of the substance use behaviour and adverse consequences of the same. This hierarchy would vary from one individual to the other and needs to be individualised, but certain generalizations could be made.

Such prioritisations would be the preliminary steps in the intervention strategies in the harm minimisation paradigm. For injection drug use reduction in the number of the sharing partners would be the initial step. Similarly limiting the number of sharing partners to one would further reduce the risk. Complete cessation of sharing would further reduce the risk and stopping reuse by the same individual would further reduce the likelihood of the complications. Needle exchange programme by preventing the reuse and sharing helps achieve these aims. Further interventions

Table 4

Harm reduction related to IDU: hierarchies

1. Do not use drugs
2. If you have to use drugs, do not inject
3. If you have to inject, use new materials and do not share needles, syringes, spoons, water, substances
4. If you need to re-use equipment, clean adequately and use your own
5. If you must share, clean or disinfect before use and limit your number of sharing partners

Harm reduction related to risky sex: hierarchies

1. Do not have sex / have sex with only one partner
2. If more than one partner, avoid penetrative sex
3. If penetrative sex, use condoms; Avoid anal sex
4. If anal sex unavoidable, condom use is a must

would aim at stopping use of injecting route, providing the individual with agonist medications and reducing the individual's indulgence in associated illegal activities. Complete stopping of agonist and shifting to antagonist would be higher on the list of interventions.

Skills for the therapist:

To practice the strategies of harm minimisation, one has to be equipped with certain assessment and management skills. Most of these skills are based on the basic principles of the management of substance use with appropriate modifications for reduction of the harmful consequences rather than complete abstinence from the substance. The therapist should be well versed with the specific modalities that (s)he wishes to implement with his/her clients. These skills aim at the identification of individuals with the problem of substance use, screening them for the suitability of harm minimisation strategies, development of individually tailored interventions and subsequent review of the interventions and any modifications/ changes as required. The requirements for a therapist would range from in-depth knowledge of the specific intervention modality to detailed assessment skills for substance use, presence of physical complications, psychological and socio-occupational assessment. One can be helped in this process by the following guiding principles. These principles provide a generalized overview of the issue and may need to be modified for individual patients.

- Apply harm minimisation principles when working with patients to satisfy their individual needs
- Explain the concept of harm minimisation and provide advice to a patient on harm minimisation practices which can be applied to the use of specific substances
- Identify and involve other stakeholders i.e. other important individuals in the vicinity
- Analyse substance use situations in terms of their potential for harm and suggest strategies that address these harms to satisfy the needs of all stakeholders.
- Take a coordinated team approach in relation to work practices, techniques and circumstances that respond to situations involving the risk of substance use harms to community members.

Conclusion

It is clear that different types of harms may be associated with substance use. These harms may

be reduced by decreasing the quantity of substances taken, ensuring safer methods of administration and by encouraging healthy living skills. However, a meaningful and effective strategy for harm reduction must include a sustained effort to communicate with, and educate the community objectively about illicit substances. Such an approach would help to educate the community regarding the problem at hand and the basis of the management strategy being employed. Improved understanding and education of he community by dispelling myths would minimise the likelihood of programme being opposed and encourage community participation and ownership of the programme.

Suggested reading material

DNC (2002). *National Assessment of Situation and Responses to Opiate use in Bangladesh (NASROB).* Department of Narcotics Control, Bangladesh, 2002.

Hagan H et al (2000). Reduced injection frequency and increased entry and retention in substance treatment associated with needle-exchange participation in Seattle substance injectors. *J Subst Abuse Treat*. 2000 Oct;19(3):247-52

Hurley, S.F., & Jolley, D.J. (1997). Effectiveness of needle-exchange programmes for prevention of HIV infection. *Lancet, 349*, 1797-1800.

Kerr T et al (2006). Impact of a medically supervised safer injection facility on community substance use patterns: a before and after study. *BMJ* 2006;332:220-222

Leonard L et al (2001). The Effectiveness of Harm Reduction Strategies in Modifying Hepatitis C Infection among Injection Substance Users in Canada.. *Canada Communicable Disease Report*. Volume: 27S3 • September 2001

Longshore J et al (1998). Long-term trends in self-reported HIV risk behavior: injection substance users in Los Angeles, 1987 through 1995. *J Acquir Immune Defic Syndr Hum Retrovirol.* 1998 May 1;18(1):64-72.

Moore G, et al (2004). A *Review of Harm Reduction Approaches in Ireland and Evidence from the International Literature*. National Advisory Committee on Substances, 2004

NACO 2006. Facts and Figures. National AIDS Control Organisation, *www.nacoonline.org/facts.htm*

Ritter A, Cameron J (2005). *A SYSTEMATIC REVIEW OF HARM REDUCTION*. Substance policy modelling project - Monograph 06. DPMP Monograph Series. Fitzroy: Turning Point Alcohol and Substance Centre. 2005

Strathdee SA and Vlahov D (2001). The effectiveness of needle exchange programs: A review of the science and policy. *AIDScience* Vol. 1, No. 16, December 2001

Watters J et al (1994). Syringe and needle exchange as HIV/AIDS prevention for injection substance users. *JAMA*. Vol. 271 No. 2, January 12, 1994

Witkiewitz K, Marlatt GA (2006). Overview of harm reduction treatments for alcohol problems. International Journal of Substance Policy 17 (2006) 285–294

World Health Organisation (2003). Harm reduction approaches to injecting substance use *http://www.who.int/hiv/topics/harm/reduction*

Harm Minimisation in Substance Use

10

Atul Ambekar and Yatan Pal Singh Balhara

Summary: Substance use, along with its associated behaviors, leads to many harmful consequences. Since substance use is a heterogeneous and dynamic condition, users go through various stages in their substance use career. Not all substance users are ready to abstain completely. However, they need help to reduce the harms or risks posed by their substance use, such as of HIV infection among injecting drug users (IDUs). For them, we need innovative, pragmatic and acceptable treatment approaches. This chapter is about a relatively recent concept, 'harm minimization'*, (also known as 'harm reduction' or 'risk-reduction') which aims at the prevention or reduction of the negative health consequences associated with substance use. Stemming from the public health philosophy, it aims at achieving the best possible within the constraints of the specific situation. By engaging in the treatment and reducing the adverse consequences of the substance use behaviour, it is of immense benefit to those for whom the treatment strategies aiming at complete abstinence might not work. Harm reduction is about the prevention or reduction of the negative effects of substances, both legal and illicit, on both – individuals as well as the community. Harm minimisation strategies see the substance use problem with a broad spectrum, i.e., with a gradation of the possible adverse consequences. For IDUs, Harm minimisation interventions like Needle Syringe Exchange Programmes and education on the safe injecting and sexual practices help by reducing the possible physical hazards like transmission of HIV and other blood borne infections. Moreover, engagement of IDUs in the harm minimisation treatment provides with an opportunity to*

intervene in other aspects of their life. Another harm reduction strategy - opioid substitution therapy - ensures the reduction in the physical, social, familial, legal complications associated with the use of an illicit substance like heroin. Though there have been some myths associated with these strategies, there is now ample evidence that these approaches help substance users in reducing the risk of various harmful consequences. Prioritisation of the harmful or risky behaviour and the assessment and management skills on the part of the therapist constitute an integral component for the effective delivery of harm minimisation services.

Introduction

Substance use is one of the major causes of morbidity and mortality worldwide. Indeed, with the advent of HIV epidemic, substance use – in particular injecting drug use (IDU) – is now seen as a major public health issue rather than just a social/ legal issue. This chapter will discuss briefly the concept of harm-minimisation as it applies to substance use. While harm minimisation for IDU will be the prime focus of this chapter, issues related to harm minimisation for other substances will also be discussed.

Concept of harm minimization:

Harm minimization, also known as 'harm reduction' or 'risk-reduction' is a relatively recent concept. While the concept has been used in the context of a variety of risky behaviours, it has been seen primarily as an intervention and management strategy for the individuals using psychoactive substances. The World Health Organisation (WHO 2003) defines harm reduction as a *concept aiming to prevent or reduce negative health consequences associated with certain behaviours*. In the context of substance use, at its most basic level, it entails – as the name implies – minimisation of harmful consequences of substance use, even though the substance use itself may continue. One of the major strengths of this concept is its inclusive and broad-based approach. Although initially there was limited consensus on the definition of the term harm reduction, of late there has been a general agreement that harm reduction refers to policies and programs that are aimed at reducing the harms from substances, but not substance use per se.

Harm reduction is about the prevention or reduction of the negative effects of substances, both licit and illicit, on both the individual as well as the community.

Abstinence from substances is not the highest or the most immediate priority in this approach. It is important to understand that, harm minimisation does not condone substance use but acknowledges that it occurs. It is a practical and pragmatic approach to deal with the problem. Harm minimisation strategies emphasize overall health and well being, encourage the use of available support networks and provide access to reliable and pertinent information.

While management of adverse physical consequences of substance use is important, harm minimization, rather than limiting itself to the adverse physical consequences of the substance use, encompasses issues of psychological, social and economic well being. It deals with social, financial, occupational and

mental health consequences of the continued use of the substance along with the minimisation of the physical harm. Harm reduction is a flexible approach that stresses understanding of the needs of the substance user, and responding to them in a flexible and realistic manner that is acceptable to the patient. (Table 1)

Table 1
The key features and principles of harm reduction include:

- The primary goal is reducing harm rather than substance use per se;
- It is built on evidence-based analysis;
- There is acceptance that substances are a part of society and will never be eliminated;
- It provides a comprehensive public health framework;
- Priority is placed on immediate (and achievable) goals;
- Pragmatism and humanistic values underpin harm reduction

Rationale of harm minimisation:

Substance use - A heterogeneous condition: Substance use is a chronic health problem characterised by a long course with multiple changes in the pattern of the substance use behaviour ranging from complete abstinence to heavy use. Hence, interventions required for such a heterogeneous condition also need to be multifaceted. Multiple relapses are a common phenomenon and considered inherent to the disorder. The treatment strategies aiming at complete abstinence from the substance might not work for a substantial proportion of individuals. The reasons for this may vary from an individual to another and include :

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B. Needle Syringe exchange programmes

Yet another well-researched, very effective, yet controversial harm-reduction strategy is Needle Syringe Exchange Programmes (NSEP). At its most basic level, this strategy involves supplying new, clean needles and syringes to IDUs, in exchange of old used, needles and syringes.

Rationale for Needle Syringe exchange programmes: It is a well-established fact that many IDUs share their injecting equipments. While there are multiple factors underlying the practice of sharing, the most important one is that many IDUs do not have access to affordable clean needles and syringes. Availability of new, clean injecting equipments, free-of-cost, provides the IDUs with an opportunity to protect themselves and their injecting partners from transmission of HIV. At the same time, this involvement in the programme could also be used to provide them other important services such as education about healthy practices, management of certain complications such as abscess or thrombophlebitis at the injection site, counselling and testing for HIV, referral to substance dependence treatment services etc. Thus, while as a stand-alone activity, NSEP protects IDUs from HIV, it also acts as a stepping-stone to provide various other services by ensuring an ongoing contact with the IDUs.
Such programmes have been found to be effective in reducing the sharing of injecting equipment among IDUs, and reducing the incidence of HIV sero-positivity among IDUs .

Safe injection facilities

At certain places, the concept of providing clean needles and syringes has been taken yet another step forward, to provide – not only the clean syringes or needles, but – a safe injection facility. Also known as 'injection rooms', in these

facilities, opportunities are provided to IDUs to inject pre-obtained illicit substances under the supervision of and/or by the medical staff. Most such facilities also provide sterile injecting equipments and interventions in the event of overdose. The scope of services could be broadened to also include primary health care, addiction counselling, and referral to external health and social services. Even though they have remained controversial, research has shown that there is no risk of these facilities being seen as encouraging substance use.

C. Other harm-reduction approaches:
Some of the other harm-reduction approaches could include:

I. Education to IDUs about safer injecting practices (such as using adequately cleaned and sterilised injecting equipments, if reuse and sharing are inevitable).

II. Alcohol harm reduction:

(a) Promoting designated-driver programmes: One of the major public health consequences of excessive alcohol use has been 'drunk-driving' resulting in accidents and subsequent injuries, mortalities and disabilities. If people who drink in groups are educated to designate one of them as the driver (who ensures not getting drunk, so that (s)he can drive everyone else safely home) the risk of accidents could be significantly reduced. In some countries, bars and night-clubs provide their visibly drunk patrons a free cab-ride back home.

(b) psychosocial approaches aimed at reducing the amount of alcohol consumed, in a safe manner such as moderation management or controlled drinking

Myths and controversies surrounding harm reduction

Though found to be very effective, almost all the strategies subsumed under harm reduction have been mired in controversies. One of the reasons behind these controversies is various myths surrounding harm reduction.(Table 3) As seen in the light of the evidence presented here and as reviewed in greater details by various other researchers, harm reduction strategies, if employed judiciously and with proper planning, have no risk of increasing any harm, and go a long way in protecting people and promoting safer behaviours.

Harm reduction In India

In India, IDU has been recognised as one of the contributory factors for spread of the HIV epidemic. In two states of India (Manipur and Nagaland), HIV epidemic is primarily IDU driven. In fact, as per the latest sentinel surveillance data, IDUs are the vulnerable group with highest (more than 10%) HIV prevalence in India (NACO 2006). For the purpose of HIV prevention among IDUs, many targeted interventions for IDUs are in place, which are being implemented by the NGOs and supported by the government. Most of these interventions involve education, counselling, referral and needle/syringe exchange services. Unfortunately, the coverage of the IDU population by these interventions has not been adequate. Similarly, agonist maintenance is also available at very few centres in the country. There is an urgent need to enhance the quality and coverage of harm reduction strategies in India.

Examples of the prioritisation of the behaviours for the purpose of harm minimisation:
Use of psychoactive substances is associated with multiple complications. The complications are related to the physiological effects of the substance on various body systems, the

Table 3: Harm Reduction: Myths and Facts
(NSEP=Needle Syringe Exhange Programmes)

Myth	*Fact*
NSEP does not reduce incidence of HIV among IDUs!	In an Ecological study of 81 cities worldwide comparing those with and without NSEP, the average seroprevalence **increased** by 5.9% per year in the 52 cities without NSEP's, while it **decreased** by 5.8% per year in the 29 cities with NSEP's (Hurley & Jolley 1997)
NSEP encourages and increases substance use!	Injection frequency has been, in fact, found to be reduced among NSEP participants (Watters 1994)
NSEP does not lead to reduction in sharing!	Multiple studies have shown that involvement in NSEP does lead to a reduction in sharing. Such evidence is available from western countries (Longshore 1998) and from our own neighbourhood, Bangladesh (DNC 2002)
NSEP discourages people from entering into substance treatment!	There is clear evidence that NSEP increases entry and retention into substance treatment programmes (Hagan et al 2000)

psychological effects of the substance and socio-occupational impairment. Additionally, injection drug use is also associated with the adverse consequences of the *mode of* use of the substance. These consequences, specific to injecting, may range from pain, extravasations of the substance at injecting site and local infections. Similarly, use of same needles and syringes on more than occasion would subject the user to the risk of local or systemic infection. Additionally, sharing of the injecting paraphernalia exposes the users at the risk of transmission of blood borne infections such as HBV, HCV and HIV among others. Moreover, while being under the influence of the substance one may indulge in high-risk sexual behaviour. The possible reasons of this behaviour could be loss of inhibition, cognitive impairment, impaired judgment or mere experimentation.

The harm minimization approach to the problem of substance use in general and injection substance use in particular would include the primary step of making a hierarchy of the substance use behaviour and adverse consequences of the same. This hierarchy would vary from one individual to the other and needs to be individualised, but certain generalizations could be made.

Such prioritisations would be the preliminary steps in the intervention strategies in the harm minimisation paradigm. For injection drug use reduction in the number of the sharing partners would be the initial step. Similarly limiting the number of sharing partners to one would further reduce the risk. Complete cessation of sharing would further reduce the risk and stopping reuse by the same individual would further reduce the likelihood of the complications. Needle exchange programme by preventing the reuse and sharing helps achieve these aims. Further interventions

Table 4
Harm reduction related to IDU: hierarchies

1. Do not use drugs
2. If you have to use drugs, do not inject
3. If you have to inject, use new materials and do not share needles, syringes, spoons, water, substances
4. If you need to re-use equipment, clean adequately and use your own
5. If you must share, clean or disinfect before use and limit your number of sharing partners

Harm reduction related to risky sex: hierarchies

1. Do not have sex / have sex with only one partner
2. If more than one partner, avoid penetrative sex
3. If penetrative sex, use condoms; Avoid anal sex
4. If anal sex unavoidable, condom use is a must

would aim at stopping use of injecting route, providing the individual with agonist medications and reducing the individual's indulgence in associated illegal activities. Complete stopping of agonist and shifting to antagonist would be higher on the list of interventions.

Skills for the therapist:

To practice the strategies of harm minimisation, one has to be equipped with certain assessment and management skills. Most of these skills are based on the basic principles of the management of substance use with appropriate modifications for reduction of the harmful consequences rather than complete abstinence from the substance. The therapist should be well versed with the specific modalities that (s)he wishes to implement with his/her clients. These skills aim at the identification of individuals with the problem of substance use, screening them for the suitability of harm minimisation strategies, development of individually tailored interventions and subsequent review of the interventions and any modifications/ changes as required. The requirements for a therapist would range from in-depth knowledge of the specific intervention modality to detailed assessment skills for substance use, presence of physical complications, psychological and socio-occupational assessment. One can be helped in this process by the following guiding principles. These principles provide a generalized overview of the issue and may need to be modified for individual patients.

- Apply harm minimisation principles when working with patients to satisfy their individual needs
- Explain the concept of harm minimisation and provide advice to a patient on harm minimisation practices which can be applied to the use of specific substances
- Identify and involve other stakeholders i.e. other important individuals in the vicinity
- Analyse substance use situations in terms of their potential for harm and suggest strategies that address these harms to satisfy the needs of all stakeholders.
- Take a coordinated team approach in relation to work practices, techniques and circumstances that respond to situations involving the risk of substance use harms to community members.

Conclusion

It is clear that different types of harms may be associated with substance use. These harms may

be reduced by decreasing the quantity of substances taken, ensuring safer methods of administration and by encouraging healthy living skills. However, a meaningful and effective strategy for harm reduction must include a sustained effort to communicate with, and educate the community objectively about illicit substances. Such an approach would help to educate the community regarding the problem at hand and the basis of the management strategy being employed. Improved understanding and education of he community by dispelling myths would minimise the likelihood of programme being opposed and encourage community participation and ownership of the programme.

Suggested reading material

DNC (2002). *National Assessment of Situation and Responses to Opiate use in Bangladesh (NASROB).* Department of Narcotics Control, Bangladesh, 2002.

Hagan H et al (2000). Reduced injection frequency and increased entry and retention in substance treatment associated with needle-exchange participation in Seattle substance injectors. *J Subst Abuse Treat*. 2000 Oct;19(3):247-52

Hurley, S.F., & Jolley, D.J. (1997). Effectiveness of needle-exchange programmes for prevention of HIV infection. *Lancet, 349*, 1797-1800.

Kerr T et al (2006). Impact of a medically supervised safer injection facility on community substance use patterns: a before and after study. *BMJ* 2006;332:220-222

Leonard L et al (2001). The Effectiveness of Harm Reduction Strategies in Modifying Hepatitis C Infection among Injection Substance Users in Canada.. *Canada Communicable Disease Report*. Volume: 27S3 • September 2001

Longshore J et al (1998). Long-term trends in self-reported HIV risk behavior: injection substance users in Los Angeles, 1987 through 1995. *J Acquir Immune Defic Syndr Hum Retrovirol.* 1998 May 1;18(1):64-72.

Moore G, et al (2004). A *Review of Harm Reduction Approaches in Ireland and Evidence from the International Literature*. National Advisory Committee on Substances, 2004

NACO 2006. Facts and Figures. National AIDS Control Organisation, *www.nacoonline.org/facts.htm*

Ritter A, Cameron J (2005). *A SYSTEMATIC REVIEW OF HARM REDUCTION*. Substance policy modelling project - Monograph 06. DPMP Monograph Series. Fitzroy: Turning Point Alcohol and Substance Centre. 2005

Strathdee SA and Vlahov D (2001). The effectiveness of needle exchange programs: A review of the science and policy. *AIDScience* Vol. 1, No. 16, December 2001

Watters J et al (1994). Syringe and needle exchange as HIV/AIDS prevention for injection substance users. *JAMA*. Vol. 271 No. 2, January 12, 1994

Witkiewitz K, Marlatt GA (2006). Overview of harm reduction treatments for alcohol problems. International Journal of Substance Policy 17 (2006) 285–294

World Health Organisation (2003). Harm reduction approaches to injecting substance use *http://www.who.int/hiv/topics/harm/reduction*

Management in Community Settings and Community based Treatment Programmes

11

Vijaya Kumari

Summary: *There are many consequences of using alcohol and other psychoactive substances. Some are very serious and lead to social problems. A life style associated with substance abuse carries multiple risks. Accidents are frequent and violence is common. Self neglect is the norm contributing to physical and mental disease. The substances and associated life style can also lead to complications during pregnancy and the risk of fetal abnormalities. Intravenous users and their sexual partners are at high risk for hepatitis B (HBV) and Human Immunodeficiency Virus (HIV). The nurses encounter individuals with substance abuse problems in all health care setting. Within the community level, the nurses provide services along a spectrum of prevention, treatment and maintenance strategies.*

Introduction

Community based treatment and prevention approach emerged as a key strategy to reach vulnerable groups. The rationale behind the approach is that treatment process is brought closer to individuals affected by substance use and their afflicted families, who may not be able to avail these facilities on account of social stigma and host of other factors. The outsourcing of services can foster community development and broader responses at the grass-root level. It also facilitates family and community participation and identification of multi-stake holders who can address larger issues related to availability and control of substance abuse.

The ability to recognize and manage substance use disorder is an important aspect in community mental health nursing. Ideally the nurses form a part of an integrated, multidisciplinary team. The issues for nurses in community settings include

substance overdose, substance withdrawal, engaging patient in therapeutic process, assessing risk factors, substance abuse among pregnant women, substance abuse in geriatric or adolescent groups and referral to substance abuse specialist.

The advantage of community-based treatment is that flexibility can be maintained in delivery of services. It addresses both the individual's behavior as well as the socio-cultural context that define norms relating to a particular behavior. These services are proving useful as an instrument for behavior change and assist the community to cope with harmful behaviors or situations. These services help in focusing on personal health, improve social functioning and reduce threat to public health (HIV/AIDS) and public safety (drunken driving, violence, crime etc.).

There is a significant improvement in the treatment outcome when social and environmental factors are taken into consideration, and social support mechanisms enlisted in after care and social reintegration of patients.

One of the approaches in management of substance abuse is through prevention. Three levels of prevention, viz. primary, secondary and tertiary, are used in the management of substance use disorders in the community.

PRIMARY PREVENTION:

The idea of primary prevention programme is to prevent substance use in the community. It is consistent with the idea of self-help and being self-responsible for health. The ability to prevent the development of substance use would have many benefits for individuals, families, communities and society. The primary prevention activities in substance abuse have two basic aims:

1. To help people avoid stressors or to cope with them more adaptively.
2. To change the resources, policies, or agents of the environment so that they no longer cause stress but rather enhance people's functioning

Steps in primary prevention

The steps of primary prevention consists of the following

1. Assessment

Assessment involves identifying a stressor that precipitates maladaptive response and a population group vulnerable for development of substance use disorder. Although accurate assessment of a patient's pattern of substance and alcohol use is important, it is sometimes very difficult to accomplish. Simple screening tools are available that are useful in identifying people who may be prone to develop alcohol or substance use disorder.

a) Risk Assessment:

The risk factors that predispose a person for substance abuse are

- **Biological factor**-The tendency of substance abuse runs in families.
- **Psychological factor**-psycho analytic theories see alcohol and substance users as fixated at the oral stage of development, thus seeking need satisfaction through oral behaviors such as drinking. Many other theories support maladaptive behavior in the childhood. Clinicians have observed a link between substance abuse and several psychological factors such as depression, anxiety, antisocial personality and dependent personality.
- **Socio cultural factors**-several sociocultural factors influence a person's choice whether

to use substances, which substances to use, and how much to use. Attitudes, values, norms and sanctions differ according to nationality, religion, gender, family background and social environment. The reasons a person initiates use of substances vary widely. They include curiosity, desire to be grown up, desire to rebel against authority, peer pressure, desire to ease the pains of living and desire to feel good. As the amount and frequency of substance use increase, so do the perceived stressors. This leads to more use. Assessment of motivation and social supports is particularly important

- **Protective factors** -are the coping resources and coping mechanisms that can improve a person's response to stress, resulting in adaptive behavior.

  Coping resources: a comprehensive assessment of a patient with a substance abuse problem must include assessment of the personal, social, and material assets available to the person.

  ***Coping mechanism*:** patients who use problem focused coping mechanisms will take responsibility for the substance use problem and either find ways to change or seek help in doing so. It is impossible in the initial assessment to sort out the facts from the distortions caused by these coping mechanisms. That is why the assessment should be an on going process.

2. Planning and implementation

The prevention strategies should be directed toward influencing predisposing factors, precipitating stressors, appraisal of stressors, coping resources and coping mechanisms through the following interventions:

a) Health education

b) Environmental change

c) Social support

a) Health education

This strategy of primary prevention in mental health involves the strengthening of individuals and groups though competence building.

The target population is educated about the prevention of substance use through several program and activities. This might involve creating awareness about treatment services and clarifying myths and misconceptions about substance abuse. The information can be disseminated through formal and informal channels involving family, peers, social organizations and interest groups. The community based treatment services also emerge as a viable platform for primary prevention measures for school and college youth through institutional network. Issues such as drunken driving, accidents/injury and availability of illicit substances become part of community intervention and social action. At an individual level, simple handouts and pamphlets or set of booklets can be developed or procured.

b) Environmental change

Various environmental changes may include changes in economic, work, housing or family situations.

c) Social support

As a primary prevention strategy, supporting social systems does not mean removing or minimizing the stressors or risk factors. Rather, it is an attempt to strengthen social supports as a protective factor, buffering or cushioning the effects of potentially stressful event. Social support systems can be helpful in emphasizing the strengths of individuals and families, and focusing on health rather than illness. Social support patterns can be used to identify problem

areas and high-risk groups. The links between community support systems and normal mental health services would be improved. The natural existing networks should be strengthened.

Self-help groups such as alcoholic anonymous can be organized by the members to solve their own problem.

Role of the nurse in primary prevention

- Community needs assessment, identification of high risk groups, consultation, education and crisis intervention.
- Participating and organizing awareness programme for the high-risk groups.
- Identifying the needs of the high-risk groups and set achievable goals in order to prevent substance use disorder.
- Coordination between the Government and Non Government Organizations

SECONDARY PREVENTION:

Secondary prevention involves reducing the prevalence of substance use disorder by reducing the number of existing cases.

Steps of secondary prevention

1. Early case finding
2. Screening
3. Treatment

1. Early case finding

This includes the steps of primary prevention in locating the target population and high-risk groups. A general survey can identify the affected population and the high-risk groups.

2. Screening

The second prevention activity is to screen the high-risk groups for substance abuse. Screening tools are available that are useful in identifying people who may be addicted to alcohol or substances e.g. CAGE, AUDIT, MAST. These screening tools are only suggestive; findings from them should be followed by a full diagnostic assessment.

3. Treatment

Interventions depend on the current and potential withdrawal symptoms that the patient may experience.

The process of helping a dependent person to safely undergo withdrawal is called detoxification. Detoxification is best accomplished in a setting in which there can be close monitoring of the patient. This can be in an inpatient medical or psychiatric unit. Out patient detoxification is also be possible.

The ultimate goal of all substance abuse treatment is to enable the substance abusing individual to achieve lasting abstinence.

The important immediate goals are:

- To reduce and stop substance use,
- Improve the patient's ability to function, and
- To minimize the medical and social complications of substance abuse.

The emphasis is on:

- Detoxification of a selected group of alcohol and substance dependent patients in a locality.

- Re-establishment of family bonds and re-integration of detoxified persons with their community.
- Creation of awareness in the community.
- Development of a sense of responsibility on the part of the public and voluntary organizations in supporting the process of treatment and rehabilitation.
- Rehabilitation of the patients

Treatment Approaches:

The treatment approaches include both non-participatory and participatory. Non participatory approach includes involving the concerned authorities to deliver services to the community, while participatory approach may include grass-root involvement for appropriate action.

The main approaches to community mobilization are "bottom-up" and "top-down". The former includes grass-root strategies, developed and implemented by community members. In the top-down approach, outside experts and/or self-selected community leaders formulate strategies in delivering services. Each approach has its own strength and weakness. Under bottom-up approach, a wide spectrum of community members and institutions are involved to increase a sense of ownership but they may not have experience or expertise to design and implement effective intervention strategies. In the top-down approach, outside experience and expertise play a vital role but may not reflect the community's true concerns, interests and sociocultural sensitivity. A comprehensive community-based is more appropriate where essential elements of both the approaches are incorporated.

Community mobilization

Community mobilization is an important process where members of a community identify a need, garner support and bring people together to facilitate a programme. It involves concerned individuals, institutions, non-government organizations, government bodies, and media outlets in the development and implementation of a programme.

The following steps are suggested

(i) Formation of core group: The formation of a core group of representatives from different walks of life including health and welfare personnel, religious leaders, parent groups, business and trade groups, educators, trade unions, women and youth groups, enforcement personnel and local officials. The group helps in assessment of problems, need assessment and formulation of local action plan.

(ii) Community support: After the detoxification and stabilization phase, the community resources are required in after care and re-habilitation of treated patients. The activities may range from creating substance free zones for marginalized groups, social acceptance and reintegration. The community volunteers, ex-users and family members and core group and community based organizations (CBO's) play a significant role.

(iii) Extended community support: To maintain continuity of care, support from larger community is needed, both financially and for provision of manpower. A cadre of community level workers or volunteers would be ideally placed to help individuals and families in distress. The 'naturally occurring" support network of volunteers and CBO's and neighborhood families can be an asset in identifying secondary signs of alcohol/ substance abuse like child abuse, domestic violence and economic hardships in affected families and in initiating remedial steps. Likewise,

these groups also help in building social pressure against undesirable and anti-social elements.

(iv) Institutional network: In a given community, a large number of central and state agencies operate in different spheres and their resources can provide a big platform for community intervention. Institutions like schools, colleges and vocational training institutions, and health and welfare care units may be identified in the community and also outside the boundaries of the community. A number of welfare agencies focusing on problems of child, youth and women, environmental and economic development can become part of community network and support to deal with substance abuse problem.

Levels of treatment

Organized treatment: it involves rehabilitation and reintegration of individuals with physical and psychological dependence on substances. These include:

Detoxification is a 5 to 30 day treatment intended to wean the user from his or her substance by controlling his withdrawal symptoms. This can be done in a hospital-like setting or in a community-based program. Residential settings usually treat patients for 14 to 28 days.

Outpatient. Frequently alcohol/substance dependence is treated in an outpatient setting. Some people receive care in *day treatment* programs, where they attend treatment for part of the day but spend the night at home.

Self-Help Groups are another form of outpatient treatment. *Twelve-step programs* are available at some places and are run by group members. Popular among these are Alcoholics Anonymous (AA) and Narcotics Anonymous (NA).

Group treatment has been identified by some clinicians as the treatment of choice. This method tends to be effective because it uses peer feedback, modeling, confrontation, and support. Group treatment can also be used to teach coping and interpersonal skills.

Maintenance treatment has been used on an outpatient basis. This involves using medicines (e.g., disulfuram, naltrexone, buprenorphine, morphine) to reduce a person's physical need for substances or create an unpleasant effect if he uses it.

Family treatment focuses on stabilizing the family and helping them set boundaries with the substance user.

Outpatient counselling/therapy: The goal is to help the patient gain insight into their substance-using behaviors, address problem behaviors, teach social skills, and provide support.

Brief Intervention: Brief intervention by primary care providers is helpful to problematic alcohol users/ heavy drinkers. The brief intervention consists of brief advice sessions by therapist focusing on harmful aspects, recognition of problems and high-risk situations, and their management.

Treatment Settings:

Various settings have been adopted for treatment of substance abuse at community level. These include delivery of services from a hospital, establishment of community clinic/drop-in-center, field post and mobile clinic.

(a) **Centre Based Treatment extending to community**: A substance affected

community/ specific groups are adopted by Deaddiction Centre/ Medical Institute/ College and substance abusers are referred to these services for detoxification and management of concurrent illness. After completion of a treatment regime and psychosocial treatment, the patients are sent back to their community and a community team monitors, involves the family to prevent relapse and manages other problems including any crisis.

(b) Community Based Treatment at District Level : In this regard Civil/District hospital provides treatment services and medical colleges/ institutions and the Ministry of Health act as agencies for execution, advice and monitoring. The district bodies do the actual implementation. Each district can have a local coordination committee to carryout various activities. By and large, the district committees are headed by District Magistrates. The various activities being carried out are:

- survey to assess the magnitude of the problem
- delivery of treatment and aftercare services
- community awareness building
- health education
- integration with other parallel programmes of the government and
- integration with supply reduction activities.

Another feature of district level programme can be formulation of district coordination committee, which suggests the action plan/programme activities.

Community Clinic/Outreach Services:

The outreach services are set up in the natural milieu. Its broad objectives are:

- To identify majority of substance dependents in main catchment areas and adjoining localities and to initiate the process of pre-treatment counseling (clarify myths and misconceptions associated with substance abuse.
- To focus on health and social consequences of socially sanctioned substances like alcohol and tobacco as well as illicit substances such as heroin and psychotropic substances in their environment and suggest possible remedial steps.
- To provide low-cost treatment services within community.
- To facilitate formation of local support groups (youth, women, etc.) as well as self-help groups (AA, NA, etc.)

The physical infrastructure is provided by the community or organized by the community and the core team for treatment is provided by the service delivery team of De-Addiction Center/ Institutions or hospitals.

TERTIARY PREVENTION

Tertiary prevention activities attempt to reduce associated disability through rehabilitation. This is the process of helping the person return to the highest possible level of functioning.
Psychosocial rehabilitation is the range of social, educational, occupational, behavioral and cognitive interventions for increasing the role performance of persons with serious and persistent substance abuse and related disorders and enhancing his recovery.

Approach:

The approach in tertiary level prevention is person centered people-to-people care. It focuses on wellness and health, not on symptoms. It is based on person's abilities and functional behavior. The rehabilitation services are given in natural settings. The relationship between the health personnel and the patient is maintained at adult-to-adult relationship. The medications are given to patients when necessary and patients are encouraged to tolerate some symptoms. The decision-making is done by both the patient and health team (case management). Psychiatric rehabilitation emphasizes on strengths, self-help and interdependence.

1. Assessment:

In order to carry out effective rehabilitation the patient and his social system has to be studied. This requires the nurse to focus on three elements: The individual, the family and the community. A comprehensive psychiatric nursing assessment should be done for the individual, family and community, which provides information that, enables to help the patient achieve maximum possible functioning.

- **Individual**: It is important to identify stressors that may interfere with patient's adjustment to health-promoting life style. One also needs to identify the behavioral problem of the patient and the reactions of the society.

- **Family:** Most of the people with substance abuse and related disorder are in contact with family members while they are in the community. Therefore family resources must be assessed when a rehabilitation plan is being developed. The family has to be assessed in the following areas: Family structure, including development stage, roles, responsibilities, norms and values. Family attitudes toward the individual and substance abuse; Emotional climate of the family (fearful, angry, depressed, anxious, calm); Social supports that is available to the family, including extended family, friends, financial support, and religious involvement and community contacts; Past family experiences with mental health services; family understanding of the patient's problem and the plan of care; Family burden and social support needs.

- **Community**: Care providers should assume a leadership role in assessing the adequacy and effectiveness of community resources and in recommending changes. Personal contact with community agencies can be very useful as part of a community assessment. Collaborative relationships between mental health care providers and community agencies are essential if rehabilitation is to succeed. A wide range of community service must be available to patients. Those that are directed toward basic needs include:
  - Provisions for shelter, food and clothing.
  - Household management
  - Income and financial support
  - Meaningful activities
  - Transportation

  Other services provided for special needs which may differ from person to person such as:
  - General medical services
  - Mental health services
  - Habilitation and rehabilitation programmes

- Vocational services
- Social services

A third group of services which coordinates the system include

- Patients identification and outreach
- Individual assessment and service planning
- Case management
- Advocacy and community organization
- Community information
- Education and support

2. Planning and implementation

Individual: The focus of rehabilitative nursing is on fostering independence by maximizing the person's strengths.

Three basic interventions are:

- Develop their strengths and potential
- Learn living skills
- Access environmental support

Role of NGO in prevention of substance abuse and related disorder:

The ministry of social justice operates primarily through the NGO's and provides financial assistance to these voluntary organizations.

The programme emphasizes

- The mobilization of community resources
- Community participation
- Awareness building
- Counseling of affected individuals and
- Follow up assistance to recovering persons.

The programme supports

- Substance awareness
- Counseling and assistance centers
- Treatment cum rehabilitation centers
- De-addiction camps
- A workplace prevention programme

Usually, the treatment cum rehabilitation center has 15 to 50 beds. The state government (welfare department) is actively involved in the screening, and inspection of NGO's and the grant is released based on the recommendations of the state governments.

At present, there are 369 de-addiction centers and 90 counseling centers, which receive financial assistance, form the ministry.

Both the ministries (Health and Social justice) have attempted convergence of activities. Inter-ministerial committees have been formed and they have recommended that the government treatment centers and non-government treatment centers should act in unison and supplement each other. However, this effort has not been very successful.

Most recently, the ministry of health has requested the ministry of social justice to establish NGO centers in the premises of the district hospital in certain states.

Advantages of Non-Governmental Organizations (NGO's):

1. Working in partnerships:

One of the great strengths of NGO's is their ability

to strike up collaborations and partnerships with other agencies or individuals with ease. Most NGO activities are provided by multi-disciplinary teams of doctors, therapists, health workers, other professionals and volunteers.

Partnerships are built not only between medical and non-medical professionals, but also between professionals and families.

The NGO's maintain close collaborations between academicians, clinicians, social workers, rehabilitation workers, and clinical psychologists which make it distinct from traditional psychiatric clinics in hospitals or private psychiatry.

2. Innovation in practice:

The NGO's are typically closer to the community they serve, and hence they are in a better position to be more sensitive to change needs and perceptions. NGO's services may be attached with much less stigma than formal psychiatric services. Consequently, they attract a much wider range of patients. Clinical support, involving diagnosis and treatment of specific mental disorder, is the key to many NGO's activities. They are successful in providing services, which are accessible such as through outreach camps, and which rely on available human resources, such as the community participatory model of rehabilitation. Many NGOs provide a wide range of services which are especially suited for school health problems. They also take up the process of promoting attitudinal changes in the community and among policy makers.

3. Transparency in administration:

The activities of the NGO's are driven not by profit but by the desire to achieve a basic quality of care for all patients, irrespective of their ability to pay. They are governed by a relative flexible set of regulations. Employment and promotional avenues are based on merit. NGO's are under constant pressure to achieve programme objectives and ensure fiscal accountability because they are dependent on external funding. They need to explore, with remarkable entrepreneurial dynamism, collaborations with any other organization or individual to achieve their objectives.

Role of nurse:

1. Develop healthy coping response
2. Help the patient to identify substance abuse behavior and its consequences
3. Involve the patient in describing situation that lead to substance abusing behavior
4. Consistently offer support
5. Help him to realize his strength to overcome his problem
6. Assume responsibilities for behavior
7. Encourage patient to participate in treatment programme
8. Help the patient to identify and use social support system
9. Identify and assess social support system
10. Educate the patient and significant others about available resources
11. Refer the patient to appropriate resources and provide support until patient is involved in the programme

Community Health Nursing Management:

Assertive Community Management:

Therapeutic alliance, Non confrontal approach, Assertive outreach, Harm reduction focus, Health

education, Crisis intervention, Intensive Case Management.

Clinical: Provision of support, skill training,Assessment of environmental resources,Intensive care, Assertive outreach, Peer support, Services delivered in situation. (Patients environment). Services delivered on a continuous basis with no time limitUtilization of community resources to enhance patient's strength

On Going Rehabilitation

Functional assessment –focus on patients strength , Active involvement of family member in implementing and monitoring rehabilitation plan, Services and training delivered in patients' environment.

Suggested reading material

1. Agarwal S.P (2004). Mental Health: an Indian Perspective 1946 – 2003, In: NGOs and search for synergy. New Delhi, Ministry of Health and family welfare. 145 – 151.
2. Laria T. Michele, Gail W.Stuart (2001). Principles and practice of psychiatric Nursing, 7th edition St.Lous. Moby comparing 485 – 525.
3. Lehman A. Myers. C., Corty E (1989). Assessment and classification of patients with psychiatric and substance use syndromes. Hospital and community Psychiatry 40:1019 – 1024
4. Body MA. "Psychiatric Nursing Contemporary Practice", 3rd edition, Lippincott Williams & wilkins: London, 524 – 564.
5. Bhushan V. "Blackwell's underground Clinical Vignettes",2nd edition, Multivista global Limited, Chennai, 22.
6. Mary C.Townsend., "Psychiatric Mental. Health Nursing", 3rd F.A. Davis company, Philadelphia, 357-398.
7. WH.O (1992). The ICD – 10 Classification of Mental and Behavioral Disorders, 1st edn, oxford university press, Chennai, 70-83
8. Drake R, Mercer – MC Fadden C (1995) : Assessment of substance use among person sit chronic mental illnesses. In Lehman A, Dixon L (eds). Double jcopardy: Chronic mental illness and substance use disorders. Harwood Academic, chur, Switzerland, PP47-62
9. Drake R, Mercer – MC Fadden C (1995): Assessment of substance use among persons with chronic mental illnesses. In Lehman A, Dixon L (eds). Double jeopardy: Chronic mental illness and substance use disorders. Harwood Academic, chur, Switzerland, PP47-62
10. Sharma H K (2005). Community based treatment of substance use disorder. In: Substance use disorder manual for physicians 2nd edition page no 102-112.

Suggested slide material

Slide – 1

Preventive strategies

- o Primary prevention
- o Secondary Prevention
- o Tertiary Prevention

Slide – 2

Primary Prevention – Nurse Role

- Assessment Planning - Intervention
- Risk- Coping Resources
- Individual coping mechanism

- Motivation
- Social Support
- Specific Interrelation
- Appropriate social situation
- Health Education- Environment change
- Social Support

Slide – 3

Secondary Prevention - Nurse Role

- Early case findings
- General survey of High risk groups
- Diagnostic assessment
- Screening
- Prompt effective treatment
- Assume responsibilities for behavior

Help the patient to identify and use social support systems.

Slide – 4

- Family
- Burden,
- Support Needs
- Individual
- Focuses on
  - Wellness and Health
  - Abilities and functional behaviors
  - National settings
  - Involvement
  - Self help
  - Independence

Community

Directed Toward

- Basic Need
- Special Need
- Co-ordination
- Tertiary Prevention

Slide - 5

- Establishment of NGO's
- Role of Ministry of Social justice
- Public awareness campaign
- Media publicity
- Community based treatment
- The Programme emphasizes
  - Community resource
  - Community participation
  - Awareness building
  - Counseling
  - Follow up assistance
- The programme supports
  - Substance awareness
  - Counseling assistances centers
  - De – additiction camps
  - A work place prevention programme

Slide – 6

- Role of NGO'S
- Working in partnership
- Innovation in practice
- Transparency in administration

Slide – 7

- Community treatment programme
- Medical detoxifications
- Evening or partial hospitalization
- Employee diagnosed programme

Camp Approach in Substance Abuse Treatment

12

Sandhya Gupta

Summary: *Substance use disorders can affect the person and the society in many ways. It not only affects the health of the individual but also leads to impairment in financial, social and occupational functioning. The therapeutic interventions can be carried out in a wide variety of settings. There is wide spread belief that treatment can be carried out only in inpatient setting. Though inpatient treatment has the advantage of restrictive care and continuous monitoring, the outpatient treatment like in camp, has the merits of being closer to the natural settings. It also has the advantage of increased family involvement and is more cost effective.*

Introduction

Several government and international agencies have mentioned that the substance abuse has to be dealt primarily as a community problem. Thus the intervention and strategies should focus in assisting the community to adopt measures that would involve the community members and lead to community empowerment. The community program should be more focused on the psychosocial aspects and need of the community. Psychosocial activities include prevention of substance abuse, promotion of positive health and harm reduction as well as abstinence oriented treatment methods.

Rural camps are very effective in dealing with the substance abuse problem in the rural and remote areas in our community. By the help of these camps the treatment services can be provided at the door steps of users. This promotes greater acceptance by the users in the community since associated stigma in seeking treatment for substance abuse is minimized. This approach of outreaching the treatment services of deaddiction to the door steps in the community by organizing camps is called camp approach..

Camp approach is a very feasible, acceptable and affordable modality in the developing countries. It also has the advantages of the use of community leadership, community involvement and community resource mobilization. In order to provide treatment facilities in these camps the professionals are mobilized to offer their services. Then the community is mobilized to accept the help and treatment is offered to them either free or at minimal cost.

Certain factors should be considered in this camp approach:

- Majority of the treatment seekers are daily wage earners. Hence, the treatment programme should be intensive and short term.
- The treatment process should be culture specific and easily understandable by the illiterate population.
- Since substance abuse affects the family and the community as a whole, involvement of the family and the community members is very crucial in the effectiveness of the programme.

Objectives of the camp approach

The objectives of the camp method are:

- To provide preventive education in the locality, combining with the motivation of the potential patients to seek help
- To detoxify the substance abusers
- To re establish family bonds and reintegrate detoxified dependants with their community
- To create awareness in the community of the existing substance abuse problem in their environment and initiate individual and collective action
- To develop a sense of responsibility on the part of the public and voluntary organizations in supporting the process of treatment and rehabilitation
- To give sufficient encouragement to the patients to commence rehabilitation with confidence
- To follow-up the detoxified persons for further rehabilitation action, as and when required
- To create peer volunteers who are ex substance users to identify the high prevalence areas and groups in the community and motivate them to quit

Thus the camp approach is essentially "doing with the community" and not "doing for the community"; responsibilities are shared and ownership lies with the community. Preparing the community to effectively deal with these issues is the first step in organizing a treatment camp. The treatment centers cannot expect to arrive in the village and start providing services. It has to work through already existing organizations in the community - the host organization.

Host Organization

Host organization should enjoy the trust and respect of the community. Examples of host organizations are schools, voluntary agencies, rural upliftment societies and religious centers. These organizations should already be providing help in some areas like running a school, offering medical care and women upliftment.These organizations should be familiar with the members of the community and be aware of their problems. It should be willing to do the ground work to prepare the community by creating awareness about the harmful effects of substance abuse and the impact on the community. Prior to the

camp, the host organization identifies the substance abusing population and provide infrastructure to run the camp. During the camp, it helps in organizing meals for the patients and staff and help in identifying the support persons for the patients. It brings in the patient for follow-up programmes after the camp to the treatment centers, deals with the relapses and provides support to sustain their recovery.

Organization of camp

Activities before the camp

The deaddiction camps are mainly organized by the voluntary organizations. Pre camp activities include identification of the vulnerable populations and zones. The camp members visit the house holds and assess the extent of the substance problem in the community, conduct simple awareness campaigns and distribute pamphlets, leaflets and posters. At the same time they meet the community leaders, other voluntary organizations and the government officials of the area to inform them about the camp and solicit their support. The neighboring villages are also informed.

Community based camps are usually held in a temple, church, school building or a community center having residential facilities for 10-15 persons. The duration of camp is 10-15 days. In non urban localities, food and drink for the residents and the volunteers is prepared at the site by the families of substance users and community members.

Human resources

About 2-4 doctors, including a consultant psychiatrist, 3-4 staff nurses and 8-10 volunteers should be available in order to organize a deaddiction camp. The local community provides boarding and lodging. The community also provides volunteers, emotional support to the patient and security for the organizers.

Activities during the camp

In each camp an inaugural function is organized in order to educate the community about the ill effects of substance use, the benefits of quitting and about the treatment options available. Substance users are screened and referred to nearby health center if they suffer from serious medical ailments.

In the deaddiction camps patients are provided treatment for all substances. Enrolled patients are detoxified and prescribed symptomatic pharmacotherapy like analgesics, anxiolytics and hypnotics. Symptoms of withdrawals are watched carefully by nurses and the physicians notified. Nursing staff and doctors are available round the clock and if any serious complications develop patients are shifted to the nearest hospital.

Patients are also involved in recreational activities. Iinformal supportive psychotherapy and group therapy is provided by the doctors, nurses and other members of the team. Family support is also provided and counseling done.The morale of the patients is improved by continuous support and education.

The ex-substance users are involved as volunteers for motivation substance users to seek treatment. They also work as a liason between the treating team, the community and the substance user.

After detoxification patients are enrolled in the nearby deaddiction center for their maintenance treatment and rehabilitation. Towards the end of

the camp, a closing ceremony is conducted with the following aims

- To enable the recovered persons to be abstinent for the rest of their lives.
- To remove the prevailing misconceptions.
- To prepare them to tolerate some protracted withdrawal symptoms
- To motivate other substance users to come forward for treatment.
- To educate and increase awareness about the harmful effects of substance use in the general population.

Role of nurse in camp approach

Nurses play an important role in the community outreach programmes like camp approach. They should develop the willingness to work in the grass root level in the community to identify and motivate people who are abusing substances. The Nurse can play an important role in educating the community leaders about the seriousness of the issue and motivate them in participating in the community activities by exhibiting effective leadership.

The public health nurses can motivate the nurses who are working in various government hospitals and private hospital to participate in the camps and to be the volunteers.

The school health nurses play a major role in this venture. It has been found that the adolescent population starts their substance use in their schools. Since substance abuse carries stigma the children are very reluctant in approaching treatment centers. The school health nurse can conduct regular health education programmers and educate the teachers on identification of students with possible substance use. School health nurse can act as the chief coordinator in organizing camps in schools. Consequently the students can be screened and dependant children identified and provided treatment. Nurse can provide constant psychological support and provide family counseling.

Nurse's responsibility in camps

Before camp activities

- Helps in identifying the high risk groups and the catchments areas
- Participates in campaigns to create awareness about the seriousness of the substance abuse problem and benefits of deaddiction
- Performs door to door visit to identify the users and motivate the family members for the treatment
- Establishes rapport with the community leaders and other agencies to procure support for the camp

During the camp

- Organize the physical set up of the camp
- Work harmoniously with the team
- Assign duties for the volunteers
- Assist in screening of persons for serious medical illness or complications of substance use coming for registration
- Administer medications for detoxification
- Provide a safe and therapeutic environment for the patients
- Observe for withdrawal symptoms and notify the psychiatrist
- Provide symptomatic management of the withdrawal symptoms
- Supervise the patient for any substance use in the camp

- Organize group sessions and educate them about the harmful effects of substance abuse and benefits of treatment
- Identify the psychosocial problems of the patients and provide counseling
- Maintain proper record of the substances used for treatment
- Motivate the patients to become an peer volunteer
- Provide necessary assistance in procuring maintenance treatment facilities after the camp

Conclusion

Camp approach is a very feasible, approachable and cost effective method to provide doorstep services to the substance user. Public awareness, education and removal of misconceptions regarding the substance use alongwith available treatment facilities make the program widely acceptable to the rural community. Nurses play a key role in making the camp approach more successful. This approach is particularly relevant in poorly accessible areas with minimal infrastructure.

Suggested reading material

a) Ranganathan S (1998): community based treatment: UNDCP ROSA publication :155-156

b) Kodagoda N, Ratnayake Y(1998):community based detoxification camps for heroin dependants :UNDCP ROSA publication:157-158

c) Purohit D R(1998): Substance deaddiction – camp approach: UNDCP ROSA publication :159-163

d) www.substancestrategies.teens.org

e) Townsends MC(2000):psychiatric mental health nursing-concepts of care:3rd edition: davis publication:759-762

Suggested slide material

Slide 1

Camp approach: Definition

Approach of outreaching the treatment services of deaddiction to the door steps in the community by organizing camps is called camp approach.

Slide 2

Objectives of the camp approach-1

- To provide preventive education in the locality, and motivating potential patients to seek help
- To detoxify the drug abusers
- To re establish family bonds and reintegrate detoxified dependants with their community
- To create awareness in the community of the existing drug abuse problem in their environment and possible individual and collective action

Slide 3

Objectives of the camp approach-2

- To develop a sense of responsibility on the part of the public and voluntary organizations in supporting the process of treatment and rehabilitation
- To give sufficient encouragement to the clients to commence rehabilitation with confidence
- To follow up the detoxified persons for further rehabilitation action, as and when required

Slide 4

Host organization: Definition

The process by which the already existing voluntary and service oriented organizers are motivated to host the camp by providing the boarding ,residential facilities and provide resources

Examples: Schools, NGO, churches, temples, rural development agencies etc

Slide 5

Duration of the camp 10-15 days

Members of the camp

- 2-4 psychiatrists including one consultants
- 3-4 nurses
- 8-10 volanteers
- Members of the organization

Slide 6

Role of nurse in camp approach-1

Before the camp

- Helps in identifying the high risk groups and identifying the catchment areas
- Participates in campaigns to create awareness about the seriousness of the drug abuse problem and benefits of deaddiction
- Performs door to door visit to identify the users and motivate the family members foe the treatment
- Establishing rapport with the community leaders and other agencies to procure support for the camp

Slide 7

Role of nurse in camp approach-2

During the camp-I

- Organize the physical set up of the camp
- Work harmoniously with the team.
- Assign duties for the volunteers
- Assist in screening of persons for serious medical illness or complications of drug use coming for registration.
- Administer medications for detoxification
- Provide a safe and therapeutic environment for the patients

Slide 8

Role of nurse in camp approach-3
During the camp-II

- Observe for withdrawal symptoms and notify the psychiatrist.
- Provide symptomatic management of the withdrawal symptoms Supervise the patient for any drug use in the camp.
- Organize group sessions and educate them about the harmful effects of drug abuse and benefits of treatment

Slide 9

Role of nurse in camp approach-4
During the camp-III

- Identify the psychosocial problems of the patients and provide counseling
- Maintain proper record of the drugs used for treatment
- Motivate the patients to become an peer volunteer
- Provide necessary assistance in procuring maintenance treatment facilities after the camp

Therapeutic community in Management of Substance Use Disorder

13

Raminder Kalra

Summary: Substance abuse disorder is a treatable disease. The therapeutic milieu provides a temporary safe heaven to patients who have decreased ability to cope with and adapt to life stressors. It offers patients with opportunities to acquire adaptive coping behaviors and provides an asylum, in the truest sense of the word, while simultaneously extending an invitation to patients to return to the mainstream of living and being in the world. Therapeutic community (TC) is a group therapy approach that uses the patient's total living experience as the primary therapeutic agent. Its essential characteristics include individual treatment programs, links with the patient's family and community, effective relationships among members of mental health and humanistic attributes of mental health team members.

Introduction

Substance use disorder is a treatable disorder. Through treatment that is tailored to individual needs, patients can learn to control their condition and live normal, productive lives. Like people with diabetes or heart disease, people in treatment for substance abuse learn behavioural changes and take medications as part of their treatment regimen. Behavioral therapies can include counseling, psychotherapy, support groups, family therapy or therapeutic community. Patients, who go through medically assisted withdrawal to minimize discomfort but do not receive any further treatment, perform almost the same in terms of their substance use as those who were never treated. Over the last 25 years, studies have shown that treatment works to reduce substance intake and crime rates. There are several types of substance abuse treatment programs. Long term treatment includes therapeutic community treatment.

What is Therapeutic Community?

Therapeutic communities are highly structured programs in which patients stay at a residence typically for 6 to 12 months. Patients in Therapeutic Communities include those with relatively long histories of substance dependence, involvement in serious criminal activities and seriously impaired social functioning. The focus of Therapeutic Community is on the re-socialization of the patient to a substance free, crime free lifestyle.

The therapeutic community is a structured environment with a specific philosophy of care and a focus on health rather than on illness. The patient is regarded as a responsible member of a social group. The treatment setting is viewed as a community of both staff and patients. All members interact democratically to achieve therapeutic outcomes. The goal of this approach is to develop insight into behavior through feedback received from the whole population of patients and staff.

Definition

According to Johnson 'A therapeutic community is a structured environment designed to provide a secure retreat for individuals whose capacities for coping with reality have deteriorated'. The therapeutic community gives them opportunities to acquire adaptive coping skills. Skinner defines therapeutic community as "a scientific structuring of the environment in order to effect the behavioral changes and to improve the psychological health and functioning of the individual."

BASIC BELIEF

According to 'Suzan Lego 1984' the therapeutic community is built of four basic beliefs.

Definition	*Purpose*
Democratization – Participation of all members in decision making.	To change basic orientation toward authority figures.
Permissiveness – facilitation of emotional expression.	To teach patients tolerance of others through control of their own reactions.
Communalism – general sharing in activities of daily living.	To develop increased capacity to endure "real-life" situations.To improve social skills.To increase social interactions.
Reality confrontation – confrontations about behavior as observed by those in the environment.	To counteract the patients tendency to use defense mechanisms (denial, displacement, withdrawal).To assist patients to develop more realistic perceptions of home and family.

Goals and Purposes of Therapeutic Community

1. To minimize the antitherapeutic environment for the patients in the ward (e.g. Encouraging the patients to gather around the excited patient – it is anti-therapeutic).
2. To minimize maladaptive behavior. Creating an environment where maladaptive behavior is discouraged.
3. To provide a free and favorable climate in which the patient can talk and gain awareness of his own feelings, impulses and behavior.
4. To help the patient to improve his self esteem by helping him to understand that he also can take decisions, can take responsibilities and his activities are appreciated if he performs them well.

Principles of Therapeutic Community (TC)

The essential principles of TC can be described as:

1. Therapeutic community is an approach used for the care of patients through group activity.
2. Democracy is observed in a hospital setting and helps to increase the self respect of a patient.
3. Patient is involved in his own therapy which helps him in making decisions.
4. Decision making ability improves the self confidence of patients.
5. It provides an environment of free communication. Hospital authoritativeness is reduced.
6. The patient is also directed to focus his attention not only on his own needs but also on the needs of other patients.
7. It attempts to reduce the feelings in the patient about the supreme power of the doctor.
8. Though the nurse sets limits and has various roles to play, the patient still considers her part of the milieu in which he is living.

Basic Assumptions

Skinner (1979) outlined seven basic assumptions on which a therapeutic community is based:

1. **The health in each individual is to be realized and encouraged to grow:** All individuals are considered to have strengths as well as limitations. The healthy aspects of the individual are identified and serve as a foundation for growth in the personality and in the ability to function more adaptively and productively in all aspects of life.
2. **Every interaction is an opportunity for therapeutic intervention:** Within this setting, it is virtually impossible to avoid interpersonal interaction. The ideal situation exists for patients to improve communication and relationship development skills. Learning occurs from immediate feedback of personal perceptions.
3. **The patient owns his or her own environment:** Patients make decisions and solve problems related to governing of the unit. In this way, personal needs for autonomy as well as needs that pertain to the group as a whole are fulfilled.
4. **Each patient owns his or her behavior:** Each individual within the therapeutic community is expected to take responsibility for his or her own behavior.
5. **Peer pressure is a useful and a powerful tool:** Behavioral group norms are established through peer pressure. Feedback is direct and frequent, so that behaving in a manner acceptable to the other members of the

community becomes essential.

6. **Inappropriate behaviors are dealt with as they occur**: Individuals examine the significance of their behavior, look at how it affects other people, and discuss more appropriate ways of behaving in certain situations.
7. **Restrictions and punishment are to be avoided:** Destructive behaviors can usually be controlled with group discussion. However, if an individual requires external controls, temporary isolation is preferred over lengthy restriction or other harsh punishment.

How to initiate a therapeutic community programme

In a therapeutic community setting everything that happens to the patient, or within the patient's environment, is considered to be part of the treatment program. The community setting is the foundation for the program of treatment. Community factors, such as social interactions, the physical structure of the unit, and schedule of activities, may generate negative responses from some patients. These stressful experiences are used as examples to help the patient learn how to manage stress more adaptively in real-life situations.

A number of criteria have been identified based on which the environment is considered therapeutic:

1. **Basic Physiological needs are fulfilled:** As Maslow (1968) has suggested, individuals do not move to higher levels of functioning until the basic biological needs for food, water, air, sleep, exercise, elimination, shelter and sexual expression have been met.
2. **The physical facilities are conducive to achievement of the goals of therapy:** Space is provided so that each patient has sufficient privacy, as well as physical space, for therapeutic interaction with others. Furnishings are arranged to present a homelike atmosphere, usually in spaces that accommodate communal living and have dining and activity areas for facilitation of interpersonal interaction and communication.
3. **A democratic form of self government exists:** In the therapeutic community, patients participate in the decision making and problem solving that affect the management of the unit. This is accomplished through regularly scheduled community meetings. These meetings are attended by staff and patients, and all individuals have equal input into the discussions. At these meetings, unit norms and rules and behavioral limits are set. This reinforces the democratic posture of the unit, as these are expectations that affect all patients on an equal basis. An example might be the unit rule that no patient may enter a room being occupied by a patient of the opposite sex. Consequences of violating the rules are explained.

   Meetings are usually held each morning right after breakfast. Some therapeutic communities elect officers who serve for a period of a week or even for a few days. The officers calls the meeting to order, conducts the business of discussing old and new unit issues, and asks for volunteers or makes appointments, alternately, so that all patients have a turn to accomplish the daily tasks associated with community living, eg, cleaning the tables after each meal and watering plants on the unit. New assignments are given each morning.

The secretary reads the minutes of previous meeting and takes minutes of the current meeting. All staff members except those required to manage the unit and provide necessary care for patients are expected to attend the daily meetings.

4. **Unit responsibilities are assigned according to patient capabilities:** Increasing self-esteem is an ultimate goal of the therapeutic community. Therefore, a patient should not be set up for failure by being assigned a responsibility that is beyond his or her level of ability. By assigning responsibilities that promote achievement, self-esteem is enhanced.
5. **A structured programme of social and work related activities is scheduled as part of the treatment programme:** Each patient's therapeutic program consists of group activities in which interpersonal interaction and communication with other individuals are emphasized. Time is also devoted to discuss personal problems. Various group activities may be selected for patients with specific needs, for example, an exercise group for a person who expresses anger inappropriately.
6. **Community and family are included in the program of therapy in an effort to facilitate discharge from the hospital:** An attempt is made to include family members, as well as certain members of the community that affect the patient, in the treatment program. It is important to keep as many links to the patient's life outside the hospital as possible. Family members are invited to participate in specific therapy group and, in some instances, to share meals with the patient in the communal dining room. Connection with community life may be maintained through patient group activities, such as shopping, attending movies, and visiting the zoo.

Role of Nurse

Nurses are generally the only members of the health team who spend time with the patients on a 24 hours basis. They assume responsibility for management of the therapeutic milieu, and accomplish this through use of the nursing process. An ongoing assessment, diagnosis, outcome identification, planning, implementation, and evaluation of the environment is necessary for the successful management of a therapeutic milieu. Nurses are involved in all day-to-day activities that pertain to patient care. Suggestions and opinions of nursing staff are given serious consideration in the planning of care for individual patients. Information from the initial nursing assessment is used to create the inter-disciplinary treatment. Nurses have input into the goals of therapy and participate in the weekly updates and modification of the treatment plans.

In the therapeutic milieu, nurses are responsible for ensuring that patients' physiological needs are met. Patients must be encouraged to perform as independently as possible in fulfilling activities of daily living. However, the nurse must make ongoing assessment to provide assistance for those who require it. Assessing physical status is an important nursing responsibility that must not be overlooked.

Nurses are responsible for the management of medication administration. Constant vigilance has to be ensured regarding the substance free environment, fights, and violent behavior, craving etc. The patients have to be involved in diversional activities like vigorous exercises, watering plants, gardening etc.

A major focus of nursing in the therapeutic milieu is the one to one relationship, which grows out of a developing trust between patient and nurse. Developing trust means keeping promises that have been made. It means total acceptance of the individual as a person, separate from behavior that is unacceptable. It means responding to the patient with concrete behaviors that are understandable to him or her. Within an atmosphere of trust, the patient is encouraged to express feelings and emotions and to discuss unresolved issues that are creating problems in his or her life.

The nurse is responsible for setting limits on unacceptable behavior in the therapeutic milieu. This requires stating to the patient in understandable terminology what behaviors are not acceptable and what the consequences of violation would be. These limits must be established, written and carried out by all staff on all shifts. Consistency in carrying out the consequences of violation of the established limits is essential if the learning is to be reinforced.

Outcome

Therapeutic Communities treat people with a wide range of substance abuse problems such as multiple substance addictions, involvement with the criminal justice system, lack of positive social support and mental health problem.

For three decades National Institute on Substance Abuse (NIDA) has conducted several large studies to advance scientific knowledge of the outcomes of substance abuse treatment as typically delivered in the United States. These studies collected baseline data from over 65,000 individuals admitted to public funded treatment agencies. They included a sample of TC programs and other types of programs (i.e. methadone maintenance, out-patient substance-free, short term inpatient, and detoxification programs). Data was collected at admission, during treatment, and in a series of follow-ups that focused on outcomes that occurred 12 months and longer after treatment.

These studies found that participation in a TC was associated with several positive outcomes. For example, the Drug Abuse Treatment Outcome Study (DATOS), the most recent long-term study of substance treatment outcomes, showed that those who successfully completed treatment in a TC had lower levels of cocaine, heroin, and alcohol use; criminal behavior; unemployment; and improvement of depression than they had before treatment.

Conclusion

Nurses have traditionally assumed the responsibility for managing and coordinating therapeutic milieu activities. They also serve as a link between patients and socially constructed reality of everyday life. One important nursing function in therapeutic milieu is mental health teaching. Nurses in the therapeutic milieu must communicate by their every action and word
References

Suggested reading material

1. Carter, Frances Monet (1981). Psychosocial Nursing Theory and Practice in Hospital and Community Mental Health. 3rd ed. New York: Macmillian Publishing Co., 81-88.
2. Johnson, Barbara Schoen (1989). Adaptation and Growth Psychiatrics Mental Health Nursing, 2nd ed., Philadelphia : JB Lippincott Co., 171-182.
3. Lego, Suzanne (1984). The American Handbook of Psychiatric Nursing, Philadelphia: JB Lippincott Co., 296 – 304

4. Marry, Ruth Beckmann et al. (1993). Use of Therapeutic Milieu in a Community setting. Journal of Psychosocial Nursing Mental Health Services. Oct., 31 (10) 10 – 11.
5. Rawlins, Ruth Parmelie et al. (1993). Mental Health – Psychiatric Nursing: Holistic Life Cycle Approach, 3rd ed. Philadelphia: Mosby Year Book, 504-523.
6. Street, Gail W., et al. (2005). Principles and Practice of Psychiatric Nursing, 8th ed., Mosby, 700 – 702
7. Walker Mary (1994). Principles of a Therapeutic Milieu: Perspectives in Psychiatric Care. 30:33,5-8.
8. White, Joan (1989). Resistance Within the Therapeutic Community. Perspectives in Psychiatric Care. 25: 28-33.
9. Yurkovich, Eleanon (1989). Patients and Nurses Roles in the Therapeutic Community. Perspectives in Psychiatric Care, 29: 3 – 4, 18 – 22.

Suggested slide material

Slide 1

Definition

- A therapeutic community is a structured environment designed to provide a secure retreat for individuals whose capacities for coping with reality have deteriorated. Therapeutic community gives them opportunities to acquire adaptive coping skills.

Slide 2

BASIC BELIEF

- Democracy
- Permissiveness
- Communalism
- Reality confrontation

Slide 3

GOALS OF THERAPEUTIC COMMUNITY

- To minimize anti-therapeutic environment
- To minimize hospitalization
- To minimize maladaptive behaviour
- To provide free and favourable climate
- To improve self-esteem of the patient

Slide 4

BASIC ASSUMPTIONS

- The health in each individual is to be encouraged to grow
- Every interaction is an opportunity for therapeutic intervention
- The patient owns his/her own environment
- The patient owns his/her behaviour
- Peer pressure is a useful and powerful tool
- Inappropriate behaviours are dealt with as they occur
- Restrictions and punishments are avoided

Slide 5

CRITERIA FOR THERAPEUTIC ENVIRONMENT

- Basic physiological needs are fulfilled
- Physical facilities are conducive to achievement of the goals
- A democratic self government exists
- Unit responsibilities are assigned according to patients capabilities
- Structured program of social and work related activities is scheduled
- Community and family are included

Slide 6

ROLE OF THE NURSE

- Management of therapeutic milieu by nursing personnel
- Ensuring that patients physiological needs are met
- Promoting independence of patients
- Assessing physical status
- Medication administration
- Developing trust between patient and nurse
- Setting limits on unacceptable behaviour
- Patient education

Slide 7

OBJECTIVES OF THERAPEUTIC COMMUNITY

- Providing detoxification treatment
- Behaviour shaping
- Motivation to remain abstinent
- Psychological rehabilitation
- Vocational training

Self help Groups in Substance Use Disorder

14

Ramachandra

Summary: *Self-Help Groups like Alcoholics Anonymous (AA), Al-Anon, Alateen, Narcotics Anonymous (NA), Cocaine Anonymous (CA) Marijuana Anonymous (MA) and Nicotine Anonymous have evolved to offer a set of attitudes, beliefs, and behaviors that can facilitate change in the respective group of subjects. The AA, with its 12 steps, offers as its unconditional acceptance of the patient's alcoholism, an unshaken belief in the concept of alcoholism as a disease, and support to foster a healthy relationship in the alcoholic. The AA approach has been successful with many alcoholics. The meetings provide members with acceptance, understanding, forgiveness, confrontation and means of positive identification. Admission of the problem, developing personal control over the disease, taking personal inventory, making amends, helping others are some of the principles on which AA works. New members have sponsors (recovering alcoholics) to guide them through their recovery. Many cities in India have active AA, Al-anon and Al-Aleen groups. Cocaine Anonymous, Narcotic Anonymous, Marijuana Anonymous and Nicotine Anonymous groups also work on the twelve steps involved in AA group.*

Introduction

Groups organized around a common experience are labeled self - help groups. Self-help groups are composed of peers who share a similar mental, emotional, or physical problem, or who are interested in a common issue, such as education or parenting. Most self-help groups are voluntary, non-profit associations open to anyone with a similar need or interest. They offer network of sharing and caring in the community and a safe place to talk about fears and problems.

Usually, groups are led by peers, have an informal structure, and are free except for small donations to cover meeting expenses. However, professionals of various kinds lead some self-help groups. Health professionals consider self-help groups for mental or emotional problems to be an adjunct to therapy. The processes involved in self-help groups are social affiliation, learning self-control, modeling methods to cope with stress, and acting to change the social environment.

Characteristics of Self-Help Groups

- Supportive and educational in nature rather than therapeutic
- Based on shared experiences and the premise that the individual is not alone
- Focused on a single life disrupting event
- Purpose is to support personal responsibility and change
- Anonymous and confidential in nature
- Voluntary membership
- Members lead the group and implement principles of self-governance
- Non profit orientation

Because self-help groups use a variety of stress coping methods and have differing membership criteria, each group should be assessed individually for its general effectiveness and appropriateness for particular individuals and families. Some areas for the nurse to assess before referral to a self-help group are presented below.

Assessment Guidelines for referral to Self-Help Groups

- Ask whether the patient has ever attended a self-help meeting.
- Explore the patient's attitude and concerns about attending meetings.
- Explore with the patient the possible benefits of attending groups.
- Describe typical meetings and the range of self help meeting that are available.
- Refer the patient to a specific meeting, at a specific time, date and location.
- Follow up with the patient.

Self-help groups

Several self-help groups are available for substance abusers. They are:

1. Alcoholics Anonymous (AA)
2. Al-Anon
3. Alateen
4. Narcotics Anonymous (NA)
5. Cocaine Anonymous (CA)
6. Marijuana Anonymous (MA)

Alcoholics Anonymous

Alcoholics Anonymous is a fellowship of problem drinkers, who voluntarily join to stop drinking and remain sober. It was started in the United States in 1935. AA does not offer professional guidance such as counseling or therapy. The key to AA is the support members provide to each other. AA is not the only hope for alcoholics, nor is it everything they need. Mental health professionals are welcome to attend 'open' AA meetings to see how it works.

The twelve steps of alcoholics anonymous

AA's programme for remaining sober is called the twelve steps. The twelve steps of AA are listed below:

1. We admitted we are powerless over alcohol and that our lives had become unmanageable
2. Came to believe that a power greater than ourselves could restore us to sanity
3. Made a decision to turn our will and our lives over to the care of God as we understood Him
4. Made a searching and fearless moral inventory of ourselves
5. Admitted to God, to ourselves, and to another human being the exact nature of our wrongs
6. Were entirely ready to have God remove all these defects of character
7. Humbly asked Him to remove our shortcomings
8. Made a list of all persons we had harmed, and became willing to make amends to them all
9. Made direct amentds to such people wherever possible, except when to do so would injure them or others
10. Continued to take personal inventory and when we were wrong, promptly admitted it
11. Sought through prayer and meditation to improve our conscious contact with God as we understood Him, praying only for knowledge of His will for us and the power to carry that out
12. Having had a spiritual awakening as a result of these steps, we tried to carry this message to alcoholics and to practice these principles in all our affairs

The steps are based on the experiences of members who have been trying in becoming and staying sober. At both 'open' and 'closed' (for members only) meetings, members closely examine the twelve steps and narrate their drinking stories. Members describe to each other how the AA programme has helped them to stay sober.

An AA group comes into being when two or more alcoholics join together to practice the AA programme. There are no dues or fees for membership; AA is self-supporting and is not associated with any religious sect or denomination, political groups, or other organization. It does not support or oppose any cause.

When an alcoholic experiences that quitting alcohol through sheer will power seems impossible and becomes convinced that drinking is causing many more problems than pleasure, the person is likely to attend an AA meeting. Once an alcoholic decides to follow the AA programme, five phases follow:

i) First stepping
ii) Making a commitment
iii) Accepting one's problem
iv) Telling one's story
v) Doing work as in step 12

The first phase of stepping (Stepping one) involves the initial contact with AA. The person is oriented to group meetings and made to feel powerless over alcohol. When an alcoholic is willing to say the words, "I admit that I am powerless over alcohol… that my life has become unmanageable because of it," he or she has completed step one. An AA guide will then become the newcomer's sponsor and try to help the member reach the second stage, commitment. The AA group acts quickly to ensure that the newcomer will affiliate, challenging the newcomer

to attend "ninety meetings in ninety days". The group seeks to keep a close watch over the newcomer, gently forcing the person to give up other commitments and spend a significant amount of time with AA program affiliates or taking part in AA activities.

In the third phase, acceptance of a drinking problem begins with the phrase, "I am X and I am an alcoholic". Throughout the initial weeks and months, the group presses newcomers, sometimes gently but sometimes forcefully, to realize that they are alcoholics. Accepting that one is an alcoholic can occur immediately or after a long process.

In the fourth phase, the group encourages newcomers to tell their stories to the entire group at an open meeting. Telling one's story to the public is an act of commitment that demonstrates one is a genuine AA member, and members greet this act with applause and congratulations.

In the final phase, the person must perform the program's twelfth step, a promise to remain in the process of recovery: "Having had a spiritual awakening as a result of these steps, we tried to carry this message to alcoholics, and to practice these principles in all our affairs." One of AA's basic philosophies is that alcoholism is not a disease from which people can recover once and for all. Instead, they are always in the process of recovering. To remain sober, a member must remain active in AA and carry the program to those who are still active alcoholics. By doing twelfth-step work, members reinforce their membership and their new definition of themselves as recovering alcoholics.

Al-Anon

Al-Anon introduces the Twelve Steps of AA into the lives of family members as a way to reduce resentment and anger and to help them stop the controlling behavior they often display. AA's first step is: "We admitted we were powerless over alcohol – that our lives had become unmanageable". Al-Anon's version of AA's first step is: "We admit we are powerless to control an alcoholic relative, that we are not self-sufficient". Al-Anon groups tell family members that they must admit that it is a waste of time to try to control what is in fact beyond their control. It is then no longer necessary for them to deny that their efforts at control are useless. They feel relieved of an enormous burden and sense of guilt. Al-Anon tries to help families recover from the terrible effects of living with someone who is out of control. Al-Anon members work together to support each other, and to give each other strength. Ultimately, Al-Anon tries to teach family members that they can never successfully take responsibility for anyone else's behaviour and that they should never consider themselves the cause for anyone's choice to drink. Al-Anon encourages family members to separate themselves emotionally from their loved one's drinking problems, but to learn how to safely love that person. Family members are reassured that they can create a happy, successful life for themselves despite the choices that their alcoholic loved one is making for herself or himself. The Twelve Step strategy allows the family members to accept outsider treatment and to welcome its possible success.

Alateen

Alateen is a division of the Al-Anon Family Group, which caters to teenagers of alcoholic family members.

Alateen enables its members to share their experiences openly and find ways to cope with the problem of living closely with an alcoholic parent or other relative. Typically the teen is obsessed with trying to control the drinking

relative's behaviour. He or she may be in denial as to the severity of the drinking problem. Through meetings, members learn that they can change their own thinking about that relative but that they cannot control his or her drinking. Scolding, tears, or persuasion are useless. Members also learn that they did not cause the problem drinking and have nothing to feel guilty for. As Al-Anon explains the goals of Alateen meetings, the teens must "learn to take care of themselves whether the alcoholic stops or not". In the last step of the AA Twelve step program, members declare: " We tried to carry this message to alcoholics". Alateen changes this to: "we tried to carry this message to others".

Cocaine Anonymous

Cocaine Anonymous (CA) is a community based organization that offers self help to cocaine users. CA takes Alcoholics Anonymous (AA) as its model and applies the same basic principles. The goal for members is to stop using cocaine and remain drug free by following the Twelve Steps of CA, which are based on the original Twelve Steps of AA.

CA is available to anyone who expresses a desire to stop using cocaine and other drugs. All that is necessary to become a group member is to attend meetings. Meetings vary from large, open sessions that anyone can attend to small, closed discussions reserved for specific groups. For example, young people, professionals, or women might organize their own groups to address their specific concerns. At most meetings, members share their experiences and offer advice and support to each other. In addition, CA offers sponsors, or members who have been in recovery for a substantial period of time, to provide support and guidance to a person attempting to recover. Many treatment professionals recommend CA for people with cocaine problems.

Marijuana Anonymous

Marijuana Anonymous (MA) a self-help fellowship based on the principles and traditions of Alcoholics Anonymous, exist in a number of countries all around the world. In addition to in person meetings, MA sessions are also held online. One group hoping to treat marijuana use is Marijuana Anonymous, which uses a Twelve-Step approach similar to that of Alcoholics Anonymous. The effectiveness or usefulness of this group has not been tested.

Nicotine Anonymous

This is also in existence since 1982 and has world wide fellowship. The principles are similar to the ones detailed under Alcoholics Anonymous.

Conclusion

The features of Self-Help groups are easy accessibility through media; maintainance of anonymity; receiving social support and mutual aid; providing/preserving self esteem, self respect; aiding in introspection and offering spiritual solace. Worldwide, self-help groups are becoming increasingly popular. They are effective in providing mutual support and are good resources for finding needed information. However, when searching for an appropriate group, prospective members should ask their friends, physicians, nurses and counselors for references, and then visit a few groups before deciding on which one to attend. The date and venue of AA open meetings are also displayed in prominent newspapers and available on Internet also.

Suggested reading materials

1. Borkman, Thomasina Jo(1999). Understanding Self-Help/Mutual Aid: Experiential Learning in the Commons. New Brunswick, NJ: Rutgers University Press.
2. Chick Jonathan (2004). Treatment of alcohol dependence. In: New Oxford Textbook of Psychiatry (eds) Gelder, Coper and Andreason, Oxford University Press, 498-9
3. Drummord Cohin (2004). Services for alcohol disorder In: New Oxford Textbook of Psychiatry (eds) Gelder, Coper and Andreason, Oxford University Press, 507-11
4. DuPont, Robert L (1997). The Selfish Brain: Learning from Addiction. Washington, DC: American Psychiatric Press, Inc.
5. Galanter, Marc, Ricardo Castañeda, and Hugo Franco (1998) "Group Therapy, Self-Help Groups, and Network Therapy." In Clinical Textbook of Addictive Disorders,, edited by Richard J. Frances and Sheldon I. Miller. 2nd ed. New York: Guilford Press.
6. Hyndman, Brian(1997). Does Self-Help Help? A Review of the Literature on the Effectiveness of Self-Help Programs. Evaluation in Health Promotion Series: Canadian and International Perspectives, no. 7. Toronto: Center for Health Promotion, University of Toronto.
7. Vivek Benegal, Pratima Murthy, Shantala, N. Janakiramaiah (2003). Alcohol related problems. A Manual for Medical Officers, Deaddiction center, NIMHANS.
8. Aloholics Anonymous. Grand Central Station, PO Box 459, New York, NY 10163. <www.alcoholicsanonymous.org>.
9. Narcotics Anonyomous World Service Office. PO Box 9999, Van Nuys, California 91409. Telephone: (818) 773-9999. Fax (818) 700-0700. <http://www.na.org/>.

Suggested slide material

Slide 1 Introduction

Groups organized around a common experience are labeled self help groups

- Groups are led by peers
- Informal and democratic
- Processes involved are social affiliation, learning
- Self control, coping stress and acting to change the social environment

Slide 2

Characteristics of Self-Help Groups

- Supportive and educational in nature rather than therapeutic
- Based on shared experiences and the premise that the individual is not alone
- Focused on a single life disrupting event
- Purpose is to support personal responsibility and change
- Anonymous and confidential in nature
- Voluntary membership
- Non profit orientation

Slide 3

Assessment Guidelines for referral to Self-Help Group

- Ask whether the patient has ever attended a self help meeting
- Explore the patient's attitude and concern about attending meetings
- Explore with the patient the possible benefits of attending groups

Slide 4

Types of Self-Help Groups

- Alcoholics Anonymous (AA)

- Al-Anon
- Al-Ateen
- Narcotics Anonymous (NA)
- Cocaine Anonymous (CA)
- Marijuana Anonymous (MA)
- Nicotine Anonymous

Slide 5

Alcoholics Anonymous

- Started in USA (1935)
- Does not offer professional guidance
- Mental health professionals are welcome to attend 'open' AA meetings
- AA is based on twelve steps

Slide 6

Process of Steps in AA Meeting

1. First stepping: Making a Commitment
2. Accepting one's process
3. Telling one's story
4. Doing twelfth step work

Slide 7

Al-Anon

Follows Twelve steps of AA for family members

- Reduces resentment and anger
- Admits waste of time in controlling alcoholic
- Teaches they cannot take responsibility for any one else's behaviour
- Encourages to separate themselves emotionally from alcoholics arising problems

Slide 8

Al-Ateen

- Caters to children of alcoholics
- They share their experiences openly and find ways to cope with the problem.
- Learn to take care of themselves whether the alcoholic stops or not.
- They share their experiences openly and find ways to cope with the problem.
- Learn to take care of themselves whether the alcoholic stops or not.

Slide 9

Open and Closed Sessions

Share their experiences, offer advice and support each other

Slide 10

Nicotine Anonymous

This is also in existence since 1982 and has world wide fellowship. The principles are similar to the ones detailed under Alcoholics Anonymous.

Slide 11

Conclusion

The features of Self-Help groups are

- easy accessibility through media
- maintenance of anonymity
- receiving social support and mutual aid
- providing/preserving self esteem and self respect
- aiding in introspection and offering spiritual solace

Promotive and Preventive Activities in Relation to Substance Abuse

15

Jasbir Kaur

Summary: *The epidemic of substance abuse and associated adverse health consequences pose a formidable public health problem. It is widely acknowledged that substance abuse is a community problem, and that it is multi-dimensional. Thus, a combined and coordinated strategy involving different sectors of the community is needed in order to effectively address substance abuse prevention and intervention. Effective strategies for comprehensive health promotion and substance abuse prevention require multiple programme components that address risk factors and focus on promotion and preventive activities across at least four groups: individual, family, peer group and community.*

Introduction

Substance abuse is emerging rapidly, and bringing with it related social and health consequences. It is estimated that alcohol abuse is about 1.5 times more prevalent than diabetes in the community. Unfortunately, less than 20% of such patients are identified and offered health care interventions. The swift and wide global spread of substance abuse, along with associated problems like HIV, Hepatitis B, C and sexually transmitted diseases, is ample evidence. Community surveys, hospital based studies and mortality indices all suggest an increased prevalence of alcohol and substance abuse in contemporary society. Nurses and primary health care providers have a key role to play in the early identification and appropriate interventions to prevent, manage and rehabilitate the individuals diagnosed with such problem.

Community surveillance methods:

Community surveillance methods are an effective tool in assessing and understanding issues like substance abuse and they are increasingly being used to assist in the development of public health interventions for substance abuse problems.

Patterns of substance abuse, injecting practices and associated consequences vary across areas and social groups, even within a country, and alter quickly over time. Responses to these problems are also diverse and are influenced by social, cultural, economic, religious and political factors. Drug surveillance information systems deliver information of practical relevance. Located in drug treatment and medical care centers, they cover people who are in touch with such agencies, and reveal much about the problem in wider society. This also enables us to properly identify and target interventions, and to develop interventions that are both appropriate and resource-effective.

Screening tools for surveillance:

Screening may include biophysical investigations (like blood and urine tests) or psychosocial surveys. Screening tools viz. Adolescent Drinking Inventory (ADI) and the **CRAFT** approach can be used for surveillance.

C -Have you ever rode in a **car** driven by someone (including yourself) who was "high" or had been using alcohol or substances?

R –Do you ever use alcohol or substances to **relax**, feel better about yourself, or fit in?

A –Do you ever use alcohol/ substances while you are by yourself **alone?**

F –Do your **family** or **friends** ever tell you that you should cut down on your drinking of substance use?

F –Do you ever **forget** things you did while using alcohol or substances?

T –Have you got into **trouble** while you were using alcohol or substances?

Objectives of the surveillance:

- To identify majority of substance dependents in main catchments areas and adjoining localiteies and to initiate the process of preventive implementation counseling (clarify myths and misconceptions associated with substance abuse).
- To focus on health and social consequences of socially sanctioned substances like alcohol and tobacco as well as illicit substances such as heroin and psychotropic substances in their environment and suggest possible remedial steps.
- To provide awareness of the low cost treatment within community.
- To facilitate formation of local support groups (youth, women, etc.) as well as self-help groups (AA, NA, etc.)
- To utilize local community resources in implementation of nursing care services.

Target Groups for surveillance: target group will consist vulnerable groups in a given population.

Surveillance approaches: To approach the target population for surveillance following approaches can be used:

Health promotion activities:

- Enhance distribution of the sterile needles.
- Substance substitution process to be initiated.
- Condom promotion for substance abusers.
- Voluntary counseling and testing (VCT) services.

- Easy access of HIV & STD testing program.

Prevention Planning

Principles of prevention activities for substance abuse:

General Principles:

- **Principle 1**: Prevention programmes should enhance protective factors and reverse or reduce risk factors.
- **Principle 2:** Prevention programmes should address all forms of substance abuse, alone or in combination, including the underage use of legal substances (e.g., tobacco or alcohol); the use of illegal substances (e.g., marijuana or heroin); and the inappropriate use of legally obtained substances (e.g., inhalants), prescription medications, or over-the-counter drugs.
- **Principle 3**: Prevention programmes should address the type of substance abuse problem in the local community, target modifiable risk factors, and strengthen identified protective factors.
- **Principle 4:** Prevention programmes should be tailored to address risks specific to population or audience characteristics, such as age, gender, and ethnicity, to improve program effectiveness.

Family Programmes:

- **Principle 5:** Family-based prevention programmes should enhance family bonding and relationships and include parenting skills; practice in developing, discussing, and enforcing family policies on substance abuse; and training in drug education and information. Family bonding is the bedrock of the relationship between parents and children. Bonding can be strengthened through skills training on parent supportiveness of children, parent-child communication, and parental involvement.
  - o Parental monitoring and supervision are critical for substance abuse prevention. These skills can be enhanced with training on rule-setting; techniques for monitoring activities; praise for appropriate behavior; and moderate, consistent discipline that enforces defined family rules.
  - o Education and information for parents or caregivers reinforces what children are learning about the harmful effects of substances and opens opportunities for family discussions about the abuse of legal and illegal substances.
  - o Brief, family-focused interventions for the general population can positively change specific parenting behavior that can reduce later risks of substance abuse.

School Programmes:

- **Principle 6:** Prevention programmes can be designed to intervene as early as preschool to address risk factors for substance abuse, such as aggressive behavior, poor social skills, and academic difficulties.
- **Principle 7:** Prevention programmes for elementary school children should target improving academic and social-emotional learning to address risk factors for substance abuse, such as early aggression, academic failure, and school dropout. Education should focus on the following skills.

  • Self-control;

- Emotional awareness;
- Communication;
- Social problem-solving; and
- Academic support, especially in reading.

- **Principle 8:** Prevention programmes for middle or junior high and high school students should increase academic and social competence with the following skills: study habits and academic support; communication; peer relationships; self-efficacy and assertiveness; drug resistance skills; reinforcement of anti-drug attitudes; and strengthening of personal commitments against substance abuse.

Community Programmes:

- **Principle 9:** Prevention programmes aimed at general populations at key transition points, such as the transition to middle school, can produce beneficial effects even among high-risk families and children. Such interventions do not single out risk populations and, therefore, reduce labeling and promote bonding to school and community.

- **Principle 10:** Community prevention programmes that combine two or more effective programmes, such as family-based and school-based programmes, are more effective than a single programmes alone.

- **Principle 11:** Community prevention programmes reaching populations in multiple settings—for example, schools, clubs, faith-based organizations, and the media—are most effective when they present consistent, community-wide messages in each setting.

Prevention Programme Delivery:

- **Principle 12:** When communities adapt programmes to match their needs, community norms, or differing cultural requirements, they should retain core elements of the original research-based intervention which include:
  - *Structure* (how the program is organized and constructed);
  - *Content* (the information, skills, and strategies of the programme); and
  - *Delivery* (how the program is adapted, implemented, and evaluated).
- **Principle13:** Prevention programmes should be long-term with repeated interventions (i.e., booster programs) to reinforce the original prevention goals. Research shows that the benefits from middle school prevention programs diminish without follow-up programmes in high school.
- **Principle 14**: Prevention programmes should include teacher training on good classroom management practices, such as rewarding appropriate student behavior. Such techniques help to foster students' positive behavior, achievement, academic motivation, and school bonding.
- **Principle 15:** Prevention programmes are most effective when they employ interactive techniques, such as peer discussion groups and parent role-playing, that allow for active involvement in learning about substance abuse and reinforcing skills
- **Principle 16:** Research-based prevention programmes can be cost-effective. Similar to earlier research, recent research shows that for each rupee invested in prevention,

a savings of up to Rs 500 in treatment for alcohol or other substance abuse can be seen.

Preventive Interventions:

The best approach to prevention is to begin early to reduce emerging behavioral and emotional problems in youth. Longer lasting results can be obtained from changing school, community, and family environments that promote and maintain substance problems in youth. Communities need nurses and other health care providers who are knowledgeable about substance abuse prevention and who can advocate for the implementation of prevention programs with proven effectiveness.

Many communities across the country have taken positive steps to combat the problem of substance abuse. Examples include alcohol and drug-free school parties, smoke-free buildings, and drug courts. Reducing access and demand are important public health strategies. Raising the minimum drinking age to 21 was found to decrease alcohol use by 25% in those 18 to 20 years old, along with a reduction in related accidents and problems. In contrast, laws prohibiting cigarette sales to minors have not resulted in decreased use. Youth simply get older friends to make purchases for them.

Media campaigns provide needed information and can slowly affect community norms. Efforts spearheaded by citizen groups, such as Mothers against Drunk Driving (MADD), can have a positive impact as well, whereas warning labels on alcohol or tobacco appear to have little impact on behavior change.

Major strategies for the prevention substance use are:

- **Supply reduction** (policies and activities aimed at minimizing the availability of alcohol and other substances to people
- **Demand reduction** (aimed at decreasing the internal need or demand for the substances by the people).
- **Harm reduction**, which tends to minimize the harm resulting due to substance use, and thus acts at the levels of secondary and tertiary prevention.

Level of substance abuse prevention:

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Primary Prevention. Primary prevention aims to prevent the nonusers from initiating use and to prevent the individuals who are experimenting with substance from progressing and chronic and abusive use of substances. This may include preventing substance use among children and adolescents. School health nurses can be involved in education efforts in the schools. Family strengthening strategies are key to preventing problems, as are social competency programs.

Social competency skills

- Provide love and affection to a child
- Let the child learn how to face the problems rather than avoiding it, so use problem-solving approach.
- Constant observation of children company and peer group.
- Strengthen interpersonal and social skill in individual this lead to increased self-esteem and positive self-concept.

Family counseling: - Parental counseling and guidance regarding rearing and upbringing of their children and avoidance of neglect and rejection in their case. The parents should be helped to look at the way of modeling their

children and bringing about changes if necessary.

1 Alert parents for symptoms of maternal depression and sign of child battering and abuse.
2 Educate parents about childhood growth and development.
3 Childrearing practice i.e. rewarding and punishment.
4 To develop internal control or social consciences rather than punishment.
5 Reduce the disorganization of family.
6 Develop a relationship of support and assistance to child
7 Identify the family hero, the scape goat and the lost child.
8 Improve the living conditions.

Tips For Parents· Talk with child about alcohol and other substances.

- Listen to child
- Help child to feel good about him or herself.
- Help child to develop strong values
- Be a good role model or example in your own use of alcohol, other substances or tobacco
- Help child to deal with peer pressure
- Set firm no use rules about drinking and other substance use by the children
- Encourage healthy, creative activities.

School Education programs*:*

- Develop educational program for teachers so that they can better help their students with the question of drinking alcohol and substance abuse.
- More recreational facilities
- To develop positive coping mechanisms e.g. sublimation

Legal approach

- Strict laws and punishment against drug peddling
- Dry days and dry areas
- Increase the age for consumption of alcohol
- Strict punishment for driving while drunk.

Advertising Policies:

- Advertising policy should take into consideration all ad venues to which people are exposed, including Magazines, TV, in-store displays, and concession stands at sports events and concerts.
- Given the high rates of beer advertising awareness among adolescents watching televised sports, the current practice of airing frequent beer ads during such programming warrants examination.
- Youth reactions to specific such ads should be examined on a regular basis, by advertisers and by policymakers, so that ads particularly appealing to young people can be identify.
- Warning labels on the containers on the substances.
- Negative propaganda for use of alcohol or other substances and message can be disseminated through radio or television, posters on important public places.
- Pamphlets can be placed in areas like local health clinic, hospital waiting rooms, schools, grocery stores.

Secondary Prevention. Secondary prevention involves screening and treatment to minimize the health and social consequences of substance abuse. The efforts are aimed at people with mild to moderate drinking problems. Several brief therapies have evolved to address their special

needs. These range from simple advice to stop drinking to more elaborate programs involving early identification presentation of assessment findings, education advice regarding the need to reduce drinking with an emphasis on personal responsibility self-help manuals, and periodic follow-up. People with mild to moderate drinking problems are increasingly being referred to treatment programs through the courts after drunken driving charges. Nurses should be non-defensive, non-judgmental and accepting but firm.

- She should maintain an empathetic approach
- She should have high degree of alertness, tact and skill
- She should use approach of hopefulness, caring and supportive but firm.
- She should use appropriate motivational technique depending upon patient's motivational level.

Tertiary Prevention. Tertiary prevention is aimed at preventing relapse of those who have already been treated for substance use problems. It involves decreasing the complications of substance use. Medical and psychiatric treatment settings still serve a major role here, as do more current case management, community outreach, and dual diagnosis programs.

Policy approaches often include legislation to reduce negative consequences of using substances, rather than the use itself. This approach is called harm reduction. It includes efforts to reduce the effects of drunkenness on oneself and others such as that occurring through car accidents, drowning, and family disputes. It also can include providing public education to increase the number of designated drivers, offering rides to incapacitated friends, using seat belts and arranging sleepovers after parties involving alcohol.

Self-help groups:

"Self-help" group and therapeutic communities, attempt a complete life style change with abstinence as a goal. These are non profit, non governmental organizations and may provide support to user and his family all together.

Methods and media for health education:

Media has touched and deeply affected the lives of people worldwide, particularly the importance of reaching the public through these venues has concentrated on three fronts: to simplify, produce and disseminate health messages that are understandable and appealing to all media outlets, public and stakeholders. Following are the some of the important methods and medias for public education regarding the promotion of health and prevention of the substance abuse.

- Audio-visual publicity
- Development and distribution of print materials
- Press advertisements
- Out door publicity
- Anti-substance awareness campaigns and
- Awareness programs in schools and colleges

Basic information dissemination is a cheap, quick and useful method of intervention. Its most common forms are:

- Leaflets, fliers or posters containing clear and simple messages.
- Other mediums such as fact-sheets, comics, street plays, theatre, public meetings,

workshops, and video can also be employed.

More sophisticated forms of information delivery are sometimes referred to as social marketing. These are based on the recognition that:

- One-time or limited exposure to information is less successful than interventions, which reinforce positive behaviors or values.
- A single message is insufficient to reach the multiple and diverse communities who may engage in health risk behaviors
- The adaptation of commercial marketing techniques can improve the analysis, execution and evaluation of program designed to facilitate behavioral change.

Health education is a core element of most intervention strategies. It can be used to:

- Provide accurate and essential advice about the harms of substance use, problems stemming from substance use, harmful effects of IDU, including adverse health consequences.
- Inform people and organizations about important services available for dealing with substance use and related adverse consequences.
- Promote or defend key concepts and interventions (for instance, preventing HIV and other blood borne pathogens among substance users).

Providing information alone is not enough: individuals also have to be in a position to act on the knowledge they possess. Interventions should target to change the behavior of an individual.

Educational programs can also be conducted in a range of other locations including the family, residential homes, criminal justice system, brothels, and the workplace. Developing programs that reach at risk groups is a challenge.

Community Based Action: Many people affected by substance use and related consequences may have limited contact with existing health and prevention organizations. Innovative methods are needed in order to reach the populations most likely to be affected.

Outreach involves entering settings where those engaging in risk behaviors gather, and distributing health education and prevention materials through one-to-one interaction.

Peer education was developed in the recognition that those engaging in risk behavior (e.g. street children and substance users) could act as effective prevention advocates in their own social networks.

Community Based Nursing Interventions: In community based approach nurse need to implement following interventions:

- Identification of people who have risk factors through social networks and multiple entry points.
- Educating the people about their prescription.
- Educating the public about the addictive, synergistic and antagonist effect of substances with each other and with alcohol.
- Build protective factors by giving healthy prevention messages
- Participation in community and other activities
- Home visits and follow-up (family counseling)
- **Motivational counseling:**
    - Express empathy through reflective

listening

- Develop discrepancy between patients' goals or values and their current behavior.
- Avoid argument and direct confrontation
- Roll with resistance
- Support self-efficacy

- Involvement of family, ex-users and volunteers
- Social reintegration of cured substance abusers.
- Advocacy with government officials on policy matters
- Promotion on healthy lifestyle
- Stress management training.

The community based nursing approach must include all the steps of the nursing process; assessment, planning, implementation and evaluation. The evaluation of the community based approach based on accomplishment of the expected outcomes and short-term goals. The nurse and patients with a team together should implement the program in achievement of expected outcomes and goals.

Suggested reading material :

1. Stuart WG, Laraia TM. Principles & practice of Psychiatric Nursing. 8th edition. St. Louis: Mosby Publication 2005.
2. Sadock JB, Sadock AV. Kaplan & Sadock's Comprehensive Textbook of psychiatry, 8th edition. Philadelphia: Lippincot Williams & Wilkins Publication. 2005.
3. Park K. Park's Textbook of Preventive and Social Medicine. 18th edition. Jabalpur: Banarsidas Bhanot Publishers.2005.
4. Galanter M, Kleber HD, Eds. The Ameri-can Psychiatric Press Textbook of Substance Abuse Treatment. American PsychiatricPress, Washington D.C. 1999.
5. Lowinson J, Ruiz P, Millman R, Langrod J. Substance abuse, a comprehensive textbook,4th edn. Baltimore: Lippincott Williams andWilkins, 2005.
6. McGrady BS. & Epstein E. Addictions:A Comprehensive Guidebook. New York:Oxford University Press, 477-498.Diagnostic and Statistical Manual of Men-tal Disorders, Fourth Edition, (DSM-IV), Text Revision,
7. American Psychiatric Association. PracticeGuidelines for the Treatment of Patients with Substance Abuse Disorders: Alcohol, Cocaine, Opioids. American Journal of Psychiatry 1995, 152 (Suppl.): 1-59.
8. Kumar, S.M., S. Mudaliar, S.P. Thyagarajan, S. Kumar, A. Selvanayagam, D. Daniels (2000): 'Rapid Assessment and Response to Injecting Substance Use in Madras, South India.' *International Journal of Substance Policy,* 11: 83-98.
9. Latkin, C., W. Mandell, M. Oziemkowska, D. Vlahov, D. Celentano (1994a): 'The Relationships between Sexual Behavior, Alcohol Use, and Personal Network Characteristics among Injecting Substance Users in Baltimore, Maryland.' *Sex Trans Dis,* 21: 161-67.
10. Singh, M. (1998): 'Making Target Communities and Workplaces Substance Free in India.' In V. Navaratnam, A. Abu Baker (Eds). International Monograph Series Centre for Substance Research USM, Pulau Penang: 21-29.
11. Sullivan E.J. Nursing care of patient with substance abuse. Mosby : 274-284

Suggested slide material

Slide 1

Introduction and basic concept

- Substance abuse is emerging as an epidemic.
- There are evidences of increased prevalence of substance abuse in society.
- Comprehensive substance abuse prevention require multiple programme components that address risk factors across at least four groups:
  - Individual
  - Family
  - peer group
  - Community (school, workplace and local neighborhood).

Slide 2

Screening tools for surveillance

- Screening may including biophysical investigations (like blood and urine tests) or psychosocial surveys.
- Important screening tools are:
  - Adolescent Drinking Inventory (ADI)
  - CRAFT approach
  - Substance Usage Screening Inventory (DUSI)
  - Problem-Oriented Screening Instrument for Teenagers (POSIT)

Slide 3

Community based nursing interventions

1. Identification of people who have risk
2. Build protective factors by giving healthy prevention messages
3. Participation in community and other activities
4. Home visits and follow-up (family counseling)
5. Motivational counseling
6. Involvement of family, ex-users and volunteers
7. Social reintegration of cured substance abusers.
8. Promotion on healthy lifestyle
9. Advocacy with government officials on policy matter

- **Target Groups for surveillance:**
  - Adolescent children in schools,
  - Underprivileged/ slum population
  - School dropouts,
  - High rate of consumption of legal substances
  - Migrant workers,
  - Substance traffickers/net workers
  - Homeless,
  - Sex workers

Slide 4

Prevention principles & interventions

- There are various principles under risk factors and protection, prevention planning, family, school and community programs.

Prevention interventions:

- Primary Prevention
- Secondary prevention
- Tertiary prevention

Slide 5

Methods and media for health education

- Audio-visual publicity
- Development and distribution of print materials
- Press advertisements
- Out door publicity

Substance Abuse in Vulnerable Populations

16

Kanwaljeet Kaur Gill

Summary: Substance abuse in vulnerable populations tend to be higher and all aspects of management are different including initiation, course, complications and outcome. This chapter deals with prisoners, elderly, women, neonates and health professionals. It discusses etiology, prevalence, complications and management principles in these groups.

Section I: Substance abuse in offenders, handicapped and homeless

Introduction:

Offenders, homeless and handicapped are a vulnerable group in which use of illict substances are a demonstrable problem. Substance use tends to augment involvement in crime and is more common among repeated offenders. A history of substance use also predicts various form of maladjustment in this group.

Presence of economic disparity and lack of moral sense and other factors cause a rise in crime and substance abuse. Homelessness and physical handicap have a plethora of mental health and social difficulties and high level of stress leading to substance abuse.

Epidemiology

Crime has increased rapidly during the past few decades. Many studies suggest that the prevalence rates of substance abuse and mental disorder are considerably higher among this vulnerable population than in general population.

Cote and Hodgins found a life time prevalence of substance abuse to be 62% in those suffering from acute psychotic disorders (APD) and 49% among prisoners.Alcohol was the commonest substance being abused (67%). Several researches reported relationship between psychopathy and violent crime.

Etiology

Substance abuse disorders are caused by multiple factors including genetic vulnerability, environmental stressor, social pressure, individual personality and presence of psychiatric problem.

1 **Biological Factors:**

- Hereditary factor
- Biochemical factors (disturbance in neurotransmitters)
- Brain pathology
- Low level of intelligence

2 **Personality factor:**

- Antisocial personality
- Borderline personality

3. **Psychological factor:**

- Label of antisocial personality.
- Low self esteem.
- Pathogenic family pattern.
- Sociopathic parental model.
- Fear, tension, irritability.

4. **Social and cultural factor:**

- Poverty.
- Unemployment
- Illiteracy
- Social maladaptation
- Social rejection.
- Criminality and gang culture

Management of Substance use disorder:

Substance use treatment depends on variety of factors like age, overall health, and the substance being abused.

1. Assessment: A complete history of physical health, family and social back ground and occupation should be collected.The patttern of substance use also should be identified.
2. Screening: Identify the symptoms of use in the individual by accurate screening. Symptoms are:
   - Weight loss
   - Poor hygiene
   - Malnutrition
   - Red eyes
   - Loss of appetite
   - Insomnia, tremors, slurred speech
   - Physical injury
   - Harm to self and others.

It is important for caretakers and nurse to identify the specific symptoms of substance abuse.
A variety of treatment programme for substance abuse are available usually based on type of substance abused.

3. Detoxification: Based on the substance being abused.
4. Individual and family therapy often recommended to address the developmental, psychosocial and family issues that may have contributed to and result from the development of substance abuse disorder.

Nursing Intervention:

1 Develop trust and accept the patient as an individual.

2 Collect information regarding type of substance used, time and amount of consumption.

3 Identify the types of treatment required and explain the treatment options to patient and refer him for treatment.

4 Set limits on patient's manipulative behaviour.

5 Explain the patient about detoxification and withdrawal symptoms and their management.

6 Assess the motivational level and and explain responsibility of his maladaptive behaviour.

7 Patient should able to realize his nature and harmful use of substances.

8 Assess the patient anxiety level and provide individual support and therapy.

9 Nurse should observe the sleeping pattern and nutrition level of patient and provide education and support to relieve this problem.

10 Involvement and support of family members is important. The nurse should facilitate the involvement.

11 Prevention

There are some major approaches to prevention.

i) Community based prevention programmes usually involve the media and are aimed to educate community and the group.

ii) Family focused prevention involve family skills training, parents training and social skills training.

Section II:
Substance abuse in older adults

Substance abuse disorder in older adults has been given comparatively little attention, as prevalence studies have focused mainly on younger persons. Age related stress such as loss of a spouse, retirement or loneliness may trigger substance use. Older adults who frequently suffer from one or more chronic diseases often require medication. Episodes of acute illness may require additional medications. Elderly may purchase over the counter (OTC) drugs to remedy common ailments related to aging, such as constipation, sleep disturbance and joint pain. The complexities involved in the self-administration of medication may lead to a variety of misuse situations such as taking too much or too little medication, combining alcohol with medication, combining prescribed medications with over the counter drugs, taking medications at the wrong time, or taking someone else's medication.

Elderly alcohol abusers include those who began excessive alcohol use later in life. Many late onset alcohol abusers are widowers. Alcohol interacts with various drugs, altering the normal effect of the medication on the body. In an older adult who has a chronic illness and takes many medications, the combination of drugs and alcohol can lead to serious drug overdose.

Etiology: Researchers have long been asking the questions of what causes addictive behavior and why some people feel compelled to keep abusing substances they know are harmful to them. Three factors are responsible for this namely: Biological, Psychological and social factors.

Biological:

1 Genetic predisposition.
2 Low levels of monamine oxidate enzymes.
3 Inadequate self-care abilities especially in the old age persons.
4 Variants in liver enzymes that metabolize substances either slowly or too fast.
5 Physical symptoms like pain, coughing, insomnia and stress related illness.

Psychological:

1 Low self esteem.
2 Self-derogatory.
3 Increased need of power.
4 History of antisocial activity.
5 Emotional component like fear, tension & irritability.

Social:

1 Dysfunctional family dynamics.
2 Social Maladaptation.
3 Loss of life partner (specially in old widowers)

The modern disease model of substance abuse is truly a biopsychosocial one - it encompasses the body, the mind, and society's influences in studying the disease and formulating treatment.

Nursing Management:

Assessment: As people age their ability to absorb, metabolize and dispose off drugs changes along with some changes in their normal physiology due to aging, making them at risk of harmful reactions which include the following:

1 Changes in sleeping and eating patterns.
2 Confusion or disorientation.
3 Malnutrition.
4 Poor hygiene.
5 Neglecting one's appearance.
6 Slurred speech.
7 Incontinence or difficulty in urination.
8 Blurred vision or dry mouth.
9 Tremors.
10 Shakiness.

It is important for doctors, nurses and family members to monitor older adults, especially since they may take several medications at once in addition to herbal remedies. Collect a detailed history of physical health social cultural background and family support.

Nursing Intervention:

1. Show warmth, support, respect and understanding in communication with patients.
2. Provide a menu of treatment options, from which patients may pick those that seem more suitable.
3. Include a clear recommendation or advice on the need for change in a supportive and concerned rather than judgmental manner.
4. Explain them that anxiety is a symptom of withdrawal and is usually time limited.
5. Observe sleeping behavior of the patient because sleep is often disturbed. Sleep deprivation, contributes to anxiety.
6. Check for apprehension and a change in vital signs.
7. Monitor for hallucination because alcohol use can cause hallucination in elderly.
8. Take care of nutrition and safety measures

especially for the elderly patients.

9. Give health education to the family members and encourage patient to follow up with treatment once he is detoxified.
10. Include the patients in occupational therapies so that their mind gets diverted.

Section III: Substance abuse in women/ pregnant women

Women with substance abuse disorders differ from men in several ways. They experience more difficult physiological and psychosocial courses, and are more likely to suffer from a comorbid depression and suffer from more shame guilt, interpersonal problems and financial difficulty than men. Due to poor socialization, women are also more likely to be in situations of helplessness than men. Although women have special treatment needs, they are less likely to receive treatment.

For a pregnant woman, substance abuse is double danger. Firstly substances may harm her own health, interfering with her ability to support pregnancy. Second, some substances can directly impair foetal development.

Epidemiology

The prevalence of alcohol abuse in women is almost half that in men in world. In India, chewing tobacco is common practice among many women across the country. National multi-centered studies in early 1980s reported negligible substance use rates among women. The findings in 1990s also indicate that substance abuse was predominantly male phenomenon and that 92 to 94% of women had never used substances in their lifetime.

Etiology

1. Genetic differences: Genetic research is demonstrating a link between substance abuse in parents and similar occurrence in their offspring.

2. Social factors: The stressful life style, poverty, hopelessness and frustration lead to substance abuse. Divorce, broken family, death of spouse and lack of a meaningful relationship are also contributory factors. Childhood sexual abuse increases the risk for substance abuse.

3. Psychogical factors: Women substance abusers use substances to cope with low-self esteem, personal stress, and external locus of control.

4. Family system: The difficulties in marital relationship results in pain and the vulnerable spouse begins to use chemicals to offset the frustration. This, in turn, creates new disharmony. Soon the family is in rigid disorganization and problem solving becomes difficult and one family crisis follows another.

Management

Assessment: For any woman with substance use problem, the following questions need to be answered.

1) Does the woman have a significant problem related to substance use?
2) What is the severity of substance use and are there any complications?
3) What kind of treatment will be required?

Screening

The goal of screening for substance abuse disorders is to identify individuals who are at risk of developing substance related problems and who need further assessment to diagnose or treat their substance-abuse disorder.

Nursing intervention

Since substance abusers differ greatly in respect to both severity of dependence and factors contributing to their abuse.No one type of treatment program will work for every individual. Often several approaches may be required. Nursing interventions vary depending on the nature of the current problems and their severity. Monitoring vital signs and neurological functioning are necessary, where as when the substance abuse problem is secondary to other physical or psychiatric problems, education of patient and family may be priority.

Treatment approaches to substance dependence in women

1 Establishing confidentiality and rapport, being non-judgmental.

2 Assessment of severity of problem.

3 Educate ill effects of substance on her and on her family and fetus if she is of reproductive age.

4 Feed back of damage due to substance.

5 Help in reduction or abstinence and in handling high-risk situations.

6 Increase self-esteem.

Intervention

Interventions include: -

1) Pharmacological Treatment

2) Non-pharmacological treatment

1. Pharmacological treatment

Most of patients with substance use disorder will need pharmacotherapies to treat or prevent withdrawal symptoms to promote abstinence and prevent relapse. (Please refer chapter on pharmacologic treatment of substance abuse)

2. Non pharmacological treatment

A number of psychosocial approaches have received controlled empirical evolution in treatment of substance-use disorders.

Low intensity approaches: -
These include brief motivational interventions and referral to "Self-help" groups.

Brief interventions are used as an approach in individuals who are not dependent on a substance but whose use is considered harmful or problematic. These individuals are not usually "patients" as they are identified in primary care, legal or occupational settings and not seeking treatment for substance abuse. The essential ingredients of such intervention include feedback of personal risk, personal responsibility for change, and advice to change, menu of alternative change options, therapist empathy and facilitation of self-efficacy. Self-help group is fellowships of individuals with common problems. Referral to these groups via "Alcoholics anonymous" (AA) and "Narcotics anonymous" (NA) are commonly used strategies in addition to other approaches. Both are dealt with in detail in other sections of this manual.

High Intensity approaches: -The above approaches may not be effective for severe or complicated cases and referral to specialty substance-abuse treatment may be required. This includes cognitive-behavioral interventions, marital and family therapies, short-term psychodynamic and interpersonal approaches and disease model approaches.

Section IV: Effects of maternal substance abuse in neonates

Substance abuse is a clearly documented threat to both mother and fetus. Infants who were

exposed to substances throughout pregnancy are reported to have significant decrease in mean birth weight, length and head circumference. The risk of pre-maturity can be reduced by a factor of two to three with adequate prenatal care.

Some substances can be harmful when used at any time during pregnancy, others however, are particularly damaging at specific stages.

- **At the stage of organ formation:**

  Most of the body organs and systems of foetus are formed within the first ten weeks or so of pregnancy. During this stage, some substances and alcohol in particular can cause malformations of such parts of developing fetus such as heart, the limbs, and the facial features.

- **At the stage of prenatal growth:**

  After about the tenth week, the fetus should grow rapidly in weight and size. At this stage, certain substances may damage organs that are still developing such as eyes, as well as nervous system. Continuing substance use also increases the risk of miscarriage and premature delivery. The greatest danger substances pose at this stage is their potential to interfere with normal growth. Intrauterine growth retardation is likely to result in a low birth weight baby - a baby born too early, too small, or both. Low birth weight babies require special care and run a much higher risk of severe health problems or even death.

- **At the stage of birth:**
  Some substances can be especially harmful at the end of pregnancy. They may make delivery more difficult or dangerous, or they may create health problems for the newborn baby.

Alcohol:

Alcohol is one of the most dangerous substances for pregnant women, especially in early weeks. In the mother's body, alcohol breaks down chemically to a cell-damaging compound that is readily absorbed by fetus. Heavy drinking during early pregnancy greatly increases the risk of a cluster of birth defects known as fetal alcohol syndrome. This cluster includes a small skull abnormal facial features and heart defects, often accompanied by impeded growth and mental retardation. Heavy drinking in late pregnancy may also impede growth. Furthermore the functional integrity of basal ganglia is affected by prenatal alcohol exposure results in Down's syndrome in child.

Tobacco:

Smoking during pregnancy appears to raise the risk of miscarriage. But the primary danger is hindered fetal growth, Nicotine depresses the appetite at a time when a woman should be gaining weight, and smoking reduces the ability of the lungs to absorb oxygen. The fetus, deprived of sufficient nourishment and oxygen, may not grow as fast or as much as it should.

Cocaine and Methamphetamines:

These are powerful stimulants of central nervous system. They suppress the mother's appetite and exert other forces on her body, causing the blood vessels to constrict, the heart to beat faster and blood pressure to soar. The growth of fetus may be hindered, and there are higher risks of miscarriage, premature labor and a condition called abruptio placenta. If these substances are taken late in pregnancy, the baby may be born substance dependent and suffer withdrawal symptoms, such as tremors, sleeplessness, muscle spasms and sucking difficulties. Some

experts believe learning difficulties may later develop.

Heroin and other Narcotics:

Heavy Narcotics use increases the danger of premature birth with such accompanying problems for infant as low birth weight, breathing difficulties, low blood sugar and bleeding within the head. The babies born to opiate dependent mothers show opiate withdrawal when new born. IDU mothers may become infected with HIV virus from contaminated needles and have high risk of passing the virus into their babies.

Inhalants:

At least one inhaled substance has been clearly connected with birth defects. The organic solvent toluene, widely used in paints and glues, appears to cause malformations like those produced by alcohol.

Nursing Assessment: -

The most accurate way to identify a woman who is using substance during pregnancy is to ask her. There are two critical reasons for this. First, urine testing is only an indicator of substance use within the last 48-72 hours. The more accurate test of hair sampling is expensive and not widely used. Meconium testing is also expensive and does not prevent problems during pregnancy. Second, an expectant mother's greatest desire is to have a normal and healthy baby. The stigma associated with substance use may require that nurses ask women more than once about substance intake.
Assessment of newborn: -

1. Review the child's growth pattern- Height, Weight, and Head circumference
2. Look for neuro-developmental concern- Head Circumference, Delay in speech development, altered motor skills, Sleep disturbances, reduced attention and learning deficits.
3. Other physical abnormalities -facial features, cardiac anomalies and function, limb deformities and ophthalmologic problems.

Intervention:

1 Ensure exclusive breast-feeding during first 6 months of life.

2 Adaptive behaviors also are important in determining the long terns effects associated with FAS. Adaptive behaviors illustrate how a child performs daily activities that are required for personal and social competence. These behaviors may be medical, physical social, emotional or familial and include skills used daily such as walking, talking, dressing and completing household chores.

3 Pediatric nurses follow a child from birth to adolescence in clinical and outreach setting and are in a unique position to recognize delays in development or central nervous system dysfunction.

Supporting families: -
Research focused on parents raising a child with disabilities has increased over the past three decades. Professional and peer support of families are seen as critical to decreasing stress and increasing resilience in families.

Conclusion

1. Extent and severity of substance use problem among offenders, physically handicapped and homeless is relatively unknown. Early identification, effective treatment availability and appropriate brief

nursing intervention help to decline the problem.

2. Older people are not immune to the development of substance misuse and dependence on legal and illicit substances as well as prescribed and "over the counter medication". The nature and extent of the problem and associated physical and psychological co-morbidity is greatly underestimated.
3. Prescribed medication should not be shared and relatives or friends should be aware of the risk of recommending or giving potentially addictive substance to older people.
4. General and specialist physicians and nurses have a responsibility in the detection and identification of the severity of the disorders and associated so that appropriate or specialist interventions can be efficiently accessed and implemented.
5. Physicians should be aware of the local arrangements regarding referral of the elder person for specialized help and the process should be a rapid as possible.
6. It should be emphasized that once recognized older addicts have a good chance of reducing or abstaining.
7. Substance abuse and dependence is often associated with other co-morbid conditions in women. These disorders are further complicated by pregnancy. If a substance dependent woman became pregnant, it affects both mother and baby.
8. Some substances can be harmful when used at any time during pregnancy, others, however, are particularly damaging at specific stages.
9. Clinical research on the treatment of this population has been limited. Along with pharmacological approach other approaches are also necessary such as family therapy, marital therapy, cognitive behavioral interventions etc. for treatment and care of substance abuse among women

Section V: Substance abuse in health care professionals

Introduction

Health care professionals are said to be at risk of substance misuse. Substance misuse by health care professionals raises many concerns, including the threat to patient care. Self medication is common health care professionals as they have relatively easy access to psychoactive substances. Many have stress due to frequent contact with illness and death and disrupted sleep and social life. In addition to negative effects on the individuals physical and mental health and negative effect on their families, substance misuse may threaten the ability to provide adequate patient care. Those in specific specialties are noted to be at higher risk, which include emergency medicine, psychiatry and anesthesia. Recognition of the risk of substance misuse should be explicitly included early in the training of health care workers. Special treatment programme should be holistic in approach and should not concentrate solely on substance misuse issues but include the treatment of depression, anxiety, sexual and adjustment disorders.

Epidemiology:

In an Australian study, 42.1% of male doctors and 52.9% of female doctors had written prescriptions for themselves in the past years. A recent conference stressed that all medical practitioners are at risk of substance misuse problems.

Professionals from several specialties were found to have preferences for specific substances: physicians working in emergency, anesthesia and chronic pain clinics are likely to use opiates. A strong association was found between Psychiatrists and benzodiazepine use, family practitioners and obstetricians had a significantly higher prevalence than all physicians for narcotic use.
In one study, illicit substance use was reported by 33.1% of medical students. Cannabis was the most commonly used substance (28.3% of men and 35.6% of women).

In 1987, The American Nurses Association estimated that 10-20% of nurses had substance abuse problems, and that 6.8% of nurses were impaired because of their alcohol and other substance abuse.

Piko/conducted a cross-sectional study among 218 female nurses in Hungary. She found significant associations between the use of alcohol, tranquillizers and sleeping pills by stress level.

Etiology

A number of factors have been implicated in the predisposition to abuse of substances. At present, there is no single theory that can adequately explain the etiology of this problem.

Biological factors

An apparent hereditary factor is involved in the development of substance-use disorders. This is especially evident with alcoholism, less, with other substances. Other studies have shown that male biological offspring of alcoholic fathers have a four times greater incidence of alcoholism than offspring of non alcoholic fathers.

A second biological hypothesis relates to the possibility that alcohol may produce morphine - like substances in the brain causing euphoria that are responsible for alcohol addiction.

Psychological factors

Having once experienced the gratification of a supportive, substance induced pattern of ego functioning, users attempt to repeat this satisfying experience as a solution to their own conflicts

Research suggests that certain personality traits may play an important part in both the development and maintenance of alcohol dependence. Characteristics that have been identified include impulsivity, negative self concept, weak ego, low social conformity, neuroticism and introversion. Substance abuse has also been associated with antisocial personality and depressive response styles.

Sociocultural factors:

Various studies have shown that children and adolescents more likely to use substances if they have parents who provide a model for substance use. Peers often exert a great deal of influence for the use of substances for the first time. This is particularly true in the work setting. In situations where drinking is valued and is used to express group unity with plenty of leisure time available, chances of alcohol abuse are high.

Another important learning factor is the effect of the substance itself. Many substances create a pleasurable experience that encourages the user to repeat it.

Clues for substance abuse by health care professional :

1) Has extreme interest in giving the medications and in carrying the narcotic box keys. The dependent nurse tends to hang around the unit when they are not on duty, since this is the source of their supply.
2) Medicates another nurse's patient.
3) Always uses the maximum amount of PRN dosage when the other nurse thinks it's useless. The PRN medications present the most opportunity to divert drugs.
4) Patient complains that the sedation given on one shift does not seem to be as effective as on others.
5) Patients complain that they did not receive a sedative when the record indicates they did.
6) Physical changes in multiple dose vials such as cloudiness or lightness in color. When stealing by substitution, the nurse will remove part of the drug and substitute with normal saline or distilled water.
7) Frequent wastage by one nurse such as spillage or drawing blood into the syringe.
8) Supplies in the emergency room seem to be missing, these may be easily diverted, as records are sometimes less accurate.
9) Entire stock of one drug may disappear from the pharmacy, along with the sign out sheet. This may be written off as an accounting error.

Clues apparent in job interviews

1) Hazy references.
2) History of frequent job changes.
3) Signs in Physical appearance.
4) When nursing shortages are acute, supervisors tend not to verify references.

We can manage these workers as follows:

Medical Managements (Psychopharmacology):

Several medications can help an individual overcome the symptoms of substance withdrawals. These are dealt with in detail in another section of this manual..

Nursing management:

General Interventions: Primary nursing intervention in a substance dependence treatment program are helping the patient acknowledge the substance dependence and facilitating the patient's development of effective coping skills in this type of program. The nurse works as an integral part of the treatment team in providing consistent limits, structured support, education and referrals for continued support.
In case of Alcohol dependence, treatment goals focus on facilitating the Patient's insight, fostering self-esteem, and helping the patient develop coping and problem- solving skills.

Management programmes for substance dependent health care professionals:

Programmes were organized either at local, regional or national levels.

One study concluded that the need for dedicated services was justified in order to protect patients and confirmed that doctors are a scarce resource with a high morbidity rate. A local support network can be established as present in UK. (British Medical Association Conuselling Service for Sick Doctors Trust.)

Conclusion:

There is a need for future research to focus on high-risk groups. In order to understand the impact of substance misuse in the population of health care workers and to make comparisons within population groups, standard questions about substance misuse should be included in health and lifestyle studies. Investigations should move beyond asking about alcohol and nicotine only. Longer term follow up studies would provide more information about co-morbidity, relapse rates and the determinants of relapse, thus contributing to the planning of effective treatment programs.

The need for special services for addicted doctors has been highlighted. Reporting trends in the misuse of substances by healthcare workers need to reflect current prescribing patterns, current fashions in the misuse of substances, changes within the specialties and gender differences.

Health care workers should be alerted to the risks of substance misuse from early on in their training. Although healthcare settings offer more opportunities for access to substances with abuse potential and also for treatment, the latter may be much more difficult to access.

Suggested reading materials

1. Bennett Jennifer, O' Dononan Diarmuid (2001). Substance misuse by doctors, nurses and other healthcare workers. current opinion in Psychiatry. 14(1), 95-99.
2. Boyd Mary Ann (2001) "Psychiatric Nursing Contemporary Practice", 2nd edition, Lippincott Philadelphia New York Baltimare PP 616-654.
3. Brooder RK, Schmidt CW andBigelow GE (1992). Antisocial behaviour of interavenous substance abuser:implication for diagnosis of antisocial personality disorder, Am J of psychiatry, 148 : 482 - 487.
4. Coleman J.C. (1976): Abnormal Psychology and Modern life, 5th edition, DB Taraporevala son's publication Bombay.
5. Frisch Noreen Cavan & Frisch Lowrence E (1998). Psyctiatiric Mental Health Nuring ; Delmar publishers an International Thomson Publishing company, p 636-637.
6. Green Pat (1989). The Chemically Dependent Nurse. Nursing clinics of North America 24:1 , 81-94.
7. Hartjen, Clayton A(1977). Possible Trouble: An analysis of social problems N.V.
8. Herman H, Gorry MCP, Metis J and B.S.Singh (1991).Hidden Sever Psychiatric morbidity in sentence prisoners, Am J of psychiatry, 148 : 236-239.
9. Jagadish A. Management of Alcoholism a presentation in ICPN conference-2006.
10. Mc Fanland & Thomas (1991) Psychiatric mental Health. Nursing Application of the Nursing process. Lippincot JB, p: 523-541.
11. Sarsoza Jose F(2006): Warning war against dangerous substances; Herald of Health 97 (9): 9 -10.
12. Schultz Judith M. Videbeck Sheila L(2002). Psychiatric Nursing care Plans, 6th edition, Lippincott Philadelphia - New York, Baltimore, 125-134
13. Srinivas, K.R. Alcoholism a concern of the nation (2006). Nightingale Nursing Times 29 -32.
14. Townsend Marry C. (1999):- Essentials of Psychiatric mental health nursing, F.A. Davis Company, Philadelphia, 264 - 32.

Suggested slide material

Slide-1

Major reason of substances abuse and criminal behaviour

- Poverty
- Migration
- Unemployment
- Frustration
- Starvation

Slide-2

Incidence

- Mental Illness and substance abuse disorders are high in offenders
- Prevalence rate is 49% for substance abuse in offenders and 67% of substance abuse is due to alcohol use.

Slide-3

Etiology

- Biological Factors
- Personality Factors
- Psychological Factors
- Socio-cultural Factors.

Slide-4

Management

- Assessment
- Screening
- Diagnosis
- Detoxification
- Brief Nursing Intervention

Slide 5

Nursing Intervention for offenders and homeless with substance abuse

- Develop trust and accept the patient as an individual.
- Collect information accurately
- Explain the treatment option for patient
- Set limits
- Explanation about the treatment options.
- Assess the patient motivational level
- Create awareness about harmful consequence of substance use
- Involvement and support of family members should identify and involve them in the therapy.

Slide 6

Etiology of substance abuse in old age

Biological

Psychological

Social

Slide 7

Nursing Intervention for older groups with substance abuse

- Show warmth, support, respect and understanding in communication with patients
- Provide treatment options
- Family motivation and enhance support
- Participate in diversional activities

Slide 8

Etiology of substance abuse in women

1. Genetic differences
2. Social pressure
3. Stress
4. Family system

Slide 9

Treatment approaches to substance dependence in women

- Establishing confidentiality and rapport, being non-judgment.
- Assessment of severity of problem.
- Educate ill effects of substance to her and family and fetus
- Feed back of damage due to substance.
- Help in reduction or abstinence and is handling high-risk situations
- Increase self-esteem.

Slide 10

Substance abuse among health professionals

- Health Care Professionals are great risk to be Substance Abuse.
- Emergency Medicine, Psychiatrist, Anesthetist and nurses are in High Stress Specialties and they are more prone to be substance abuse.
- Easy availability of psychoactive substance is other reasons for substance abuse in this group.

Slide 11

Incidence of substance abuse among healthcare professionals

- In the U.S.A. 10-15% of Physician will develop Chemical dependence during the life time.
- British Medical Association estimated that one doctor in 15 could suffer from some form of dependence.
- Several Specialties were found to have preference for specific substance

Slide 12

Etiology

- Biological Factors
- Psychological Factors
- Socio cultural Factors

Slide 13

Clues for substance abuse by health care professionals

Management of substance abuse in professionals

- Assessment
- Screening
- Diagnosis
- Detoxification
- Brief Nursing Intervention

Slide 14

- Conclusion
- Future direction

Role of Laboratory Services in Management of Substance Abuse Disorders

17

Raka Jain

Summary: In recent years, the abuse of psychotropic substances is on the rise. It has become a major problem of our times, with high economic and social costs. The pattern of substance use varies from time to time depending on the availability of new illicit substances. The problem of substance abuse is of concern to health professionals, clinical chemists, toxicologists and regulatory authorities. This chapter deals with the role of the laboratory in management of substance abuse.It focuses on the need for testing, appropriate biological fluids, methods of sample collection, its storage and transportation. It briefly describes instruments currently available for assessment purposes.

WHY TO TEST

A valid assessment of substance consumption is critical for evaluating substance abuse treatment programs and treatment outcome data. Substance abusers tend to falsify their pattern of substance use. Deception, denial and minimizing the extent of substance use are common practices seen among substance abusers.

There have been concerns about the accuracy of self-reporting. It is therefore necessary to establish its validity by an independent objective method.

The testing of biological specimens for the presence of substances is the most objective means of determining exposure and for validating self-reported substance use. Such analysis helps to confirm the clinical history of substance intake, plan intervention, monitor compliance following treatment, contribute to the clarification of the medico-legal problems and also provides an epidemiological data in studying patterns of substance abuse. Thus, laboratory has a very important role in substance abuse management.

WHEN TO TEST

Testing of substances may be requested at several places. Subjects may include employed individuals, individuals seeking employment, those referred by police and finally patients in treatment programs.

ANALYTICAL ISSUES

Biological Specimens

Many biological specimens can be used for substance abuse testing. These include urine, blood, saliva, sweat and hair. Each specimen has its own advantages and limitations.

Among all the biological samples, **urine** is the preferred biological specimen for screening substances of abuse in a clinical setting. Drugs and their metabolites tend to be present in relatively high concentrations and remain detectable in urine from several hours to several days after the last use, especially in chronic users. In general, substance concen trations in urine vary with dose, route of administration, time elapsed since administration, and the individual's physiological status, which influences urine flow, urine pH and metabolism. Moreover, urine has a simpler matrix than other biological specimens, which simplifies its sample preparation and analysis. Before carrying out a urine test, it is essential to ensure that urine specimen has actually being taken from the patient who is being assessed as urine specimens can easily be tempered with by substitution, dilution or adulteration.

Blood retains the substances or their metabolites for several hours. The half-life of substances in blood is short, making blood specimens less useful for routine substance screening (though a high concentration of active substance will suggest recent usage and, sometimes, likelihood of impairment). The major concern is the invasive procedure of the collection especially from intravenous substance abusers as their veins are often thrombosed, and a greater risk of infection of staff handling samples. Additionally, it is difficult to obtain large volumes and the cost of collection and analysis is higher.

Saliva analysis is a developing technology, particularly the sample collection is relatively quick, noninvasive and the matrix has the potential to provide both qualitative and quantitative information. It is useful in determining very recent substance use. It is less prone to adulteration than urine but, substance concentrations are lower and it requires more-sensitive test methods. A disadvantage of using saliva as a matrix for substance testing is the high risk of substantial buccal contamination from certain routes of administration such as smoking, snorting, and oral administration. Also, substances are only detectable for a shorter period (1-2 days) than in urine. In addition, the method of sample collection may influence the saliva substance concentrations as a result of changes in PH and flow rate. It is not considered economically viable or practical for continuous substance use monitoring.

Sweat patch analysis of may prove to be an alternate matrix for substance testing that may provide an additional tool for monitoring substance use. Sweat patches are applied to non-hairy portions of body (e.g. abdomen) after cleansing of skin with an alcohol wipe to avoid contamination and improve adherence. The patches are tamper resistant. Since the patches are worn for up to one week, the window of detection can be longer than that provided by urine testing. The main limitation of sweat testing is that, the collection process is quite lengthy

and the production of liquid perspiration varies with ambient temperature and physical activity. Therefore, the volume of perspiration collected by the patch during the week that it is worn is unknown. This reduces meaningful (substance per milliliter of perspiration) quantitative analysis of substances detected on the patch and limits the interpretative value of a sweat patch substance test result.

Hair testing offers the largest window of detection. The standard hair test will detect substance use from 7 days to three months. The greatest advantage of hair testing is the ability to create a permanent record of substance use in the strand (shaft) of the hair. In contrast to urine samples, hair samples do not pose problems with sample substitution, adulteration, or dilution. However, hair treatments such as perming, bleaching, and straightening can reduce substance levels and can convert borderline positive results to negative results. Other disadvantages of the use of hair analysis include the sample preparation stage, which can be more labour-intensive than for urine, lack of proper quality control and expense involved.

Human Breath has been extensively used for the measurement of ethanol as a gauge of alcohol consumption. Generally the variety of instruments used to monitor breath are portable, economical and easy to use for patient sampling.

Table I. A comparison of the types of samples that can be used in substances-of-abuse testing.

Sample	Advantages	Disadvantages
Blood	• Can be used to infer impairment • Difficult to adulterate	• Short half-life of substances • Low substance concentrations
Hair	• Potential for long-term assessment of substance use	• Requires difficult analytical procedures • Substance deposition not uniform • Testing is expensive among hair types
Saliva	• Difficult to adulterate	• Low substance concentrations • Difficult to get large volumes for confirmation
Sweat	• Can monitor accumulated substance use for 3–7 days	• Requires difficult analytical procedures • Difficult to get large volumes for confirmation • Environmental contamination possible
Urine	• Noninvasive • Available in large volumes • Remains positive 2–3 days	• High adulteration potential when collection not witnessed
Exhaled Breath	• Noninvasive • Easy to test • Difficult to adulterate	• Low substance concentrations • Instant testing is required • Alcohol does not last long in breath

Specimen Collection and Transportation

Patients attending the de-addiction services may occasionally dilute their urine samples by adding tap water or some common adulterants, viz. Sodium hypochloride, table salts, lemon juice, orange juice, vinegar, ammonia water, soap solutions or caustic compounds, eye drops. These adulterants may interfere in testing and which results in false negatives or positives.

Responsibility of the Nurse:

It is very important to take the following precautions at the collection site, before the sample is sent for testing to the laboratory:

i) Container or specimen bottle must be clean, dry, unbreakable and leak proof.

ii) Urine sample should be collected under close supervision of trained personnel.

iii) There should not be any provision of sink or hot water in the toilet

iv) The staff at the collection site should check the temperature of the urine sample immediately after voiding. Freshly voided urine should have a temperature close to body temperature i.e. 33^0 C- 36^0 C and the urinary pH should range between 4.6 and 8.0. If adulteration is suspected the laboratory should be notified.

v) Minimum volume of urine to be collected is 30-60 ml.

vi) Each specimen must be clearly labeled with patient's name, date, time, ward or OPD No. to prevent intentional or inadvertent confusion.

vii) The person supervising the collection site should notify the date, time of collection of the specimen on the substance screening request form. It is also important for the collection site person to sign on the substance request form to ensure the integrity of the specimen.

viii) Each specimen should be properly sealed and transported to the laboratory to avoid pilferage. Each sample should be accompanied with the substance abuse request forms containing the details of investigations required with adequate clinical history.

Sample Storage

Proper storage of samples is important. Samples kept at room temperature for long prior to their analysis have altered pH. It changes from acidic to basic and bacterial decomposition occurs, which increases the chances of false negatives. In general, sample should be refrigerated within 12hrs of their collection preferably at minus 20^0 C. Barbiturates, amphetamines and cocaine are unstable at room temperature. Samples brought from offsite laboratories should be transported inside an ice box. Ideally, quick transport and short period of storage can significantly contribute to the quality of results.

Methodology for Detection

I) Preparation of biological samples for analysis

Biological samples are very complex multi-component mixtures. Often the analyte (substance) of interest is present in very low concentrations in the biological matrix. Sample preparation is therefore necessary to concentrate the analyte and remove the extraneous material that may interfere in the assay. Sample preparation is not required for the immunological assays. The

chief physiological methods used to isolate and enrich analytes include dilution, protein precipitation, hydrolysis, liquid –liquid extraction (LLE) and liquid –solid extraction (LSE).

II) Analytical Techniques

Various analytical procedures are available for analysis of substances of abuse. Many factors are considered for selection of method, i.e. nature and quantity of specimen, turnaround time, sensitivity required, existing facilities, available manpower, workload and economic considerations.

Substance abuse testing is a two-step process,

i) preliminary screening
ii) confirmatory analysis of the prescriptive positive and doubtful results.

Analytical methods used in most laboratories for the detection of substances are selected so as to meet the requirements for screening and confirmation. A screening test should be able to identify potential positives and should be sensitive, rapid and inexpensive whereas the confirmatory tests should be sensitive and more specific than the screening test. The Screening test generally involves immunoassays and thin layer chromatography (TLC). More specific confirmation tests used to identify substances of abuse are chromatographic techniques like gas liquid chromatography (GLC), high-pressure liquid chromatography (HPLC) and gas chromatography-mass spectrometry (GC-MS) etc. The purpose of confirmation is to eliminate any false positive results or false negative results that may have originated from an initial screening process.

Screening techniques

I) Immunoassays Immunoassays are widely used for screening of substances of abuse in body fluids. The various immunoassays operate on the principle of antigen-antibody interactions. A fixed amount of labeled substance material from the test kit (marked with a radioactive substance, enzyme, fluorescent tag, or colored particle) competes for antibody binding sites with the variable amount of unlabeled substance in the urine/serum/plasma sample. When the binding sites are saturated, the amount of either free or bound labeled substance is measured. For a bound-labeled substance, low sample-substance concentration will produce a high analytical signal; high concentration will produce a low analytical signal.

The most commonly employed immunoassays used for urine screening include methods such as radioimmunoassay (RIA), enzyme immunoassay (EIA), enzyme-linked immunosorbant assay (ELISA) and fluorescence polarization immunoassay (FPIA). Each method has its own advantages and limitations. The principal advantages of the immunological assays are ease of sample handling, rapidity of analysis and high sensitivity. These techniques do not require preliminary sample processing. Technicians can also be trained easily.

Currently, on-site devices are also available. These on-site devices cost substantially more per test but, because results can be obtained immediately by specimen collectors, they save on transportation costs. Their quick turnaround time can also help emergency room personnel make good patient-management decisions.

The most serious limitations of all immunoassays are that specificity for a substance is not absolute. Substances of similar chemical

structure may cross-react. For this reason, all negative results may be considered reliable and all the positive results may be considered ambiguous and must be re-confirmed by another non-immunological method such as TLC, GLC or HPLC etc. Further, these assays do not differentiate between substances in these classes and may cross-react with related therapeutic substances. For example codeine and poppy seeds may lead to false-positive opiate results and decongestants such as pseudoephedrine and phenylpropanolamine may lead to false-positive test for amphetamine.

The interferents do not produce a false-positive result with the chromatographic assays now employed for confirmation—a justification of the two-tiered approach to substance testing.

2) Chromatographic Technique

All chromatographic methods in use today are based on a common principle. It involves two phases i.e. stationary and mobile. Stationary phase may be solid or liquid adsorbed on an inert solid support having a large surface area and the mobile (moving) phase may be a liquid or a gas. The compounds to be separated are differentially attracted to the stationary phase because of variation of their physiochemical properties. This distinctive influence is manifested by different distance migrated. The compounds which are less strongly held by the stationary phase would tend to move faster in mobile phase and vice-versa. Identification of a compound is achieved by comparing the distance traveled by the pure known standard against the distance traveled by the unknown compounds from the biological samples (Rf) or by comparing the time taken to migrate a specified time (retention time) of pure known standard with that of unknown sample. There are various types of chromatography depending upon the stationary and mobile phase.

3) Thin Layer Chromatography (TLC)

Thin layer chromatogram is most widely used for multiple substance screening programs. It is relatively fast and economical. It requires pH dependent extraction followed by purification and concentration of the substance from a biological sample. We found TLC to be very effective for preliminary screening of opioids and other substances. It offers the advantages of low start up cost, relatively rapid analysis, and simultaneous determination of multiple substances and metabolites. Some disadvantages of TLC are that it is labor intensive and results are highly dependent on the technician's skill as interpretation of results is subjective.

Confirmatory techniques

1) Gas Liquid Chromatography (GLC) and High Pressure Liquid Chromatography (HPLC)

GLC and HPLC are widely used for confirmation of presumptive positive and doubtful results in screening assays. Both techniques are highly sensitive and specific and are used for qualitative and quantitative detection of substances of abuse. Identification is based on the retention time (Rt). Detection limit is about 0.1 µg/ml. Despite the high sensitivity and specificity, there are several drawbacks associated with these techniques.

2) Gas Chromatography-Mass Spectrometry (GC-MS)

Gas Chromatography coupled with mass-spectrometry (GC-MS) technique combines the efficient separating power of gas chromatography with the high sensitivity and specificity of mass spectrometric detection.

Substances are identified with GC-MS by their gas chromatographic retention time and by the ions that forms in the mass spectrometer. It is the most sensitive and specific of all the methods available for confirmation and quantification of substances and their metabolites in biological samples. It is the most legally defensive confirmation technique due to its high sensitivity and specificity and is still considered as the "gold standard'' test. The GC-MS or liquid chromatography –mass spectrometry (LC-MS) is not widely used because the equipment and its maintainence is expensive and specially trained staff is needed to operate it. Further the sample preparation is complex as is the interpretation of results.

III)Detection Periods

The length of time that the presence of substances of abuse in the body can be detected is an important factor in substance screening (Table II) When interpreting the duration for the presence of substances of abuse in the body, one must take into consideration variables including the body's metabolism, the subject's physical condition, overall body fluid balance, state of hydration, amount and frequency of usage, body mass, age, substance tolerance, and urine pH.

Moreover, the detection of the substance would also depend on the type of technique adopted by the laboratory. For instance if thin layer chromatography is used as a screening technique recent use of the substance can be detected.

Recommended Frequency of urine Testing
In-patients – Every third day
Out-patient – Every follow up

IV)Quality Assurance and Quality Control

The goal of a substance testing laboratory is to demonstrate reliably the presence or absence of a substance in test specimens and to have an error-free laboratory operation. Thus, substance abuse testing laboratories should have a Quality Assurance program (QA) and Quality control (QC) programs.

A rigorous QA program will assure the complete documentation of specimen acquisition, chain of custody, security and reporting of results, in addition to the screening and confirmation of analytical procedures. "Quality control" (QC) are those mechanisms or activities established to control errors, and to promote validity and validity of laboratory data

Drug Standards

For testing these substances in body fluids reference substance standards are essential. These reference standards are used in all determinations that require comparison to a chemical substance for exact identification of a substance. The number of substances to be screened in the laboratory will however depend upon the availability of reference substance standards. These reference substance standards are controlled substances and thus not available off the shelf in the market due to stringent license policies. Therefore, de-addiction laboratories must have authorization permit from the government to possess these pure substance standards.

Cut-Off Values

The definition of a cut-off value is the concentration used for deciding whether a result

is positive or negative. The cutoff value is critical in determining if a substance test is to be reported as positive or negative and is defined by the laboratory in order to provide meaningful interpretation of results. However, perfectably valid and reliable results are obtainable if a lower or more sensitive cutoff value is used.

V) Interpretation of urine test results

It is important to note that the determination of substance use through biological analysis is never absolute. Numerous factors associated with the person tested (e.g. metabolism), the substance used (e.g. pharmacokinetic properties, route of administration), the sample taken (e.g. window of detection, biology of substance incorporation), the collection procedure (e.g. testing schedule), error due to adulterants and the analytical procedure (e.g. limit of detection, sensitivity, cross-reactivity, specificity) all affect the results obtained. Four qualitative interpretations are:-

(i). A *true –positive* result, where a tests correctly identifies the presence of a substance

(ii) a *false-positive* result, when a substance is detected by a test when, in fact, that substance is not present in the sample

(ii) a *true-negative* result, where a tests correctly identifies the absence of a substance; and

(iv) a *false-negative* result, when no substance is detected by a test when, in fact, a substance is present in the sample.

Record Keeping

The laboratory should maintain documentation of all protocols and procedures. The laboratory should have protocols to protect the confidentiality of all records.

Safety Guidelines

'Standard safety measures' in clinical laboratory must be maintained. For HIV screening, the used needles, syringes and gloves should be destroyed immediately in incinerator or by burning. Blood samples should be carefully handled. Moreover, discarded tube or infected material should never be left unattended or unlabeled. Furthermore, eating, drinking and smoking in work area should be strictly prohibited.

Communication

Regular interaction of laboratory personnel with health care professional's staff is essential in the interest of patient care. Health care professionals should furnish adequate clinical history regarding suspected dug use, route of administration, quantity of consumption, frequency of use in last 72 hrs, time of last intake of substance before sample collection and medicines being prescribed to the patients on the substance screen request forms to the laboratory. This would minimize the false positive results; eg. patients who have been prescribed with cough syrup containing codeine.

Clinical Audit

Results of all tests are to be reviewed by a qualified certifying scientist employed by the laboratory, and also by an independent medical review officer (MRO), a physician trained in interpreting substance test results, who should have knowledge of substance abuse disorders, pharmacology, toxicology and laboratory techniques for detection and confirmation.

Limitations of Substance Testing

In routine clinical practice, the substance abuse screening yield qualitative data - present or absent. Moreover, the parent compound is detected in its metabolic by-product form and free substance is excreted in urine in low quantities. A laboratory test would not differentiate between heroin user and a morphine user. Moreover, false positive results have also been an issue for substance testing programs like dietary poppy seeds can give strong positive results for urinary opiates for several days. Furthermore, some consumer medications contain substances of abuse like codeine in cough syrups giving false positives. A urine sample is considered dilute when creatinine is below 20 mg/dl and specific gravity is less than 1.003. Replacement of donor urine with non-urine fluid is substitution. A sample is deemed substituted if creatinine is less than 5 mg/dl and the specific gravity is 1.000 or 1.001.

Since most immunoassays are designed to be performed under narrow pH and ionic strength ranges, the addition of acids, bases, salts, or detergents will invalidate them. However, these adulterants generally do not affect GC/MS test results.

Health Damage Assessment

Apart from substance abuse testing De-addiction laboratories should also have facilities for assessment of health damage in substance addicts. With increasing intravenous substance use, testing for HIV and Hepatitis B is also considered essential. Some general health investigations such, as haemogram, routine urine examination, biochemical investigations like Liver and Renal function tests are also undertaken to ascertain the extent of organ damage.

The establishment of a well-equipped laboratory is a prerequisite requirement for any hospital-offering Substance - Dependence Treatment services. Laboratory plays an important role in the assessment and clinical management of patient's substance problem.

Suggested reading material

Eskridge KD and Guthrie SK. (1997). Clinical issues associated with urine testing of substances of abuse. Pharmacotherapy, 17, 497-510.

Fraser AD and Zamecnik J (2003). Impact of lowering the screening and confirmation cutoff values for urine substance testing based on dilution indicators.
Therapeutic Substance Monitoring, 25, 723-727.

Jain R and Ray R. (1995): Detection of substances of abuse and its relevance to clinical practice. Indian Journal of Pharmacology, 27, 1-6.

Jain R. (ed). (1998). Detection of Substances of Abuse in Body Fluids: A Manual for Laboratory Personnel. Substance Dependence Treatment Centre, All India Institute of Medical Sciences, N. Delhi, India.

Jain R. (1998). The Relevance of laboratory Services in South Asia. In: South Asia Substance Demand Reduction Report, Ray R (ed), United Nations International Substance Control Programme, Regional Office of South Asia, New Delhi, India, pp, 214-221.

Jain R. (2005). Role of Laboratory Services in Substance Use Disorder. Lal R (ed), Substance Use Disorders: A Physician's Manual. National Substance Dependence Treatment Centre, All India Institute of Medical Sciences, N. Delhi, India. Pp, 127-137.

Katz N, Fanciicullo GJ. (2002). Role of urine toxicology testing in the management of chronic opioid therapy. Clinical Journal of Pain, 18(4 Suppl):S76-82.

Manual for use by National Laboratories: Recommended Methods for the detection and assay of barbiturates and benzodiazepines in biological specimens. UNDCP, Vienna (1997).

Raphael C. Wong and Harley Y. Tse, (eds.). Totowa, NJ: Substances of Abuse, Body Fluid Testing. Humana Press, (2005).

Report of the substance abuse testing committee. Critical issues in urinalysis and abused substances. Clinical Chemistry. (1988), 605-632.

Samyn N, van Haeren C. On-site testing of saliva and sweat with Substancewipe and determination of concentrations of substances of abuse in saliva, plasma and urine of suspected users. (2000). International Journal of Legal Medicine, 113, 150-154.

Simpson D, Braithwaite RA, Jarvie DR, Stewart MJ, Walker S, Watson IW and Widdop B. (1997). Screening for substances of abuse (II): Cannabinoids, lysergic acid diethyl amide, buprenorphine, methadone, barbiturates, benzodiazepines and other substances. Annals of Clinical Biochemistry, 34, 460-510.

Wu AHB (1998). Integrity of Urine Specimens Submitted for Toxicologic Analysis: Adulteration, Mechanisms of Action, and Laboratory Detection. Forensic Science Review, 10, 47–65.

Suggested slide material

Slide 1
WHY LABORATORY SERVICES IN A SUBSTANCE DEPENDENCE TREATMENT PROGRAMME

- CONFIRM CLINICAL HISTORY OF SUBSTANCE INTAKE
- MONITOR PROGRESS FOLLOWING TREATMENT
- TREATMENT COMPLIANCE
- ASSESSMENT OF OVERALL HEALTH STATUS OF SUBSTANCE DEPENDENTS
- CLARIFICATION OF MEDICO-LEGAL PROBLEMS
- TO ASSIST LAW ENFORCEMENT
- PROMOTE PHARMACOKINETIC AND METABOLIC RESEARCH

Slide 2
BIOLOGICAL SAMPLES

- BIOLOGICAL FLUIDS: BLOOD, URINE, SALIVA, SWEAT
- TISSUES: HAIR, WHY URINE IS PREFERRED FOR SCREENING

ADVANTAGES:

- NON INVASIVE PROCEDURE
- EASY COLLECTION
- LARGER VOLUME AVAILABLE
- SUBSTANCES AND METABOLITES CAN BE DETECTED IN HIGHER CONCENTRATION FOR A LONGER PERIOD OF TIME
- EASIER PROCESSING

DISADVANTAGES:

- HIGH ADULTERATION POTENTIAL WHEN COLLECTION NOT WITNESSED

Slide 3

COMMON ADULTERANTS

- TABLE SALT
- CAUSTIC SODA
- LIQUID SOAP
- ORANGE/APPLE JUICE
- LIME JUICE
- VINEGAR
- BLEACHING POWDER

Slide 4

RESPONSIBILITIES OF NURSE

PRECAUTIONS IN SAMPLE COLLECTION

- CLOSE SUPERVISION
- PROPER LABELLING
- HOT WATER SHOULD NOT BE AVAILABLE AT COLLECTION SITE
- URINARY TEMPERATURE SHOULD APPROXIMATE NORMAL BODY TEMPERATURE
- PROPER SEALING
- TRANSPORTATION UNDER CUSTODY

STORAGE OF SAMPLES

- STORAGE UNDER -20° C TEMPERATURE IS RECOMMENDED

Slide 5

WHY DO SAMPLE PREPARATION

- REMOVE INTERFERING MATERIAL
- REMOVE PARTICULATES
- CONCENTRATE SOLUTE OF INTEREST
- ENHANCE SENSITIVITY

OPTIONS FOR SAMPLE PREPARATION

- DILUTION
- CENTRIFUGATION
- ULTRAFILTRATION
- PRECIPITATION
- LIQUID-LIQUID EXTRACTION
- LIQUID-SOLID EXTRACTION
- DERIVATIZATION
- HYDROLYSIS

Slide 6

SELECTION OF ANALYTICAL METHODOLOGY

- COST
- WORKLOAD
- TURN AROUND TIME
- SENSTIVITY REQUIRED
- RELIABILITY SCREENING TECHNIQUES
- IMMUNOASSAYS: RIA, EIA, ELISA, IFPIA
- CHROMATOGRAPHY-TLC

Slide 7

CONFIRMATORY TECHNIQUES

- GAS LIQUID CHROMATOGRAPHY (GLC)
- HIGH PRESSURE LIQUID CHROMATOGRAPHY (HPLC)
- GAS CHROMATOGRAPHY-MASS SPECTROMETRY (GC-MS)

PRINCIPILE OF IMMUNOASSAYS

COMPETITION BETWEEN THE LABELED SUBSTANCE

AND UNLABLED SUBSTANCE TO BIND TO ITS BINDING SITES

Ab + D* + D Þ AbD* + AbD

Ab= ANTIBODY, D* = LABELED SUBSTANCE

D= UNLABLED SUBSTANCE

ADVANTAGES OF IMMUNOLOGICAL ASSAYS

- NO SAMPLE PREPARATION
- EASE OF OPERATION
- RAPID ANALYSIS
- HIGHLY SENSITIVE
- DETECTION LIMIT: 0.001-0.1 µg/ml
- QUALITATIVE AND QUANTITATIVE ESTIMATION

LIMITATIONS OF IMMUNOLOGICAL ASSAYS

- HIGH REAGENT COSTS
- SPECIFICITY FOR A SUBSTANCE IS NOT ABSOLUTE
- MODERATE TO HIGH EQUIPMENT COST

Slide 8

FEATURES:

URINE DIPSTICK ONSITE TESTS/ CASSETTE

- **Simple, easy, accurate**
- **Immuno-chemistry based**
- **Require no instrumentation**
- **Without laboratory facilities**
- **Convenient, enough to be used anytime, any place**
- **Can read results in 5 mins.**
- **Available in single or in combination of drugs**
- **High sensitivity (300ng\ml), Qualitative, built- in control system**

Slide 9

ADVANTAGES OF IMMUNOLOGICAL ASSAYS

- NO SAMPLE PREPARATION
- EASE OF OPERATION
- RAPID ANALYSIS
- HIGHLY SENSITIVE
- DETECTION LIMIT: 0.001-0.1 µg/ml
- QUALITATIVE AND QUANTITATIVE ESTIMATION

LIMITATIONS OF IMMUNOLOGICAL ASSAYS

- HIGH REAGENT COSTS
- SPECIFICITY FOR A SUBSTANCE IS NOT ABSOLUTE
- MODERATE TO HIGH EQUIPMENT COST

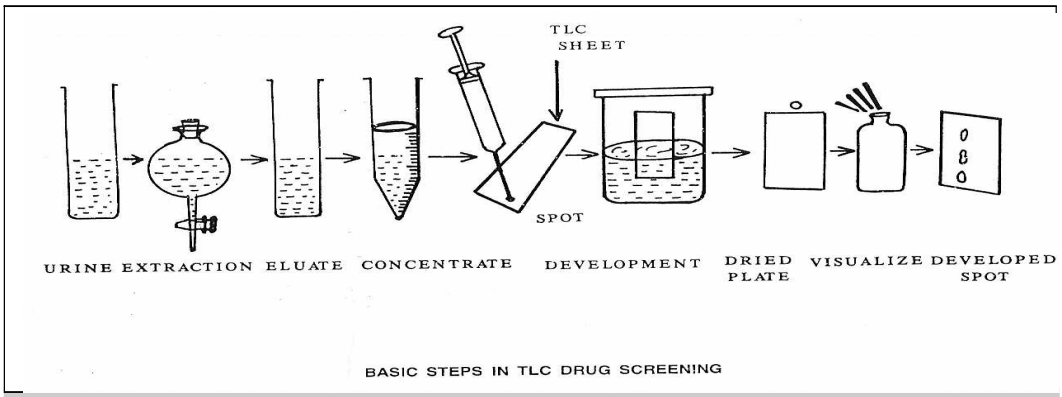
Slide 10

THIN LAYER CHROMATOGRAPHY(TLC)

TLC SYSTEM CONSISTS OF

- EXTRACTIONS
- CONCENTRATION
- ACTIVATION
- SPOTTING
- DEVELOPMENT
- VISUALIZATION

Slide 11



BASIC STEPS IN TLC DRUG SCREENING

Table2. Detection periods of substances in biological specimens

Substance	Urine	Hair	Blood
Alcohol	6-24 hrs	-	Unknown
Amphetamine	1-4 days	up to 90 days	Unknown
Barbiturates	1-21 days	Unknown	Unknown
Benzodiazepines	1-42 days	Unknown	Unknown
Cannabis (single use)	48-72 hrs	up to 90 days	2-3 days
Cannabis (habitual use)	up to 12 wks	up to 90 days	2 weeks
Cocaine	4-5 days	up to 90 days	Unknown
Codeine/Morphine	2-4 days	up to 90 days	Unknown
Heroin	8 hrs	up to 90 days	Unknown
Methamphetamine	3-5 days	up to 90 days	1-3 days
PCP	3-7 days	up to 90 days	1-3 days

Special Topics: Care in General Medical and Surgical Units and Pain Management

18

Sandhya Gupta, Renju Sussan Baby, Prerna

Summary: The nurse in a hospital setting may care for a patient with substance dependence even when the disorder has not been diagnosed. This chapter deals with the nursing care of the patient in a general medical or surgical unit who has an acute or chronic disorder in addition to substance abuse. It also deals with the care of surgical patient with substance abuse. The toxic effects of alcohol, tobacco, opiates, and other substances are associated with significant alterations in the normal physiological functions. Patients who abuse these substances may not risk develop characteristic clinical manifestations of the diseases. When hospitalization is required for medical management or surgical intervention, the contribution of substance abuse to the clinical picture may be overlooked. Hence nurses should be familiar with the classic consequences of abuse and be prepared to assess for abuse and dependence.

Introduction

Many medical conditions with which the patient is admitted in the general medical and surgical units are the results of substance abuse and its complications. These patients may be seen in general wards, ICU's, surgery units and emergency department. The nurse in the hospital setting may care for patient with substance use disorder whether or not the disorder is recognized or diagnosed. The nurse must be prepared to recognize the problem and intervene appropriately. To be effective the nurse must be aware of the clinical manifestation and complication of substance of abuse as well as the treatment options. The nurse and the treatment team must first recognize the problem so that appropriate interventions can be initiated. This chapter describes the nursing care of patient who has acute or chronic disorder in addition to substance abuse, preoperative, perioperative and pain management.

Sequlae of Alcohol Abuse

When healthy, non-alcoholic individuals ingest alcohol in moderation, pathological changes are reversible. The potential benefits of mild alcohol consumption (not more than 1 drink a day) for such individuals includes increased socialization, increased appetite, and decreased risk of cardiovascular disease. If moderate use gives way to abuse or the person has other medical problems, the consequences can be life threatening. Classical changes in the body system secondary to excessive alcohol intake depends on the organ system invloved that include :

Liver

The liver is particularly affected by the consumption of alcohol. Even in low doses, alcohol disturbs the ability of the liver for gluconeogenisis for carbohydrate metabolism and increases fatty acid and triglyceride synthesis resulting in fatty infiltration called fatty liver. Three major Diseases of liver due to alcohol consumption are:

1 Fatty liver
2 Alcoholic hepatitis
3. Cirrhosis.

The clinical progression from fatty liver to liver failure in cirrhosis includes signs and symptoms ranging from mild indigestion to coma and death. Nursing care is directed towards encouraging sobriety, improving nutritional status, managing signs and symptoms and monitoring for major complications such as portal hypertension, ascites, esophageal varices and hemorrhage, and hepatic encephalopathy.

Portal hypertension results when liver necrosis obstructs the portal circulation and causes rise in portal venous pressure, thereby causing splenomegaly.

Ascites is an abnormal collection of fluid in the intra peritoneal cavity consequent to portal hypertension, decreased hepatic synthesis of albumin, increased levels of aldosterone, and obstruction of hepatic lymph flow.

Esophageal varices are the enlarged, swollen, tortuous veins at the lower end of esophagus. These veins are susceptible to ulceration and hemorrhage. Nursing care demands close observation to monitor cardiac output, vascular volume, tissue perfusion, homeostasis, fluid and electrolytes, and the status of renal, respiratory, and neurological systems.

Hepatic encephalopathy is an abnormal functioning of the brain secondary to liver disease and is another major sequlae of cirrhosis. Patients with encephalopathy require close observation and care to support ventilation, cardiovascular status, and nutrition. Narcotics and sedatives are contraindicated because of impaired hepatic function.

Gastrointestinal tract

Alcohol is a direct irritant to gastrointestinal mucosa and promotes secretion of gastric acid (Hydrochloric acid). This contributes to erosion in the lining of gastrointestinal tract and can cause esophagitis, gastritis, and duodenitis. Complaints ranging from mild gastric pain to severe nausea and vomiting cause the patient to seek medical help. Such conditions should alert the nurse to the possibility of alcohol abuse.

Pancreatitis

This condition is the self-destruction of the pancreas by its own enzymes, and is associated with alcohol abuse. Pancreatitis proceeds from intestinal pancreatic edema to proteolysis, hemorrhage, parenchymal damage, and fat

necrosis. Clinical manifestation includes persistent midepigastric and left upper quadrant pain that may radiate to the back. Eating, drinking alcohol, and vomiting aggravate pain; fasting, and leaning forward or assuming a fetal position decreases it. Surgical debridement and resection may be required for patients with bleeding, necrosis and abscess. The therapeutic intervention include drugs used to reduce pancreatic juice secretion, fluid replacement, pain management, and general measures to support respiratory and cardiovascular status.

Cardiovascular system

Alcohol, affects the cardiovascular system in several ways. It is an identifiable cause of heart muscle disease (cardiomyopathies). Alcoholic cardiomyopathy includes loss of contractility of myocardial cells, resulting in decreased cardiac output. Clinical manifestations include dyspnea, orthopnea, fatigue, paroxysmal nocturnal dyspnea, chestpain and cough. Complications include dysrrhythmias and emboli. Treatment is the same as in other cardiac myopathies and diuretics, dietary sodium restriction, adequate diet, digitalis and vasodilator are prescribed. Abstinence from alcohol is mandatory. Nursing care includes promoting oxygenation with a semi fowlers position and providing oxygen, monitoring fluid and electrolyte balance, administering prescribed medications, providing balanced rest and activity, assisting with nutritional intake, providing skin care to reduce the risk of skin breakdown in the edematous areas and educating the patient and the family about the disorder and need for abstinence. Close monitoring of the cardiovascular status is very important in order to detect the life threatening dysrrhythmias and provide necessary intervention.

Musculo - skeletal system

Acute and chronic myopathies occur as a result of alcohol consumption. causing muscle inflammation and wasting. Muscle wasting in chronic alcohol abusers is noticed in shoulders and hips because of alcohol induced bone necrosis resulting from fat embolism secondary to hyperlipidemia. Other sites involved are humeral heads, the knees, and talus. Early detection and treatment of hyperlipidemia through diet and medication may prevent the need of surgical intervention.

Alcohol, tobacco and cancer

Tobacco and alcohol are the two major substances that contribute to the development of cancer. Alcohol works synergistically with tobacco to increase the risk of tobacco related neoplasms. Individuals who drink heavily develop cancer of oral cavity, pyriform sinus, esophagus, stomach and liver. When excessive smoking and drinking are combined, the risk for all forms of head and neck cancers increase. Other problems that contribute to carcinogenesis include malnutrition, liver diseases, and tooth decay. Surgery, radiation ,chemotherapy or a combination is used for malignancies associated with the alcohol and tobacco use.

- Special attention should be given to improve the nutritional status and
- Assistance with cessation of alcohol and tobacco use.

The nurses must consider the possibility of withdrawal syndrome in patients hospitalized for management of various carcinogenic lesions. Nursing care varies with the location and size of the tumors, as well as the nature of the treatment.

General considerations include promoting optimal nutrition, monitoring respiratory status, encouraging communication, assisting the patient to cope with the altered body image and improving oral hygiene. The nurse should provide comfort and assist the patient to cope with the fear and anxiety associated with the diagnosis of the malignancy.

Sequlae of other substance of abuse

Patients with substance abuse can sustain major health related problems related to the technique used to administer drugs or to associate life style factors. Infections and direct injury result in the majority of health consequences. Substance abusers have increased risk of infection for the following reasons

- They are often carriers of staphylococcus aureus
- Dirty needles and syringes are used to inject unsterile drugs
- Poor dental hygiene
- Decrease bacterial clearance of the tracheobronchial system during intoxication
- Cell mediated immunity may be impaired by the HIV infection and by IV drug use itself
- Promiscuity and prostitution are often part of their life style

Nasal septum damage

Septal damage occurs from chronic snorting of cocaine and opiates through the nasal mucosa. It causes chronic infections and sinusitis is very common.

Cellulitis

Cellulitis is the infection of the skin and soft tissues, resulting from the direct tissue damage or chemical irritation by the substances. Management include antibiotics and local moist compresses

Infective endocarditis

Infective endocarditis is caused by the microbial invasion of the endocardium, usually the valvular endocardium. Clinical manifestations of infective endocarditis may be present in every organ system. Symptoms include .myalgias, arthralgias, headache, nausea, vomiting and diarrhea. Lab. findings include positive blood cultures, raised ESR count, anemia and neutropenia. Management includes IV antibiotics and possibly valve replacement.

Nursing responsibilities include administering antibiotics, monitoring the clinical manifestations of the disease and complications, educating the patient measures to avoid recurrence, and provide comfort.

AIDS

AIDS results from the infection of the HIV virus. The viruses are present in blood and serum derived body fluids. Contaminated syringes and sharing of needles and sexual encounter with the infected partner pose risk to the substance abuser. Early detection and treatment can prolong the life span of the infected patients. Nursing care includes promoting the nutritional status, preventing from opportunistic infection, promoting self-care, provide counseling and psychological support to the affected patients. The nurse should also educate them about the modes of transmission and methods of preventing transmission and improving the quality of life.

Tuberculosis

The incidence of tuberculosis has increased in general, as well as secondary to immunosuppression because of HIV/AIDS. The diagnostic test includes chest X-ray, sputum culture for acid fast bacillus and, mauntaux test. Medical management includes anti tubercular therapy under direct observed treatment schedule (DOTS).

Nursing care include administration of medications, promoting the nutritional intake, education the patient about methods to prevent the airborne transmission.

Viral hepatitis

Viral hepatitis is the predominant cause of liver disease in non-alcoholic IV drug users. Viruses that can cause acute and chronic liver diseases include hepatitis A, B, C, D, E. Transmission of viruses occurs either via fecal contamination or contamination of food and water. The other routes of blood borne infection are through infected blood and parentral drug abuse with contaminated needles and syringes. Medical management is supportive with fluid and electrolyte replacement, interferons, antihistamines, vitamin supplements and antiemitics.

Nursing care consists of general supportive measures to promote rest and fluid balance, prevent injury and spread of infection It includes maintaining standard safety measures, prevent skin breakdown, providing information about self care and adequate nutrition and prevention of transmission of infection A healthy lifestyle and abstinence from the substance abuse is also encouraged.

Sexually transmitted diseases

Sexually transmitted diseases are the diseases, which are transmitted from person to person by sexual intercourse or intimate contact with the genatalia, mouth, or rectum. Substance abusers and particularly at risk because of the antisocial and promiscuous behavior during intoxication or prostitution to support drug habits. STDs include syphilis,gonorrhea,chanchroid,herpes simplex, candidiasis, veneral warts, bacterial vaginosis and AIDs. Clinical manifestations include excessive foul smelling, purulent vaginal discharges, lower abdominal pain, urethritis and cervicitis. Medical management is related to the causative organism. Nursing responsibilities include promoting self care, education about the prevention of transmission and safe sexual practices, providing emotional support and helping in improving the body image.

Perioperative care of patients with substance abuse

The hazards and stress of surgery are intensified in patients who abuse substances. The overall general health status is compromised by the substance abuse and the lifestyle factors. The substances affect the organ system critical to general anashesia.smoking makes the airway more irritable to the introduction of endotracheal tubes or suction catheters. The thick and purulent secretions, bronchitis and pulmonary emphysemas associated with smoking are added risk to respiratory status and may act as a hindrance from weaning from the ventilators after surgery. This leads to prolonged mechanical ventilation.

The effects of alcohol are more subtle and include increased tolerance to anesthetic agents, nutritional deficiencies, severe cirrhosis, esophageal varices and coagulopathies. All can

greatly compromise the surgical patient. The mortality and morbidity rates of post surgical patients who are abusers of various substances are relatively high when compared with the non abusers. The average hospital stay is also more with the abusers that non abusers. The reasons are the sub clinical cardiopulmonary insufficiency, immunosuppression, and decreased haemostatic function.

Cross-tolerance to and withdrawal from the substances of abuse alter the response to the anesthetic agents and pose risks to safety and comfort during the Perioperative period. The Perioperative period is not an appropriate time to withdraw the patient from substances. The emphasis is on achieving safe anaesthesia, proper weaning, relieving postoperative pain and preventing complications without precipitating withdrawal.

Preoperative management

In the preoperative phase, it is essential to elicit a careful and complete history of substance use and abuse.

Monitor the patient carefully for any withdrawal symptoms. The amount and time of drug administration is particularly important when preparing the patients for aneashesia. A thorough pre-operative assessment to determine any health problems is the key to prevent complications. The denial of substance abuse may be a crucial factor for intra and post operative complications, so family and friends must be interviewed to gather accurate information about the substance use.

During the intraoperative period, patients with substance abuse are monitored carefully for the signs and symptoms of withdrawal. Anesthetic agents are chosen with regards of the patterns of abuse when known or suspected. Careful weaning from the anesthesia and from support ventilation need to be done

Postoperative management

Postoperative management of pain is the major problem experienced by the patients who are dependent on opiates/narcotics. Pain is alleviated with appropriate analgesia. Baseline maintenance doses are flexible and patients dependent on narcotics may require a higher dose. Alcohol dependent patients often require benzodiazepines to control restlessness postoperatively. Monitoring carefully for any withdrawal signs and symptoms like delirium tremens, seizures, confusion, irritability, hallucinations and providing a safe environment is very important. Environmental stimuli should be minimized in the ICUs and postoperative units. Due to the heightened risk for post operative complications, meticulous attention to respiratory and cardiovascular status is required.

Once the initial stress and discomfort of surgery has subsided, the nurse should discuss the relationship of dependence to pain and altered health status with the patient and family members. She should encourage the patient and family members to seek treatment for the dependence. Teaching alternative pain management strategies such as deep breathing exercises, guided imagery, and relaxation with audiotapes can be useful. Written materials on addiction and its treatment and referral for treatment should be provided before discharge.

PAIN MANAGEMENT

Pain is influenced by individual experiences, comorbidities, cultural beliefs, cognitive abilities, expectations, emotions and memory. Make the approach to pain management unique to each

patient. Effective pain management is an integral and important aspect of quality medical care, and pain should be treated aggressively.

Undertreatment of pain is a serious problem. Managing pain in special populations can be particularly challenging e.g. in patients with substance use disorders. Both the treating team and patients sometimes have difficulty distinguishing which aspects of a patient's distress represent pain and which represent craving and withdrawal symptoms. Consequently, patients with substance use disorders are at increased risk of receiving inadequate doses of medicines for pain management due to concerns of exacerbating the dependence.

ASSESSMENT OF PATIENT

Screening for substance use disorder: - As part of the initial pain assessment, all patients should be screened for a co-occurring substance use disorder. Questioning should be directed at determining whether the individual has a history of drug or alcohol use, current drug or alcohol use, or risk factors such as family history of addictive disease. Common screens such as the CAGE-AID and Cyr Wartman can be used. Those who give positive history for substance use should be assessed for substances being used and severity of dependence.

Assessment of pain

Initial assessment: - Assessment of nature and severity of pain by history and physical examination

Ongoing assessment: - In case of chronic pain nurses should rate and document the patient's pain, function, and response to medication.

Psychological status: - Assessing the psychological status of patients who present with pain is essential because persistent pain is typically associated with depression, loss of self-esteem, and social isolation. Addressing these issues, verbally and/or with medication, may also help the patient cope with overall pain and dysfunction

Methods Used by Drug-Seeking Patients

- Wants an appointment toward the end of office hours
- States that they are traveling through town, visiting friends or relatives (Not a local resident)
- Feigns physical problems, such as abdominal or back pain, kidney stone, or migraine headache in an effort to obtain narcotic drugs.
- Feigns psychological problems, such as anxiety, insomnia, fatigue or depression in an effort to obtain stimulants or depressants.
- States that specific non-narcotic analgesics do not work or that they are allergic to them. Request for particular drug especially parental opioid for pain control.

MANAGEMENT OF PATIENTS WITH SUBSTANCE ABUSE HISTORY

Involve a Multidisciplinary Team: - A team approachis imperative to effectively manage the problems. The most ideal team would comprise of a physician dealing with underlying health problem, pain specialist, addiction specialist, nurses and social workers.

Set Realistic Goals for Therapy: -

Substance abusers often remit and relapse. The

risk of relapse is likely to be enhanced because of the heightened stress associated with life-threatening disease and the ready availability of centrally acting drugs prescribed for symptom control. Preventing relapses may be impossible in such a setting. Conflict with staff may be lessened if there is a general understanding that unerring compliance is not a realistic goal of management.

Evaluate and Treat Co morbid Psychiatric Disorders: - Co-morbid depression, anxiety, and personality disorders in substance abusers is very high. The treatment of anxiety and depression can increase patient comfort and possibly diminish the likelihood of relapse.

Prevent or Minimize Withdrawal Symptoms: - Knowledge of withdrawal symptoms is necessary while caring for these patients. Daily assessment and early management is necessary.

Consider the Impact of Tolerance: - Patients who are actively abusing drugs may have sufficient tolerance to influence the use of prescription drugs subsequently administered for an appropriate medical indication.

Apply Appropriate Pharmacological Principles to Treat Chronic Pain: - The patient's comfort should be the primary goal, and opioid or pain relief should not be withheld when warranted because of concerns about addiction. Treatment should progress along the WHO analgesic ladder to the extent possible :

- Nerve block, electrostimulation, antidepressants, membrane-stabilizing medications
- Opioid pharmacotherapy in severe chronic pain
- Individualizing, monitoring, and documenting prescriptions for opioid medication in patients with a history of opioid use
- Determining whether effective alternatives are available
- Weighing the risk-to-benefit ratio of opioid use
- Discussing expected outcomes with patients
- Considering periodic random urine drug testing with the consent of the patient.

Recognize Specific Substance Abuse Behaviors: - The patients who are using potentially abusable drugs should be evaluated for drug seeking behaviors**.** To facilitate the early recognition of aberrant drug-related behaviors in those patients who have been actively abusing drugs in the recent past, regular screening of urine for illicit or licit but non prescribed drugs may be appropriate. The patient should be informed about this approach, which should be explained as a method of monitoring. This can be reassuring to the clinician and can provide a foundation for aggressive symptom-oriented treatments.

Utilize No drug Approaches as Appropriate: - Use of alternative therapies (e.g. guided imagery, relaxation) also helps in management of chronic pain relief for these patients.

Support the individual in achieving and sustaining addiction recovery:

- Refer for appropriate level of treatment as indicated.
- Do not withdraw opioids from someone in acute pain, but consider addiction intervention/counseling when pain controlled.
- When necessary for safety, make opioid analgesia contingent on active involvement

in recovery activities.

- Incorporate frequent drug screens during long-term opioid use to support recovery and identify relapse.
- Consider opioid agonist maintenance therapy as a requisite to persistent pain treatment in patients with opioid dependence.

Provide medications in manageable amounts to outpatients

- Smaller quantities (but adequate doses) at more frequent dispensing intervals.
- Supervised intake of medicines by daily dispensing.
- Oral preferred over parenteral.
- PCA (small bolus) preferred over larger parenteral bolus.
- Scheduled doses preferred over prn.
- Long-acting medications that provide stable blood levels with slower onset preferred over quick onset short-acting.

Recognize Common Characteristics of the Drug User

- Unusual behavior in the waiting room
- Assertive personality, often demanding immediate action
- Unusual appearance – extremes of either slovenliness or being over-dressed
- May show unusual knowledge of controlled substances and/or gives medical history with textbook symptoms OR gives evasive or vague answers to questions regarding medical history. Will often request a specific controlled drug and is reluctant to try a different drug

SUPPORT FOR FAMILY AND FRIENDS OF THOSE WITH DRUG AND ALCOHOL PROBELMS IN MEDICAL AND SURGICAL WARDS

All Patients those who are being admitted in general medical/ surgical ward should be screened for comorbid substance use disorder. Initial assessment of the nurse should include the following:

1. Socio-demographic profile.
2. Type of substance use.
3. Duration of use.
4. Frequency and quantity.
5. Compelling need
6. Complications associated with drug use
7. High risk behaviors
8. Psychiatric illnesses
9. Presence of family history of SUD.
10. Effect of substance use on family.

To provide support to the family and friends the nurse must identify the effect of substance use on the family and their perception about the problem.

1. Assess the **anxiety level**, fear and concerns of the family.
2. **Assess the perceived problem by the family**: Family sometimes may not perceive use of particular substance as an underlying cause of the present physical condition of the patient.
3. **Family environment**: Assess the use of substances in the family and their attitude towards the use of these substances.
4. **Peer group influences:** Assess the potential support systems in the family and friends

and influential factors for continuation of the use of the substance.

5. Assess **family burden and coping** of the family.
6. Assess for **abuse** of the family members specially spouse by the drug user
7. Assess the **financial burden** on the family.
8. **Risk behaviors**: Identification of sexual practices among the partners is crucial in identifying the risk factors (e.g. number of partners, use of condoms, history of STDs, unsafe sexual practices).

Strategies to be used while interacting with the family and friends of those who are being admitted in general medical surgical ward:

1. Empathising
2. Active listening
3. Show genuine interest
4. Provide warmth

Goals: Family members and friends should be able to:

1. Discuss their concerns and doubts.
2. Family members and friends verbalize their anxieties and fears.
3. Perceive the problem realistically.
4. Use effective coping strategies to deal with the problem.
5. Identify the risk behaviors and formulate strategies to minimize the harm.
6. Recognize their role while dealing with substance abuse patient.

Support:

1. Deal with crisis situation if present.
2. Listen to the concern of the family.
3. Provide realistic information about the patient's condition.
4. Encourage the family members to share their concerns.
5. Discuss the association of the use of the use of the substance and the underlying physical condition.
6. Explain the harmful effects of the persistent use of the substance.
7. Explain the family members to how to reduce harm (e.g. safe sexual practices).
8. Explain about the complex nature of substance use disorder and the treatment available for it.
9. Explain about the type of treatments available for substance use, their duration and role of family.
10. Explain the role of family members in patients care.

Siggested reading material

1. Currie SR, Hodgins DC, Crabtree A, Jacobi J, Armstrong S.Outcome from integrated pain management treatment for recovering substance abusers.J Pain. 2003 Mar;4(2):91-100.
2. Lawlor P, Walker P, Bruera E, et al. Severe opioid toxicity and somatization of psychosocial distress in a cancer patient with a background of chemical dependence. J Pain Symptom Manage 13 (6): 356-61, 1997.
3. Manchikanti L. Patterns of illicit drug use and opioid abuse in patients with chronic pain at initial evaluation: a prospective, observational study. Pain Physician. 2004 Oct;7(4):431-7
4. McCorquodale S, De Faye B, Bruera E. Pain

control in an alcoholic cancer patient. J Pain Symptom Manage 8 (3): 177-80, 1993.

5. McCaffery M, Hart LL. Undertreatment of acute pain with narcotics.Am J Nurs. 1976 Oct;76(10):1586-91.
6. McCaffery M, Vourakis C. Assessment and relief of pain in chemically dependent patients. *Orthop Nurs.* 1992;11:13-27 7.
7. Wesson DR, Ling W, Smith DE. Prescription of opioids for treatment of in patients with addictive disease. J Pain Symptom Manage. 1993;8: 289-296.
8. Streltzer J, Johansen L. Prescription drug dependence and evolving beliefs about chronic pain management.Am J Psychiatry. 2006 Apr;163(4):594-8.
9. Vourakis C. Substance abuse concerns in the treatment of pain. Nurs Clin North Am. 1998 Mar;33(1):47-60.
10. Sullivan EJ. Nursing Care of Patients with Substance Abuse. Publication- Mosby

WEB SOURCES

www.painmed.org
www.aapainmanage.org
www.asam.org
www.samhsa.gov
www.drugabuse.gov

Suggested slide materials

Slide 1
Role of nurse in general medical surgical units

1. Case finding
2. Assessment
3. Education
4. Referral

Slide 2
Physical illnesses related to alcohol abuse

- Liver cirrhosis
- Fatty liver
- Hepatitis
- Portal hypertension
- Ascites
- Esophageal varices
- Hepatic encephalopathy
- Gastritis
- Duodenitis
- Pancreatitis
- Myopathies
- Head and neck cancer
- Liver cancer

Slide 3
Physical illnesses associated with other substances

- Nasal septum damage
- Cellulites
- Infective endocarditis
- AIDS
- Hepatitis b
- Tuberculosis
- STDs

Slide 4
Perioperative care of patient with substance use disorder – role of nurse

1. Elicit careful and complete history of substance use
2. do not withdraw the patient from the dependent substances, provide substituents
3. Watch for the physical complications which can aggravate in the postoperative period e.g. pain, pulmonary complications etc
4. Watch the patient carefully for any withdrawal signs of the substances

5. Administer chlordiazepoxide or diazepam for alcohol dependents
6. Motivate the patient for deaddiction treatment and do appropriate referral

Patients With Substance Use Disorders Are At Increased Risk Of Receiving Inadequate Pain Management With Fear Of Exacerbating Addiction By Using Opioid Medications

Slide 5

Assessment Of Patient

- Initial assessment
- Ongoing assessment
- Psychological status

Slide 6

Initial Assessment Of Pain

- Assessment of pain is done by taking history related to
- Nature of pain
- Severity of pain
- Measures taken to relieve the pain in past

Slide 7

Ongoing assessment Of Pain

- Rating and documentation of
  - Patient's pain
  - Function
  - Response to medication.

Slide 8

Psychological status

- Assessment of following
  - Depression
  - Loss of self-esteem
  - Social isolation.

Slide 9

Management Of Patients With Substance Abuse History

- Involvement of multidisciplinary team
- Setting realistic goals for therapy
- Evaluating and treating co morbid psychiatric disorders
- Preventing or minimizing withdrawal symptoms
- Consider the impact of tolerance
- Applying appropriate pharmacologic principles to treat chronic pain

Slide 10

Pharmacological Principles To Treat Chronic Pain

- Nerve block, electrostimulation, antidepressants, membrane-stabilizing medications
- Opioid pharmacotherapy in severe chronic pain
- Individualizing, monitoring, and documenting prescriptions for opioid medication in patients with a history of opioid use
- Determining whether effective alternatives are available
- Weighing the risk-to-benefit ratio of opioid use
- Discussing expected outcomes with patients
- Considering periodic random urine drug testing with the consent of the patient

Slide 11

Management Of Patients With Substance Abuse History

- Recognize Specific Drug Abuse Behaviors
- Utilize No drug Approaches as Appropriate
- Support the individual in achieving and sustaining addiction recovery

Slide 12

Recognition of Common Characteristics of the Drug User

- Unusual behavior in the waiting room
- Assertive personality
- Unusual appearance
- May show unusual knowledge of controlled substances
- Gives medical history with textbook symptoms
- Requests a specific controlled drug
- Reluctant to try a different drug

Slide 13

Support For Family And Friends

- Assess the anxiety level, fear and concerns of the family
- Assess the perceived problem by the family
- Assess family burden and coping
- Assess for potential violence in the family specially spousal abuse
- Assess for family environment
- Assess for peer group influences
- Assess for risk behaviors

Slide 14

Strategies: To Be Used While Interacting With The Family And Friends

- Empathy
- Active listening
- Show genuine interest
- Provide warmth

Slide 15

Interventions with the families and friends

- Discuss their concerns and doubts
- Help to verbalize feelings and fears
- Help them to perceive the problem realistically
- Help them to use effective coping strategies to deal with the problem.
- Identify the risk behaviors and strategies to minimize the harm.
- Help them to recognize their role while dealing with substance abuse patient.

Nicotine Dependence

19

Arun Gupta, Vivek Benegal

Summary: *Tobacco use is common amongst men and women worldwide and most substance users are heavy users. The need to abstain and understand the harmful consequences remains unrealized in the general population. It is also considered to be difficult to manage. This chapter highlights the major issues related to nicotine dependence and effective ways to manage in primary care settings and the role of nurse.*

1. Tobacco use in India

1.1 Types of tobacco used

In India, tobacco is used in a wide variety of ways: Smoking and chewing being the commonest. Beedi smoking is the most popular form of smoking followed by cigarettes.
Chewing paan (betel leaf) with tobacco is the major form of smokeless-tobacco **(SMT)** use. Dry tobacco and areca nut preparations such as paan masala, gutka and mawa are also popular and highly addictive.

1.2 Prevalence of use

Tobacco use among men and women is widespread in all regions of India and among all sections of society. Around 56% of males in the age range of 12 - 60 years currently use tobacco. Among females 2% smoke and 12% chew tobacco. Tobacco use is higher among older age groups. Nonetheless, it is estimated that two in every ten boys and one in every ten girls use a tobacco product and initiation to tobacco products before the age of 10 is increasing.

2. Why do people need to stop?

2.1 Consequences of Tobacco use

In the year 2000, an estimated 4.83 million premature deaths in the world were attributable to smoking alone; 2.41 million in developing countries and 2.42 million in industrialized countries. The region with the highest number of deaths attributable to smoking (0.68 million deaths) was the developing region of South-East Asia (dominated by India in terms of population).

Tobacco-related cancers constitute 56% and 45% of all cancers in males and females in India, respectively. Tobacco chewing in its various forms is directly responsible for cancers of the oral cavity, esophagus, pharynx, cervix and penis. Beedi and cigarette smoking cause oral, pharyngeal, esophageal, laryngeal, lung, stomach, gallbladder, urinary bladder and penile cancers.

Tobacco use, especially smoking, is associated with vascular diseases like myocardial infarction (heart attacks) and coronary heart disease related deaths at an early age. Chronic obstructive pulmonary disease (COPD) is a progressive and disabling lung disease, which leads to respiratory crippling and premature death. In India, it affects over 5% of males and 2.7% of females who are over 30 years of age. Tobacco smoking is responsible for over 82% of COPD, which accounts for about 12 million adults suffering from smoking-attributed COPD in India.

Tobacco use in any form has marked effects upon the soft tissues of the oral cavity. It is associated with oral precancerous lesions such as leucoplakia and erythroplakia, and other oral mucosal lesions. Oral sub mucous fibrosis (OSMF) is emerging as a new epidemic, especially among the youth. In this disease, fibrous bands develop in the mouth, mucosa loses its elasticity, and the ability to open the mouth reduces progressively. In extreme cases, victims may be only able to open their mouths enough to pass a drinking straw and this disease has a high potential for cancer development. A dramatic increase in OSMF among young people in India has been attributed to chewing guthka and paan masala.

Tobacco use has an adverse effect on the sexual and reproductive health of both men and women. Male smokers have a lower sperm count and poorer sperm quality than non-smokers. Maternal tobacco use (smoked and smokeless) during pregnancy causes decreased fetal growth, spontaneous abortions, fetal deaths, and pregnancy complications.

2.2 Benefits of Tobacco Cessation?

Tobacco cessation is essential for reducing the mortality and morbidity related to tobacco use. Not doing so may lead to an additional 160 million deaths globally by 2050 among smokers alone, However, for the individual user, personalized reasons for quitting tobacco use (stated in positive terms) is likely to be a more compelling source of motivation [see Box]. Professionals involved in helping people through tobacco cessation need to be able to discuss these benefits with their clients.

3. Why do users get easily dependent?

3.1 Nicotine dependence

Nearly 3000 chemical constituents have been identified in smokeless tobacco (SMT), while close to 4000 are present in tobacco smoke. Most are harmful. Among them, Nicotine is a stimulant with properties similar to those of cocaine and amphetamines. Nicotine is 1000 times more potent than alcohol and 5-10 times more potent than cocaine or morphine in its addictive potential.

The addictive effect of nicotine is linked to its capacity to trigger the release of dopamine - a chemical in the brain that is associated with feelings of pleasure. However, recent research has suggested that in the long term, nicotine depresses the ability of the brain to experience pleasure. So, smokers and chewers need greater amounts of the drug to achieve the same levels of satisfaction. Tobacco use is therefore a form

of self-medication. Continued use relieves the withdrawal symptoms, which set in soon after the effects of nicotine wear off. A key factor is the compulsion (repeated use) to take the drug experienced by the user. Most tobacco users smoke or use smokeless tobacco on a daily basis. Other indicators of dependence include the time from waking to first use.

Another marker for dependence is the occurrence of withdrawal symptoms following cessation of drug use. Typical physical symptoms following cessation or reduction of nicotine intake include craving for nicotine, irritability, anxiety, difficulty concentrating, restlessness, sleep disturbances, decreased heart rate, and increased appetite or weight gain.

Genetic Influence: Recent research suggests that certain smokers may be predisposed to nicotine dependence through the effects of a gene responsible for metabolising nicotine. Non-smokers are twice as likely to carry a mutation in a gene that helps to rid the body of nicotine.

Other factors to consider besides nicotine's addictive properties include its high level of availability, the small number of legal and social consequences of tobacco use These factors, combined with nicotine's addictive properties, often serve as determinants for first use and, ultimately, dependence.

3.2 Behavioral and Psychological factors

The second reason why people find it difficult to stop is the psychological dependence upon tobacco use as a means of handling stress or reducing other unpleasant emotions.

Third is a learned response to certain environmental/social cues (such as finishing a meal or smoking by others). This can be thought of as an addiction triangle.

Helping people to quit tobacco must therefore address all three arms of this addiction triangle in order to be successful.

Difficulty in quitting: Surveys have shown that the majority of smokers (around 70 per cent) want to stop smoking yet the successful quit rate remains very low. As little as 3 per cent of those who try to quit succeed in abstaining for as long as a year, using willpower alone. Less than 20 per cent or of those who start on a course of treatment succeeds in abstaining for as long as a year.

3.3 Who is likely to change? Assessment of people with tobacco abuse.

Whether a user succeeds in stopping depends on the balance between that individual's motivation to stop tobacco use and his or her degree of dependence on tobacco. Clinicians must be able to assess both of these characteristics. Motivation is important because "treatments" to support cessation will not work in those who are not highly motivated. Dependence is especially important in those who do want to stop, as it influences the choice of intervention. It is also important to bear in mind that motivation to stop and dependence are often related to each other. For example heavy users may show low motivation because they lack confidence in their ability to quit; lighter users may show low motivation because they believe they can stop in the future if they wish. Also, the motivation to stop fluctuates and can vary considerably with time and is strongly influenced by the immediate environment.

Measuring dependence in tobacco users

The simplest approach to measuring dependence is to ask whether the user has difficulty in refraining from smoking or using smokeless

tobacco [in] circumstances when he or she would normally use or whether the user has made a serious attempt to stop in the past but failed. Another approach is to use a quantitative measure of dependence like the Fagerström test for nicotine dependence, which has proved successful in predicting the outcome of attempts to stop. This is a standard instrument for assessing the intensity of this physical addiction. Higher the score on this questionnaire, the higher the level of dependence.

The Fagerström test helps physicians decide the indications for prescribing medication for nicotine withdrawal and craving. While this scale was originally constructed for smokers, a modified version for SMT users also exists. The main value of measuring dependence in tailoring cessation interventions to individual smokers is in the choice of pharmacotherapies. Smokers of 10 or more cigarettes a day show significantly better results with smoking cessation drug products (principally nicotine replacement therapy and bupropion). However, some experts feel this cut off is arbitrary and all persons who have no specific contra-indication should be given the benefit of pharmacotherapies.

Measuring motivation to stop tobacco use

Simple qualitative test of motivation to stop

Do you want to stop smoking (using SMT) for good?	No/Yes
Are you interested in making a serious attempt to stop in the near future?	No/Yes
Are you interested in receiving help with your quit attempt?	No/Yes

A "yes" response to all questions suggests that behavioral support and/or medication should be offered

SMT = smokeless tobacco

Direct questioning: Motivation to stop can be assessed qualitatively by means of simple direct questions about their interest and intentions to quit. This simple approach is probably sufficient for most clinical practice, although slightly more complex, semi quantitative measures (asking the smoker to rate degree of desire to stop on a scale from "not at all" to "very much") can also be used.

Stages of change:

Another approach, which utilizes the understanding of the process of behavior change, has become popular the "Transtheoretical model." In this model, users are assigned to one of five stages of motivation.

1. Pre-contemplation (the contented user, not thinking about quitting)

People who are at this stage are not really thinking about stopping, and if challenged, will probably defend their smoking or SMT use behavior. They are not likely to be receptive to messages about the health benefits of quitting. However, getting the patient to discuss concerns about quitting and presenting information on the risks involved with smoking are accomplishable goals. Thus, setting a quit date is realistically reserved for a patient who is in the preparation stage.

2. Contemplation (thinking about quitting but not ready to quit)

During this stage, users are considering quitting sometime in the near future (probably six months or less). They are more aware of the personal consequences and consider their tobacco use a problem that needs handling. So, they're more open to receiving information about consequences of tobacco use and identifying

the barriers that prevent them from quitting.

3. Preparation (getting ready to quit)

In the preparation stage, users has made the decision to stop and is getting ready to do so. They see the disadvantages of smoking as outweighing the advantages and are taking small steps towards quitting.

4. Action (quitting)

In this stage, people are actively trying to stop, perhaps using short-term rewards to keep them motivated and often turning to family, friends and others for support. This stage, generally lasting up to six months, is the period during which smokers need the maximum help and support.

5.Maintenance (remaining a non-smoker)

Former smokers in the maintenance stage have learned to anticipate and handle urge to use and are able to use new ways of coping with stress, boredom and social pressures that had been part of their "smoker's identity." Although they may slip and have a cigarette, they try to learn from the slip so it doesn't happen again. This may give them a stronger sense of control and the ability to stay tobacco-free.

This model has been widely adopted, though no evidence exists that assigning smokers to particular stages predict smoking cessation better than the simple direct questions outlined above. The ultimate practical objective of assessing motivation is to identify tobacco users who are ready to make a quit attempt.

4. What has been shown to help users quit?

Tobacco-cessation counseling provided by physicians, nurses and other health care professionals have proved to be effective. Effective intervention includes identifying tobacco users, offering repeated advice to stop in a way that is of personal medical relevance, use of medicines such as anti-craving medication and nicotine replacement therapy (NRT), follow-up contact, and advice regarding intensive cessation therapy when necessary.

For patients unwilling to quit, motivational interventions, including information regarding personal risks associated with smoking and chewing and rewards resulting from cessation are useful. Counseling can be offered at all patient encounters, to both outpatients and hospitalized patients. Similar strategies are used in both smoking and smokeless tobacco-cessation interventions.

There are two broad strategies: One involves focused treatment for tobacco cessation to people seeking to stop or referred from other sources. Trained personnel in specialized cessation clinics usually offer this. The other involves detecting tobacco users opportunistically when they come to the attention of doctors and health care workers having come for consultation for some other illness. Less intensive interventions, as simple as physicians advising their patients to quit smoking, can produce cessation rates of 5% to 10% per year. More intensive interventions, combining behavioral counseling and pharmacological treatment, can produce 20% to 25% quit rates in one year.

4.1 Brief interventions in the non-treatment - seeking population

There is good evidence that brief tobacco cessation interventions, including screening,

brief behavioral counseling (less than 3 minutes), and medicines delivered in primary care settings, are effective in increasing the proportion of users who successfully quit and remain abstinent after 1 year.

The components of physicians' clinical intervention in tobacco use [see Box], in broad terms, are:

- Asking
- Advising
- Assessing
- Assisting
- Arranging for follow up visits

This approach has been described as the 5As interventions. The duration of each session of minimal intervention is usually three to five minutes, and certainly less than ten minutes

4.2 Medications and Nicotine replacement

Numerous effective pharmacotherapies for smoking cessation now exist. Except in the presence of contraindications, these should be used with all patients attempting to quit smoking or smokeless tobacco use: Bupropion sustained-release, Nicotine gum, Nicotine inhaler, Nicotine nasal spray and Nicotine patch. Special consideration, however, is required for certain patient groups among whom one or more of the drugs may have deleterious effects eg. Pregnant/ breast-feeding women. No agents are approved for these patients, but medicines are less harmful than tobacco use itself.

Quit attempts without pharmacotherapies, especially in light tobacco users (<10 cigarettes/ day or <1 sachet of SMT /day). are initially preferred in smokers with heart or lung disease. Care should be exercised with use of nicotine in patients who have had a recent myocardial infarction, experience severe or worsening angina, or have serious arrhythmias.

Anticipating triggers or challenges

- ➢The urge to smoke after quitting often hits at predictable times.
- ➢The trick is to anticipate those times and find ways to cope with them–without smoking.
- ➢Look at the following list of typical triggers. Do any of them ring a bell with you?
- ➢Check off those that might trigger and urge to smoke, and add any others you can think of:

• Watching someone else smoke • Working under pressure • Feeling bored, angry or sad • Finishing a task • Before starting task • To relax • To concentrate • While Studying • Talking on the telephone • Having a drink • Watching TV • Morning toilet • Finishing a meal • Playing cards • Drinking coffee • Driving your car	**USE THE 4 "A'S"** Avoid. Certain people and places can tempt you to smoke. Stay away for now. Alter. Switch to soft drinks or water instead of alcohol or coffee. Take a different route to school or work. Take a walk when you used to take a smoke break. Alternatives. Use oral substitutes like gum, cloves or saunf. Activities. Exercise or do hobbies that keep your hands busy can help distract the urge to smoke.

4.2.1 Use of Nicotine replacement therapy

Nicotine Replacement Therapy (NRT) is used to relieve withdrawal symptoms in tobacco users

when trying to quit by substituting the nicotine in tobacco with nicotine in relatively safer form, as they do not contain all the dangerous chemicals present in tobacco. However, it must be made very clear that NRT alone is not the answer. Behavior modification is an important aspect of any behavior change, especially tobacco cessation. After the acute withdrawal period, nicotine replacement therapy is gradually reduced so that patients experience some withdrawal symptoms.

Use of Nicotine Gum

Nicotine gum is currently available in India in strengths of contains 1, 2 and 4 mg that can be released from a resin by chewing. The gum manufactured in India comes in two varieties a gutka flavored one for pan paraag and gutka users and a mint flavored one for smokers.

Dosage: Scheduled dosing (e.g., one piece of 2-mg gum/hour for light smokers, and 4-mg gum for highly nicotine-dependent smokers is recommended.

It is recommended that the gum be started on the quit date when the user is advised to absolutely stop all tobacco products and use the gum instead. Duration of treatment is 4-6 weeks. The gum is weaned off subsequently by gradually reducing the frequency and strength of the gum over 2-3 months or less.

At present, other Nicotine replacement therapies such as Nicotine patches and Nicotine inhalers are not freely available in India.

4.2.2 Use of Bupropion Hydrochloride Sustained Release tablets

Bupropion (an antidepressant agent) has been used along with NRT as first-line therapy for treating tobacco dependence. It is presumed to reduce cravings or the urge associated with nicotine deprivation by affecting noradrenaline and dopamine. These two chemicals in the brain are possibly the key components of the nicotine addiction pathway. Taking the drug alone produces higher cessation rates than placebo. In actual practice settings, the combination of bupropion and minimal or moderate counseling has been associated with 1 year quit rates of 23.6% to 33.2%.

Taking it along with nicotine replacement is even more successful.

Dosage: Bupropion treatment is begun 1-2 weeks before the set quit date. The usual adult target dose for bupropion sustained release tablets is 300 mg/day, given as 150 mg, twice daily. There should be an interval of at least 8 hours between successive doses. Dosing with bupropion sustained release tablets should begin at 150 mg/day given as a single daily dose in the morning. If the 150 mg initial dose is adequately tolerated, an increase to the 300-mg/day-target dose, given as 150 mg twice daily, may be made as early as day 4 of dosing. Doses above 300 mg/day should not be used.

The 150 mg twice-daily dosage is continued for 7-12 weeks after quit date and maintenance therapy may go on upto 6 months. It is important that patients continue to receive counseling and support throughout treatment with bupropion, and for a period of time thereafter.

Adverse Effects: The medicine may result in an activating effect with feelings of restlessness that however decreases in 1-2 weeks after starting medication. Reduced sleep, gastrointestinal upset, appetite suppression and weight loss,

headache and lowering of seizure threshold have been reported. (Seizure incidence is 1 in 4000, but incidence is rare with sustained release preparations below 400 mg. /day).

Drug Interactions: It may interact with other antidepressants like Fluoxetine - causing panic and Psychosis; and Carbamezapine may increase its breakdown and reduce its efficacy.

Contraindications: The medication is therefore not recommended in people with epilepsy, those taking other psychiatric medications, those with eating disorders and in Pregnancy

4.3 Behavioral methods: Problem-solving and skills training.

The ideal strategy combines pharmacological treatment and behavioral treatment. All users wishing to quit must be provided with practical counseling. Some of the main problems to be addressed and skills that need to be developed include the following:

- Skills to assist users to make the quit attempt: Review of the participant's tobacco use history and motivation to quit; setting a specific quit date
- Skills to deal with problems that may occur immediately after stopping or withdrawal from the effects of nicotine
- Skills to avoid a lapse or relapse to earlier tobacco using patterns: Help in identification of high-risk situations and cues, which lead to tobacco use and learning of problem-solving strategies to deal with high-risk situations.

These behavioral methods can be taught as part of a brief intervention programme.

4.3.1 Skills to assist users to make the quit attempt Setting a quit date.

1 Help the patient set a quit date, preferably within 2 weeks, but not immediately, unless there is an immediate health crisis.

2 Prompt the patient by suggesting a significant date, for example, a birthday, an anniversary, or something else that would keep the date in mind.

Recommend that they do not quit during an anticipated high-stress time. Acknowledge that no time is ideal but that sooner is better than later.

Nicotine fading - This involves progressively lowering the number of cigarettes or SMT sachets daily, so that nicotine intake is at the lowest possible level just before the quit date. The alternative is the cold turkey method of giving up all of a sudden on the quit date.

1 Advise patients to throw away all tobacco and other items such as ashtrays etc. the night before the quit day.

2 Advise the patient that starting on the quit date, total abstinence is essential. Discuss the possibility of using Nicotine gum as a substitute from that date.

3 Note the date selected in the clinic progress record.

4 If there are no contra-indications, prescribe Bupropion and build up to the required dosage by the time of the quit date.

Overcoming psychological dependence.

Years of regular use have created finely developed behavior patterns and in effect, the individual has become conditioned to use tobacco in certain social settings. It is essential

to help the patient identify each of the environmental conditions that most likely lead to tobacco use. Suggest that the patient develop an alternate plan to having a cigarette during the morning toilet, smoking after a meal, smoking to manage stress at work or in traffic

Using past quit experience. Since most users have tried to quit before, the patient can draw on those experiences. Identify what helped and what hindered previous quit attempts. Was it physical withdrawal symptoms? Feeling sad bored or upset? A social situation? Help the patient plan how to handle the type of situation that led to the relapse.

Anticipating triggers or challenges. Encourage the patient to imagine situations that might lead to relapse. Discuss how the patient might successfully manage each.

Avoiding alcohol. Drinking is one of the most common causes of relapse. Suggest that alcohol be avoided during the quitting process, especially during the first weeks of abstinence, and used with caution later

Reviewing and retaining information. Providing self-help books allows patients to review what they learned and to learn more as questions arise.

Extra treatment social support. Patients should be encouraged to obtain social support for their treatment from family, coworkers, friends, and others. Patients should encourage spouses to quit with them or not smoke in their presence.

4.3.2 Skills to deal with withdrawal

Physical withdrawal from nicotine is a temporary condition, but it can cause a fair amount of discomfort while it lasts.

It is essential to teach the patient coping skills to deal with the irresistible urge to smoke or use SMT [see Box] and the other problems, which may be encountered.

4.3.3 Skills to avoid a lapse or relapse to earlier tobacco using patterns:

These interventions should be part of every encounter with patient who has recently quit. Every ex-tobacco user should receive congratulations on any success and strong encouragement to remain tobacco free. Use open-ended questions designed to initiate patient problem solving. "How has stopping tobacco use helped you?" Encourage patients' active discussion of the following topics:

Benefits, including potential health benefits, of cessation

Success the patient has had in quitting, duration, reduction of withdrawal, etc.

Problems encountered or anticipated threats to maintaining abstinence including weight gain, depression, alcohol, other tobacco users in house

Prescriptive Relapse Prevention: based on information obtained about specific problems the patient has encountered or likely to. Coping skills should be taught during follow-up contact or through a specialized clinic or program.

High Risk Situations

First step: identify high-risk situations. Where they've relapsed in past.

Next plan in advance responses or solutions to cope with these triggers

Relapse: If one slips!

Do not be discouraged if your patient slips and starts using again. Remind the person that many former users tried to stop several times before they finally succeeded. But it is important to get back on the abstinence track immediately.

Withdrawal Problems	**Suggested coping skills**
Cravings Strongest in the first week. Experienced in waves, individual "cravings" last 30-90 seconds. Begin 6-12 hours after stopping, peak for 1-3 days, and may last 3-4 weeks.	The five D's to handle Urges Delay until the urge passes—usually within 3-5 minutes Distract yourself. Call a friend or go for a walk. Drink water to fight off cravings Deep Breaths—Relax! Close your eyes and take 10 slow, deep breaths Discuss your feelings with someone close to you.
Difficulty in concentrating usually begins within the first 24 hours, peak for the first 1-2 weeks, and disappears within a month.	Taking a break: gazing into a photo or looking out a window; closing eyes and relaxing for ten minutes. Temporarily putting off work when feeling unable to do it.
Sleep disturbance,Trouble falling asleep or disturbed. Sleep and daytime drowsiness. Troublesome for the first 1-2 weeks, and disappear within a month.	Avoiding coffee, tea after 6 pm. Drinking lots of fruit juices, and water. Learning relaxation/meditation techniques. Avoiding changes in sleep routine: always getting up at the same time every morning.
Depression and tiredness: Mild feelings of depression may occur usually within the first 24 hours, continue in the first 1-2 weeks, and go away within a month Irritability, Restlessness, Anger and Frustration Feeling more "edgy" and short-tempered is common. These peak (stay high) the first 1-2 weeks, and disappear within a month.	Identifying specific feelings. Is one actually feeling tired, lonely, bored or hungry? Focus on and address these specific needs. Call a friend and plan to have lunch, go to a movie. Make a list of things that are upsetting to you and write down solutions for them. Taking short walks or exercising. Having a hot bath, using relaxation techniques. Keeping hands busy, like playing with a rubber band or squeezing a rubber ball.
Increased Appetite and Weight Gain Stronger and more frequent hunger pangs are experienced Weight gain most often due to eating more after is a common but temporary phenomenon.	More physical activities (e.g. take the stairs instead of a lift, park further away from the door to the office/shop etc.). Drinking more water—especially before meals. Eating plenty of fresh fruit—carrying it to workplace.

Help the person identify the trigger: Exactly what was it that prompted him/her to smoke or use SMT? Once aware of the trigger, help the person plan how to cope with it when it comes up again.

Marking Progress

Each month, on the anniversary of the quit date, advise the patient to plan a special celebration or purchase with the money saved. Encourage the quitter to periodically, write down new reasons why he/she is glad to have quit, and paste these reasons where they will be sure to be seen.

Follow-Up: After the Patient's Quit date

Frequent follow-up of the patient is an important predictor of success. It is important to follow up at every opportunity after the above contacts. Approximately 40% of smokers who quit relapse after the first year of abstinence. Steps to take at follow-up appointments after the patient quits include the following:

- **Data Gathering -** Ask patients if they have remained abstinent. Ask patients about problems encountered and how they are managing them. This encourages patients' thinking through circumstances and coping strategies.

- **Intervention -** Reinforce behaviors that are used to remain abstinent and be positive. Continue to build patients' confidence in them as ex-tobacco users. Ask again about their reasons for quitting and continue to reinforce their motives. Recognize if your patient has had any slips or short-term lapses. Assure the patient that he or she has only experienced a small setback and that does not automatically make him or her smoker again

5. A suggested clinical protocol

During the first visit:

Ask for tobacco use, assess and record levels of dependence and motivation to stop. Advise the patient to take up a programme of tobacco cessation, along with the advice with his/her current medical problems or other relevant tobacco related concerns.
If the patient is currently unwilling, discuss the related problems and prepare plan to discuss the issue on future visits. If the patient is willing:

1. Plan a Designated Quit Date [DQD] within the next 2 weeks
2. Start the patient on increasing doses of Bupropion and discuss the use of Nicotine chewing gum or other NRT following the DQD.
3. Outline the steps to be taken to decrease tobacco (nicotine dosage) to less than 50% of current usage before the DQD.
4. Detail the changes in daily habits and in general lifestyle that the patient is advised to start before the DQD.
5. Explain the likely withdrawal symptoms and strategies to cope with them. Persuade the patient to agree on implementing one or more of these.
6. Advise about getting support from persons close to the patient. If possible the patient could be asked to get in touch telephonically whenever his abstinence is threatened.
7. Schedule the next follow-up visit, close to the DQD.

During the second visit:

1. Check on usage of medications and side effects if any. Start the patient on NRT giving

written details regarding use.

2. Review information on withdrawal symptoms and coping strategies.
3. Educate about relapse triggers and skills to deal with them
4. Reinforce the patient's motivation to continue with the cessation plan
5. Schedule the next follow-up visit, preferably after a week.

During subsequent visits (preferably weekly for the next one month and then at increasing intervals):

1. Check on medication and NRT.
2. Review problems faced regarding relapse triggers or slips and advise accordingly.
3. Reinforce the patient's continuing in his cessation attempt and deal with any lapses or slips in a positive and empathic manner.

Role of nurse

Motivation counselling

Motivation counseling for tobacco cessation is a difficult task and it requires constant motivation and support for the patients. Explain the hazards of smoking and tobacco use. Explain about the treatment available: pharmacological and nonpharmacological. The patient should be given clear advice to stop smoking. Give positive feedback if the patient tries to quit smoking. Emphasize on the health problems the patient suffering with and on the improvement in the health after smoking cessation. Provide continuous motivation enhancement counseling, as it is very difficult to achieve complete cessation or preventing lapses.

The role of nurse can be generally described as following:

1. Provide cessation interventions through counseling and behavior modifications for inpatient, outpatient and to the community.

1. Assess current tobacco use and history of use.
2. Determine level of addiction through the Fagerström assessment test.
3. Determine stage of readiness to change by identifying the states of change in the quitting process.
4. Develop and recommend treatment plan for behavior modification, in accordance with physicians medical treatment.
5. Communicate with all involved in patient's care by using a team approach (psychiatrist, social worker, psychologist etc.)
6. Offer further support after discharge via phone or individual consultations or community classes.

2. Teach Freedom from Smoking classes for the community.

1. Ensure a comfortable environment for optimal learning and healing.
2. Conduct all sessions with motivation.
3. Follow up intervention through phone calls.

3. Educate health care providers, physician and community on Nicotine addiction and tobacco cessation.

1. Coordinate with above stated people to provide support and education on nicotine addiction and tobacco education.
2. Implement education programs, which provide continuing education credits.

3. Constantly interact with above providers to ensure the most updated information is available for this additiction.
4. Support services of ongoing community efforts that decrease tobacco use, tobacco policy changes and advocacy

Suggested reading material

1. Ray R, Mondal AB, Gupta K, Chatterjee A, Bajaj P (2004) The Extent, Pattern and Trends of Drug Abuse in India: National Survey.New Delhi. United Nations Office on Drugs and Crimes & Ministry of Social Justice and Empowerment, Government of India.
2. Rani M, Bonu S, Jha P, Nguyen SN, Jamjoum L. (2003) Tobacco use in India: prevalence and predictors of smoking and chewing in a national cross sectional household survey. Tobacco Control. 2003 Dec; 12(4):e4. Available at: http://tc.bmjjournals.com/cgi/content/full/12/4/e4. Accessed on 14 May 2005.
3. Ezzati M & Lopez AD (2004) Regional, disease specific patterns of smoking-attributable mortality in 2000. Tobacco Control;13:388-395.
4. National Cancer Registry Programme (NCRP). Two year report of the population-based cancer registries, 1997.98. Bangalore: Indian Council of Medical Research, Coordinating Unit, NCRP; 2004a.
5. Pianezza ML, Sellers EM and Tyndale RF. (1998) Nicotine metabolism defect reduces smoking. Nature ; 393: 750.
6. West R. (2004) Assessment of dependence and motivation to stop smoking. BMJ :338-339
7. Heatherton TF, Kozlowski LT, Frecker RC, Fagerström KO. The Fagerström Test for Nicotine Dependence: a revision of the Fagerström Tolerance Questionnaire. Br J Addict 1991;86:1119-27.
8. Sutton S. (2001) Back to the drawing board? A review of applications of the transtheoretical model to substance use. Addiction;96: 175-86
9. Swan GE, McAfee T, Curry SJ, Jack LM, Javitz H, Dacey S; Bergman K. (2003) Effectiveness of Bupropion Sustained Release for Smoking Cessation in a Health Care Setting: A Randomized Trial. Arch Intern Med; 163: 2337-2344
10. Stapleton J(1998) Cigarette smoking prevalence, cessation and relapse.Stat Methods Med Res;7(2):187-203.

Suggested slide material

Slide 1.

Smoking- beedi & cigarette smoking common

- Smokeless- chewing, gargling (paan masala, gutka)

Slide 2.

Prevalence- 56% males (age 12-60 years) use tobacco

- 2% women smoke: 12% chew tobacco
- Prevalence low in women- social unacceptability

Slide 3

Consequences of tobacco use

- Relative risk of death due to tobacco use is high
- Smoking causes more than 700,000 deaths/ year in India

- Tobacco related cancers constitute more than half of all cancers in India
- Cardiovascular, cerebrovascular and respiratory infections common with tobacco use
- Oral Sub mucous fibrosis common with chewing tobacco

Slide 4.

Nicotine dependence

- Nicotine release dopamine- reinforces its use
- Release other neurotransmitters- reinforces its use
- Behavioral & psychological factors contribute to dependence

Slide 5.

Measuring dependence

Fagerström test for nicotine dependence

- Available for smokers & smokeless tobacco
- Higher scores- greater dependence

Slide 6.

Measuring motivation

- Direct questioning
- Assessing the stage of change

Slide 7. Management

- Brief Intervention
  - Useful in non-treatment seekers
  - Can be practiced in short time
  - Useful for motivated individuals
- Nicotine Replacement (Nicotine gum, patches, inhalers)
  - Relieves withdrawal symptoms
  - Safe
- Bupropion hydrochloride SR tablets
  - Reduces craving
  - Begin 1-2 weeks before the set quit date
  - 150 mg single dose
  - To continue for 7-12 weeks after quit date
  - Maintenance therapy for 6 months
  - Seizures at very high doses only
  - If tolerated, increased to 150mg b.i.d after 4 days
- Behavioral methods
  - Learning skills like self monitoring & coping with craving
  - Skills to deal with withdrawals
  - Skills to avoid a lapse /relapse
  - Individual/group sessions also useful

Slide 8

Role of nurse

1. Assesses current tobacco use and history of use.
2. Determines level of addiction through the Fagerström assessment test.
3. Determines stage of readiness to change by identifying the states of change in the quitting process.
4. Develops and recommends treatment plan for behavior modification, in accordance with physicians medical treatment.
5. Communicates with all involved in client's care by using a team approach
6. Offer further support after discharge via phone or individual consultations or community classes.
7. Community education –awareness campaigning and distribution of pamphlets, booklets etc
8. Educates health care providers, physician and community on Nicotine addiction and tobacco cessation.

Substance Abuse And HIV

20

N.V.Muninarayanappa.

Summary: Substance use is a major cause of new HIV infections. Shared equipment can spread HIV, hepatitis and other diseases. Alcohol and substance use, even when just used recreationally, contributes to unsafe sexual activities, which increases the risk for transmission of HIV. Substance use can lead to non compliance to the antiretroviral treatment.. This increases the chances of treatment failure and resistance to medications. Mixing recreational substances and antiretroviral medications can be dangerous. Drug interactions can cause serious side effects or dangerous overdoses. Nurses have a vital role in educating the substance users with HIV regarding the medication and methods of preventing transmission. It is important to educate the patients regarding the drug interactions and also the means of adhering to the treatment regimen. The nurse plays a pivotal role in educating the patient and the community about the safer sexual practices and the harm reduction techniques.

Introduction

Substance abuse and HIV/AIDs are global public health problems. There were 5.1 million HIV infected persons in India (NACO 2004).Injecting drug use is an important cause in the continuing epidemics of HIV and Hepatitis C.The infection is spread through high risk substance use and sexual behaviour. Important reasons for injecting drug use and the transmission of blood borne infections include the negative attitudes towards IDU, lack of basic knowledge of dependence as a treatable disease, limited funds for prevention and harsh laws and regulations. Effective prevention efforts are needed to help IDU's reduce transmission among their substance using partners, their sex partners, their children and ultimately among the general population.

Substance abuse and HIV

Substance abuse is a major factor in the spread of HIV infection. Shared equipment can spread HIV and hepatitis. Substance abuse is linked with unsafe sexual activity. In North East India HIV epidemic started with Injection drug use (IDU). At present it is not a major cause of transmission of HIV in India, except for states of Manipur, Nagaland and Meghalaya. Injection drug users are more common in urban India possibly because of easy availability of Injectable compounds.. Substance users are less likely to take all of their medications, and substances being abused and alcohol have dangerous interactions with HIV medications.

Extent of the problem

The researches revealed that about 0.1 percent of the adult males from the general population reported having injected substance use for non medical reasons at least once in their life time. Among substance users seeking treatment, about 14% were injecting drug users (IDUs).A small percent of women substance users and prisoners inject substances. Current information showed that HIV infections among injecting drug users in some states and major cities in India are also generally high(Delhi-14.4%; Karnataka-2.8%; Mumbai 24.8%; Mizoram-6.4%; West Bengal-2.7%, Imphal -18%,Chennai-63.8%; NACO 2004).

Substances injected

The common injected substances are opiates such as heroin and buprenorphine alone or in combination with promethazine, diazepam, propoxyphene and pentazocine. There is 'shadow injecting' among the regular Non IDU i.e. occasional injecting at times when heroin is unavailable. the reasons for injecting are as follows :

a) when heroin is scarce
b) when cost of heroin is high
c) when there is an observable reduction in purity levels
d) when police enforcement is vigilant
e) easy availability
f) fewer legal complications and
g) experience more intense 'high'.

Associated high risk behaviors

Injecting drug users exhibit high levels of HIV related risk behaviors.

HIV infection spreads easily when people share equipment while abusing substances. The sharing of water, cotton, common solutions, other injecting paraphernalia and substances is also very common.

This is related to both preparation and distribution during substance sharing sessions. Sharing equipment also spreads hepatitis B, hepatitis C, and other serious diseases.

Infected blood can be drawn up into a syringe and gets injected along with the substance by the next user of the syringe. This is the easiest way to transmit HIV because infected blood goes directly into someone's bloodstream.

Even small amount of blood on hands, filters, tourniquets or in rinse water can be enough to infect another user. In some communities, needle exchange programs provide free, new syringes. These programs reduce the rate of new HIV infections.

Substance Use and Unsafe Sex

HIV related risky sexual behaviors are equally important as indicated by the frequency of unsafe and unprotected sexual acts. For a lot of people, substances and sex go together. Substance users might trade sex for substances or for money to buy substances. Consistent condom use with sexual partners is uncommon. Substance use, including methamphetamine or alcohol, increases the chance that people will not protect themselves during sexual activity. Someone who is trading sex for substances might find it difficult to set limits on what they are willing to do.

Substance use can reduce a person's commitment to use condoms and practice safer sex. Often, substance users have multiple sexual partners. This increases their risk of becoming infected with HIV or another sexually transmitted disease. This can increase their risk of transmitting HIV infection. This is a major concern in the states of Manipur, Nagaland and Meghalaya. HIV and Hepatitis C are the most serious health consequences related to unsafe drug injecting practices. Other complications include abscesses, overdose,tubeculosis and sexually transmitted infections.

Medications and Drugs (Substances)

Compliance to the antiretroviral substance regimes (HAART-Highly active antiretroviral treatment) is importanct. People who are not adherent are more likely to have higher levels of HIV in their blood and develop resistance to their medications. Substance use is linked with poor adherence, which can lead to treatment failure. Some substances interact with antiretroviral medications. The liver breaks down some medications used to fight HIV, especially the protease inhibitors and the non-nucleoside analog reverse transcriptase inhibitors. It also breaks down some recreational substances, including alcohol. When substances and medications are both "in line" to use the liver, they might both be processed much more slowly. This can lead to a serious overdose of the medication or of the recreational substance. An overdose of a medication can cause serious side effects as can an overdose of a recreational substance. Mixing a protease inhibitor with the recreational substance may be fatal. Methadone will soon be available in our country. One should be aware that antiretroviral medicines can change the amount of methadone in the bloodstream. It may be necessary to adjust the dosage of methadone in some cases. It is the nurse's responsibility to educate the users affected with HIV to be compliant with the treatment and avoid using substances which can result in serious substance interactions when the patient is on treatment.

Recommended Interventional strategies

- **Favorable policies and standard of care:** it enables the implementation of effective services for injecting drug users and helps in diversification and expansion of the substance dependence services, including the special treatment programmes for young injectors, women and prison inmates.
- **Reach out to the substance users and provide services**: Establishment of outreach interventions, covering a majority of all injecting drug users, to provide them with HIV/AIDS information, education, and the means of reducing their HIV related risks, promotion of safe behaviors, enlisting commitment to behavior change.

- **Encourage substance dependence treatment:** Motivate and educate the substance users to seek treatment and provide adequate information. The aim of substitution treatment programmes are to switch from injection use to non-injection use, to reduce the risk of contracting or transmitting HIV/AIDS and blood borne pathogens, to minimize the risk of overdose and other medical complications and to reduce hazardous substance use.
- **Strengthen peer driven intervention:** peers may influence each others behaviors through social comparison process, information exchange, socialization of new group members, modeling and reinforcement, generate peer support and utilize the culture of target group to affect and sustain changes in behaviors.
- **Establish a hierarchy of risk reduction strategies to prevent HIV among substance users:** target intervention are safe needle-syringe and injecting practices, substance and sex related risk behavior ,management of overdose, abscess management etc
- **Provide primary health care for substance users:** treatment of abscesses, sexually transmitted diseases, tuberculosis (liaison with DOTS- **D**irectly **O**bserved **T**reatment).
- **Reduce risky sexual behaviors among substance users:** consistency of condom use within regular partners should be stressed, STI's should be assessed early and treated appropriately, sex work and substance use among women injectors need to be specially addressed.
- **Voluntary HIV counseling and testing:** counseling and testing services in PHC's include primary health care, substance treatment, needle syringe exchange programmes etc. Proper pretest and post test counseling should be given and confidentiality of individuals ensured. Awareness raising among substance dependence services with respect to the need to address HIV/AIDS prevention and care issues should be done.
- **Establishment of integrated care facilities:** which provides antiretroviral treatment for substance users living with AIDS. Interventions to prevent the transition from non injecting substances use to injecting substance use, particularly for young people

Nursing Intervention

Substance users who are HIV positive need education as it is the most effective way of preventing transmission.

i. Educate Patients about how to prevent transmission through syringe and needles

- Never share any equipment used for injecting substances
- Wash hands frequently.
- Clean site used for injection
- Not to reuse the syringe as HIV can survive in a used syringe for at least 4 weeks.
- Method of cleaning the syringe:
  a. Wash under cold running water using bleach
  b. Leave bleach in the syringe for two minutes
  c. Rinse syringe and shake vigorously for 30 seconds
  d. Always use a new syringe if possible

ii. Educate patients about substance use and its effect on immune system/ HIV

Drinking lots of alcohol over a long period of time weakens the immune system. Other

substances may do the same, but more research is needed to document the extent. It's also not clear whether substance use causes HIV to progress faster. Some known facts are:

- Substance use may increase chances of getting colds, flu, sore throats and other infections.
- Cocaine, amphetamines and other substances that give rushy feeling, decrease appetite, possibly leading to weight loss.
- Smoking crack can compromise treatment taken to prevent pneumonia.
- Alcohol weakens the effects of some antibiotics and antiviral substances and may lead to oral Candida (thrush).

iii. Guide HIV positive Youth Who Use Party Drugs to stay healthy Advise the youths to:

- Take lots of rest.
- Eat well before and after partying, body needs rest and fuel and most party substances kill appetite. Fresh fruit is best.
- Take breaks from dancing to allow body to relax and cool down. An excellent opportunity to chat with friends.
- Don't share your water bottle, as it can transfer cold and other infections.
- Drink lots of water or fruit juice the day after partying. This prevents dehydration and helps body to flush out toxins.
- Avoid mixing recreational substances, including alcohol. Mixing increases the risk of overdose and liver damage.
- Take multivitamin to restore body's vitamins and minerals.
- Practice safe sex; carry a condom to the party.

iv. Educate patients regarding adherence to treatment

Missing or changing dose of HIV medication may allow resistance to develop. Resistance means that the virus changes and causes the medication to stop being effective. If a dose is missed by more than two hours, wait until the next dose to get back on normal schedule. Don't take an extra dose to make up for the one you missed. Plan ahead if you're going to be away from your pills and consider carrying your medications.

Strategies to educate patients about adherence to treatment:

- Provide information in an organized manner both orally and in written form in simple language with examples.
- Use educational tools such as pamphlets and information cards to enhance the communication
- Provide culturally competent patient centered care
- Directly observed therapy is most effective way to ensure adherence

Conclusion

Substance abuse is a major factor in the spread of HIV infection. Shared equipment for using drugs can carry HIV and hepatitis. Substance abuse is also linked with unsafe sexual activity. In North East India HIV epidemic started with Injection Drug use (IDU). Injection drug users are more common in urban India possibly because of easy availability of substances that can be injected. Education of HIV positive substance users is the key for enhancing their health condition and also a major means of preventing the transmission of HIV. These patients also need to be educated regarding the importance and ways of adhering to treatment regime.

Suggested reading material

1. Injecting substance use and HIV/AIDS in India: an emerging concerns;UNODC publications;Dec 2004;1-29
2. Abdala N, Crowe M, Tolstov Y, Heimer R.(2004): Survival of human immunodeficiency virus type 1 after rinsing injection syringes with different cleaning solutions. *Substance Use & Misuse*;39(4):581-600.
3. Abdala N, Gleghorn AA, Carney JM, Heimer R.(2001): Can HIV-1-contaminated syringes be disinfected? Implications for transmission among injection substance users. *Journal of Acquired Immune Deficiency Syndromes*;28(5):487-494.
4. Alexander, Elliot ,(2004): Toronto Rave Information Project.
5. Antoniou T. Tseng AL. (2002):Interactions between recreational substances and antiretroviral agents. Annals of Pharmacotherapy. 36(10):1598-613.
6. Centers for Disease Control and Prevention.(1998):Recommendations for prevention and control of hepatitis C virus (HCV) infection and HCV-related chronic disease. Morbidity and Mortality *Weekly Report*;47(RR 19):1-39.
7. Faragon JJ. Piliero PJ.(2003): Substance interactions associated with HAART: focus on treatments for addiction and recreational substances. AIDS Reader. 13(9):433-4, 437-41, 446-50.
8. Hagan H, Thiede H.(2003): Does bleach disinfection of syringes help prevent hepatitis C virus transmission? [letter] *Epidemiology*;14(5):628-629.
9. Hughes RA. Substance injectors and the cleaning of needles and syringes. *European Addiction Research* 2000;6(1):20-30.
10. Kapadia F, Vlahov D, Des Jarlais DC, et al. Does bleach disinfection of syringes protect against hepatitis C infection among young adult injection substance users? *Epidemiology* 2002;13(6):738-741.
11. Koester SK. Following the blood: syringe reuse leads to blood borne virus transmission among injection substance users. [letter] *Journal of Acquired Immune Deficiency Syndromes* and Human Retrovirology 1998;18(Suppl 1):S139-S140.
12. Rajashekhra, U.(2006): Tackling HIV the Right Way.Health Screen: A magazine for pre-patient care 2 (21), 10 – 19.
13. Reid, Sandra D.(2006): Poor educational attainment and sexually transmitted infection associated with positive HIV serostatus among female inpatient substance abusers in Trinidad and Tobago. Substance and Alcohol Dependence. 82(1), 81-84.
14. Stenzel MS, Mc Kenzie M, Adelson-Mitty J, et al.(2001): Enhancing adherence to HAART: A pilot programme of modified directly observed therapy. AIDS Reader, 11;317 – 328.
15. United States Public Health Service (USPHS). (1997): HIV prevention bulletin: medical advice for persons who inject illicit substances. Atlanta (GA) and Rockville (MD): USPHS, May 9.
16. Verachai V, Putiprawan T and Sawanpanyalert P (2005): HIV infection among substance abusers in Thanyarak Institute on Substance Abuse. Journal of Medical Association of Thailand. 88(1): 76 - 79.
17. Wechsberg WM, Lam WKK, Zule WA, et al (2004): Efficacy of a woman focused intervention to reduce HIV risk and Increase self sufficiency among African American crack abusers. American journal of Public health; 94: 1168 – 1173.
18. www.cdc.gov/mmwr/preview/mmwrhtml/rr5212al.htm

19. http:/
www.whitehousesubstancepolicy.gov/
substancefact/women/#extentofuse20.
www.TorontoVibe.com

Suggested slide material

Slide 1
Substance use and HIV/AIDS
Issues of concern
- High risk injection behavior
- High risk sexual practices
- Treatment non seeking
- Faster mode of spread of epidemic
- Increased prevalence in woman IDU.
- Increased prevalence of Hep B and Hep C infections

Slide2
Substance use and sexual practices
- First sex often with a sex worker
- Sex under the influence of alcohol
- Unprotected sexual encounters
- Rare or inconsistent condom use

Slide3
Reasons for injection substance use
- when heroin is scarce
- when cost of heroin is high
- when there is an observable reduction in purity levels
- when police enforcement is vigilant
- easy availability
- fewer legal complications
- experience more intense 'high'

Slide4
High risk behaviors
- direct and indirect sharing of injecting equipment
- Unhygienic practices for cleaning syringes and needles
- Sex under influence of substances
- Unprotected sexual practices
- Multiple sexual partners

Slide5
Interventional strategies
- Favorable policies and standard of care
- Reach out to the substance users and provide services
- Encourage substance dependence treatment:
- Strengthen peer driven intervention.
- Establish a hierarchy of risk reduction strategies to prevent HIV among substance users
- Provide primary health care for substance users
- Reduce risky sexual behaviors among substance users
- Voluntary HIV counseling and testing
- Establishment of integrated care facilities

Slide6
Role of nurse
- Educate Patients about how to prevent transmission through syringe and needles
- Never share any equipment used for injecting.
- Wash hands frequently
- Clean site used for injection
- Not to reuse the syringe as HIV can survive in a used syringe for at least 4 weeks.
- Method of cleaning the syringe:
- Wash under cold running water using bleach
- Leave bleach in the syringe for two minutes
- Rinse syringe and shake vigorously for 30 seconds
- Always use a new syringe if possible

Slide 7
Role of nurse
- Educate patients about substance use and its effect on immune system/ HIV
- Encourage HIV infected individuals to live a healthy life style
- Educate patients regarding adherence to treatment

Legal Aspects of Drug Abuse in India

21

Manju Vatsa

Summary: Both licit and illicit substances are being used extensively in our country. This chapter discusses in details various laws related to both groups of drugs. These include laws concerning licensing and abuse of licit substances and laws concerning criminal offences and penalties prescribed. Drug abuse is a major public health problem with extensive legal ramifications. In India, legal aspects of drug abuse involves two main areas :

***Licensing laws**- regulate production and retail supply.*
***Legislative laws**- deal with offences committed under intoxication .*

THE DRUG AND COSMETIC ACT, 1940.

It regulates the import, manufacture, distribution and sale of drugs and cosmetics. This act has two schedules. The first schedule deals with Ayurvedic and Siddha systems of drugs and second schedule deals with import of drugs and drugs manufactured, stocked and exhibited for sale or distribution.

This act deals with the maintenance of the standard of the quality of the drugs. It prohibits import, manufacture and sale of certain drugs not of standard quality, misbranded and spurious drugs and propriety medicines lacking ingredients including quantity or formula on label. This act also provides stringent punishment for contravention of provisions of act and rules thereof.

THE NARCOTIC DRUGS AND PSYCHOTROPIC SUBSTANCES ACT, 1985.

This act provides provisions for the prohibitions for the cultivation and gathering of any portion

of coca , opium and cannabis plants or production, manufacture, possession, sale, purchase, transport, warehouse, use, consumption, import and export inter-state , import and export from India and transshipment of narcotic drugs and psychotropic substances.

Some of the important definitions under this act includes

1. ***"Addict"*** : a person who has dependence on any narcotic drugs or psychotropic substance.
2. ***"Narcotic drug"*** : coca leaf, cannabis(hemp), opium, poppy straw and includes all manufactured goods and
3. ***"Psychotropic substance***" : any substance, natural or synthetic, or any natural material or any salt or preparation of such substance or material included in the list of psychotropic substances(n=110).
4. ***"Cannabis (hemp)"***
   (a) *charas*, : the separated resin, in whatever form, whether crude or purified, obtained from the cannabis plant and also includes concentrated preparation and resin known as Hashish oil or liquid Hashish
   (b) *ganja :* the flowering or fruiting top of the cannabis plant
5. ***'Coca derivatives'*** means-
   (a) Crude cocaine (Any extract of cocaine leaf)
   (b) Ecgonine and all the derivatives of ecgonine from which it can be recovered.
   (c) All preparations containing more than 0.1% of cocaine

6. 'Opium' :

(a) the coagulated juice of opium poppy and

(b) any mixture, with or without any neutral material, of the coagulated juice of the opium poppy.

It does not include any preparation containing more than 0.2% of morphine.

7. ***'Opium derivatives'*** :
   (a) Medicinal opium
   (b) Prepared opium used for smoking
   (c) Diacetylmorphine or heroin
   (d) any preparation containing more than 0.2% of morphine

This act empowers the central govt. to permit and regulate by rules

(i) The cultivation and gathering of any portion of coca plant, or the production, possession, sale, purchase, transport, import or export inter-state, use or consumption of coca leaves.

(ii) The cultivation of opium poppy.

(iii) The production and manufacture of opium and production of poppy straw.

(iv) Sale of opium and opium derivatives from the central government factories for export from India or sale to state Government or manufacturing chemists.

(v) The manufacture of manufactured drugs, not including manufacture of medicinal opium or any other preparation containing manufactured drug from materials which the maker is lawfully entitled to possess

(vi) The manufacture, possession, transport, import or export inter-state, sale or purchase, consumption or use of psychotropic substances.

(vii) The import to India and export from India and transshipment of narcotic drugs and psychotropic substances.

The State Government may by rules permit and regulate

(i) The possession, sale, warehousing, purchase, transport, import and export inter-state, use and consumption of poppy straw.

(ii) The possession, transport, import and export inter-State, purchase and consumption of opium.

(iii) The cultivation of cannabis plant, production manufacture, possession, transport, import and export inter-State, purchase and consumption of cannabis

(iv) The manufacture of medicinal opium or any preparation containing the manufactured drug from materials which the marker lawfully entitled to the process.

(v) The production and manufacture of opium and production of poppy straw

(vi) The sale of opium and opium derivatives from Central Government Factories for export from India or sale to State Government or manufacturing chemists.

(vii) The possession, transport, import, inter-State, export inter-State, purchase, use or consumption of manufactured drugs other than prepared opium and of coca leaf and preparation containing any manufactured drugs.

(viii)The manufacture and possession, of prepared opium from opium lawfully possessed by an addict registered with State Government on medical advice for his personal consumption.

Punishment for the contravention involving **small quantity** in relation to poppy straw, prepared opium, cannabis plant and preparations, psychotropic substances, and for illegal import into India, export from India or transshipment of narcotic drugs and psychotropic substances, is rigorous imprisonment for term up to six months or with fine up to 10,000 rupees or both. For the contravention involving quantity **lesser than commercial quantity** but greater than small quantity punishment is rigorous imprisonment for term up to ten years and with fine up to 100,000 rupees. For the contravention involving **commercial quantity** punishment is rigorous imprisonment for term up to ten years which may extend up to 20 years and fine up to 100,000 rupees which may extend up to 200, 000 rupees. Punishment for the contravention in relation to coca plant and coca leaves is rigorous imprisonment for term up to ten years or fine up to 100,000 rupees.

Punishment for consumption of any narcotic drug or psychotropic substances like cocaine, morphine or other narcotic drug or any psychotropic substances specified by Central Government by Gazette notification is rigorous imprisonment for a term up to one year or fine up to 20,000 rupees or both. Punishment for consumption of narcotic drugs and psychotropic substances other than mentioned is rigorous imprisonment for term up to six months or fine up to 10,000 rupees or both. For second and each subsequent offence, punishment is rigorous imprisonment for a term, which may extend to one half of the maximum term of imprisonment and also fine up-to one half of the maximum amount of fine.

Under section 64 A, any addict, who is charged with an offence punishable under section 27 (Punishment for external dealings) or with

offences involving small quantity of narcotic drug or psychotropic substances, who voluntary seeks treatment for de-addiction from hospital or an institution maintained and recognized by Government or local authority and undergoes treatment shall not be liable to prosecution. This immunity may be withdrawn if the addict does not undergo complete treatment.

Section 71, empowers the Government to establish centers for identification, treatment, education, aftercare, rehabilitation, social reintegration of addicts and for supply, of any narcotic drugs and psychotropic substances to the addicts registered with Government and to others where supply is medical necessity.
Small Quantities

Small Quantities

Hashish or Charas	-	5gm
Opium	-	5gm
Cocaine	-	125mg
Ganja	-	500gm
Heroin/Smack	-	250mg

THE DRUG (CONTROL) ACT, 1950

This act provide for the control of sale, supply and distribution of drugs. The act provides limitation on quantity which may be possessed at one time. Contravention of the provisions under this act shall be punishable by rigorous imprisonment for a term which may be extended to thee years, or fine, or both.

LAWS PERTAINING TO CRIMINAL OFFENCES & DRUG ABUSE

As per section 85 of Indian Penal Code, "Nothing is an offence which is done by a person who, at the time of doing it, is, by reason of intoxication, incapable of knowing the nature of the act, or that he is doing what is either wrong, or contrary to law; provided that the thing which is intoxicated him was administered to him without the knowledge or against his will.

As per section 85 of Indian Penal Code, In cases where act done is not an offence unless done with particular knowledge or intent, a person who does the act in a state of intoxication shall be liable to be dealt with as if he had the same knowledge as he would have had if he not had been intoxicated, unless the substance which intoxicated him was administered to him against his will.

LAWS PERTAINING TO ALCOHOL

Legal aspects of alcohol involves three main areas,

i. Licensing laws regulating retail supply.
ii. Legislation on drunkenness.
iii. Road traffic legislation.

LICENSING LAWS

Prohibition is incorporated in the constitution of India among the directive principles of state policy.

Article 47 says: The state shall regard the raising level of nutrition & standard of living of its people as amongst its primary duties and in particular, the state shall endeavor to bring about the prohibition of the use except for medicinal purposes of intoxicating drinks and of drugs which are injurious to health." Under the provisions of this act alcohol may be withdrawn from a state.or sold with partial restrictions.

Cable TV Network (Regulation) Amendment Bill (2000) completely prohibits cigarette and alcohol advertisements.

DRUNKENNESS

Drunkenness is defined as the condition produced in a person who has taken alcohol in a sufficient quantity sufficient to cause him lose control of his faculties to such extent that he is unable to execute the occupation on which he is engaged. Under section 85 a person found drunken in public places or streets shall be punishable with imprisonment for a term which may be extended for three months & with fine which may extend to two thousand rupees or both

DRUNKEN DRIVING

DRUNKEN DRIVING shall be punishable under section 185 of **Motor Vehicle Act,** for first offence with imprisonment for a term which may be extended for six months, or with fine which may extend to two thousand rupees. For second or subsequent offence, if committed within three years of the commission of previous similar offence, with imprisonment for a term which may be extended for two years, or with fine which may extend to three thousand rupees or both.
He is deemed guilty of drunken driving if

a. His alcohol level in the blood exceeds 30 mg/100ml
b. He is incapable of exercising proper control over the vehicle

LAWS PERTAINING TO TOBACCO AND SMOKING

The cigarettes and other tobacco products (Prohibition of advertisements and regulation of trade and commerce, production, supply and distribution) act, 2003 extends to whole India. As per this act:

i. Smoking is prohibited in public places. It is a compoundable offence. Punishment for smoking in public places is fine upto two hundred rupees.
ii. Advertisements of cigarette or other tobacco products are not allowed. No person is allowed to take part in advertisements which directly or indirectly suggests or promotes the use or consumption of cigarette or other tobacco products. Contravention to this section shall be punishable (i) in case of first conviction with imprisonment up to two years or with fine up to one thousand rupees, or with both (ii) in case of second and subsequent conviction, with imprisonment up to five years or with fine up to five thousand rupees.
iii. Specifications of warning including pictorial description of skull and cross bone are must on every packet of cigarette or other tobacco products.
iv. Sale of cigarette or other tobacco products is punishable for the persons under the age of 18 years and within the radius of 100 yards of any educational institution. Punishment in this regard will be fine of two hundred rupees.

NURSES ROLE:

Nurses should be aware about the legal aspects related to the substance use and should take the responsibility to update her own knowledge so that she can avail this knowledge in providing comprehensive care to the patients, their family and the community. Nurses working with patients undergoing treatment for substance use or otherwise should first guard their own feelings & beliefs. The nurses should recognize the intrinsic value & dignity of all human beings. They usually have a belief that the persons those

who are using substances are of bad character and need to have an understanding that this is a disorder which needs to be treated.

The knowledge of legal aspects guides the practicing nurses in various areas of their professional practice.

DIRECT PATIENT CARE ROLE:

Confidentiality: The Nurse must respect the individual's right to maintain confidentiality and share information judiciously. She must ensure the right to privacy of all patients receiving substance use treatment in a specified unit (deaddiction center managed by state or central government). Statements should be made regarding this policy. These should be widely disseminated and she must ensure that all the patients have understood that confidentiality and privacy of records will be maintained and the circumstances under which the information might not be protected. Nurses must also ensure that all the personnel (professionals, non professionals, employees, volunteers and other staff) those who directly or indirectly involved in patient care must also respect this confidentiality.

There are specific instances in which confidentiality need not be maintained:

(i) when the patient has provided prior written consent for release of information, including what information may be released, to whom, and the time limits for release.

(ii) Internal communication within the treating team.

(iii) When authorized by a court order.

(iv) When the patient is suspected to be or is a known of child abuser.

(v) In case of emergencies.

The Nurse should also take the required steps in protecting the patient information in case of computer based recording systems.

Informed choices: The nurse must respect the rights of her patients (receiving substance use treatment) as partner in care and help him/her in making informed choices. She should give accurate knowledge to the patients regarding the effects of these substances and the treatment options available. She should provide knowledge about harm minimization. She should not judge substance use as good or bad, but rather look at people's relationship to the substance and emphasize reduction of substance related harm and encourage safe substance use. She should respect the choices made by the patient and all communications should be in a non judgmental and non coercive manner

Medication Administration: The Nurse must understand that she can administer the drugs listed under the list of NDPS act to the patient dependent on these substances only after physician order (when the patient is registered under central or state deaddiction treatment center). These patients can keep with them their prescribed dose of drug.

Community health nurse: she assumes the responsibility to educate the public and the community as a whole about the legal aspects related to substance use. Alongwith the community leaders and legal personnel (police), she can take part in enforcement of the laws within the community. e.g. if a community health nurse finds a cigarette or other tobacco product seller in the vicinity of an educational institution then it is her moral and ethical responsibity to report to the relevant autorities. Similarly, if she observes the cultivation of the plants mentioned under

the act she should notify the community leaders or legal authority.

Occupational Health Nurse: Occupational health nurse shares the responsibility to educate the workers about the legal aspects related to the substance use. She also has an obligation to screen and refer the cases for the treatment. She has the responsibility to identify the risky behavior at the work place and do counseling of the workers for harm minimization and reduction of risky behavior.

Counselor: The nurse has the responsibility to provide the public information regarding the legal aspect related to the substance abuse at various levels and in various settings.

MANAGEMENT AND SUPERVISION ROLE

The registered Nurse has the custody of these medicines. She can administer them to the patient as per the physician's order. Nurse must ensure the count of the medicines being used for patients undergoing substance abuse treatment. Supply of the medicines should be maintained. Out of stock or non availability of certain medicines should be notified to the physician at an early stage.

By the knowledge of these prohibitions nurses can protect the vulnerable group of pregnant mothers and children from the harmful effects of these substances.

EDUCATION

The Nurse must up date her knowledge about the various legal aspects related to substance use and guide the other novice nurses, hospital staff and patients. Nurses shares the responsibility of educating laws related to drunken driving, road traffic legislation, prohibitions related to smoking and use of other substances in public places.

The **School health nurse** should actively participate in disseminating health care policies relating to substance use and the rlevant legislations to the young strata of the society. She can make the students aware about the various legal aspects e.g. drunken driving, drunkenness, prohibition of tobacco & other substances in public places and prohibitions related to the sale of these substances.

Forensic Nurses Role: Nurses can educate the patient about his legal status and his Rights and privileges. She can also interact with the police and other personnel regarding this aspect.

RESEARCH

The nurses should be involved in research related to these aspects. Till now lack of research in this area leads to insufficient data available for evidence based practice.

Suggested Reading

1. Gunn J, Taylor PJ, eds. Forensic Psychiatry-Clini-cal, Legal and Ethical issues. Butterworth-Heinemann, Oxford 1999, 435-480.
2. Drugs and Cosmetcis Act with Rules. Universal LawPublishing Company Pvt. Ltd., Delhi, 2005
3. The Narcotic Drugs and Psychotropic SubstancesAct, 1985, Universal Law Publishing CompanyPvt. Ltd., Delhi, 2005
4. The cigarettes and other Tobacco products (Prohi-bition of advertisement and regulation of trade andcommerce, production, supply

and distribution)act, 2003 Universal Law Publishing Company Pvt.Ltd., Delhi, 2005.

5. The Delhi Prohibition of smoking and non-smokers health protection act 1996-Universal Law Pub-lishing Company Pvt. Ltd., Delhi, 2005.
6. Subramanyam BV, ed. Modi's MedicalJurisprudence and Toxicology. Butterworths India, New Delhi, 317-319, 1999.
7. Reddy KSN. The essentials of Forensic Medicine& Toxicology, 19th ed. 2000, K.Saguna Devi Publication, Hyderabad.
8. McCloskey JC and Grace H. Current issues in Nursing, 5th ed.2004, Pub-Mosby.
9. Nursing in todays world 8th edition Trends, issues and M/ Ellis J.R. Hartley C.L. Lippincott W&W 272-312
10. Eggland ET Heinemann DS. Nursing Documentation, Charting Recording and Reporting J.P. Lippincott company
11. Walsh M,Crumbic A, Shirley R. Nursing Practitioners Clinical Skills and Professional issues Pub – Butterworth & Heinemann Pg 263-302
12. Creighton H. Law every nurse should know WB Sounders 116
13. Zolot JS. Computer based point records Improving efficiency, containing costs while ensuring point privacy.AJN(1999) 99(12)64-69
14. Eskresis TR(1998) common legal pitfalls in Nursing AJN 98(4)34-40
15. Sullivan EJ. Nursing Care of Patients with Substance Abuse. Publication- Mosby

Slide 1
The Drug (Control Act, 1950)

- Act provide for the control of sale, supply and distribution of drugs.
- Act provides limitation on quantity which may be possessed at one time.
- Contravention of the provisions under this act shall be punishable

Slide 2

Laws Pertaining To Criminal Offences & Drug Abuse

- "Nothing is an offence which is done by a person who, at the time of doing it, is, by reason of intoxication, incapable of knowing the nature of the act, or that he is doing what is either wrong, or contrary to law; provided that the thing which is intoxicated him was administered to him without the knowledge or against his will.

As per section 85 of Indian Penal Code

Slide 3
Laws Pertaining To Alcohol

- Licensing laws.
- Legislation on drunkenness.
- Road traffic legislation.

Slide 4
Licensing laws

- Prohibition is incorporated in the constitution of India among the directive principles of state policy as in article 47
- The state shall regard the raising level of nutrition & standard of living of its people as amongst its primary duties and in particular, the state shall endeavor to bring about the prohibition of the use except for medicinal purposes of intoxicating drinks and of drugs which are injurious to health

Slide 5
Drunkenness

- The condition produced in a person who has taken alcohol in a sufficient quantity sufficient to cause him lose control of his faculties to such extent that he is unable to execute the occupation on which he is engaged
- ***Under section 85 a person found drunken in public places or streets shall be punishable with imprisonment for a term which may be extended for three*** months & with fine which may extend to two thousand rupees or both

Slide 6

Drunken Driving

- Under section 185 of Motor Vehicle Act Drunken Driving shall be punishable
- For first offence with imprisonment for a term which may be extended for six months, or with fine which may extend to two thousand rupees.
- For second or subsequent offence, if committed within three years of the commission of previous similar offence, with imprisonment for a term which may be extended for two years, or with fine which may extend to three thousand rupees or both.

Slide 7

Laws Pertaining To Tobacco And Smoking

- Smoking is prohibited in public places
- Advertisements of cigarette or other tobacco products are not allowed
- Warning about harmful effects to be indicated on every packet.
- Sale to persons under the age of 18 years is punishable

Slide 8

Nurses Role

- Direct Patient Care Role
- Confidentiality
- Informed choices
- Medication Administration
- Community health nurse
- Occupational Health Nurse
- Counselor

Slide 9

Nurses Role

- Other roles
- Management and supervision role
- Education
- Occupational health
- Community services
- School health nurse
- Forensic nurses role
- RESEARCH

Organization of Nursing Services for Drug/Substance Dependence Treatment Centre

22

Nagarajaiah

Summary: Nurses play a vital role in the management of substance dependence treatment services. The physical set up of a center needs to be planned carefully. Nursing services needs to be organized for detoxification unit, emergency care services, outpatient services, domiciliary care services, brief counseling to individual patient and their family members, group therapy, occupational therapy, yoga therapy, public education etc. In allotting the nurses to these areas, importance should be given to the relevance of special areas of service and types of nursing activities required to be performed. In addition to the above principles and elements, the principles of management techniques need to be followed by the nurse manager. In this chapter, a general account is presented for the organization of nursing services and role of nurse manager for substance dependence treatment center.

Introduction

There is a considerable concern about substance dependence problems and national commitment to reduce the problem of substance use and the burden on the family and Society at large. In this direction nurses play a vital role not only in meeting the needs of this population but also organizing nursing services for treatment centers. The development and organization of treatment services for substance users is essentially based on a thorough understanding of the nature of problems of patient, his or her family and the wider community due to misuse/use of the substance.

Aims of organizing nursing services

1. To reduce the risks and harms that substance use causes both to the user and significant others.
2. To stabilize and reduce problems related to misuse/use of substance.

3. To facilitate abstinence and promote rehabilitation and reintegration of substance dependant individuals back into the family and community life.

Nurse needs to maintain Nursing Practice Standards: for Drug/Substance dependence treatment services. These include :

1. Collection of pertinent health data of a patient using any substance.
2. Analysis of the assessment data in determining actual or potential diagnoses.
3. Performs/Refines patient 's assessments through the diagnostic and monitoring function
4. Identification of expected outcomes individualized to the patient
5. Development of a care plan that prescribes interventions to attain expected outcomes.
6. Implemention of the interventions identified in the care plan.

6.1 Provides Competent Professional Care through the Helping Role

6.2 Administers and Monitors Therapeutic Interventions

6.3 Uses counseling interventions to assist the patient and significant others in improving or regaining coping abilities, fostering holistic health.

6.4 Provides structures, and maintains safe therapeutic environment in collaboration with other health care providers.

6.5 Structures interventions around the patient's activities of daily living to foster self care and physical and mental well being.

6.6 Through health teachings, assists the patient and the significant others in achieving productive and healthy patterns of living.

7. Effectively manages rapidly changing situations through analysis, interpretation of patient's data.
8. Evaluates the patient's progress toward attainment of outcomes.
9. Acquires and maintains current knowledge in nursing practice.
10. Monitors and ensures the quality of health care practices
11. Practices within organizational and work-role structures
12. Contributes to the professional development of peers, colleagues, and others.
13. The nurse's decisions and actions on behalf of patients are determined in an ethical manner.
14. Collaborates with the patient, significant others, other criminal justice system personnel and health care providers in providing patient care.
15. Uses research findings in practice.
16. Considers factors related to safety, effectiveness, and cost in planning and delivering client care.
17. Evaluates his/her own nursing practice in relation to professional practice standards and relevant statutes and regulations.
18. Provides consultation and liaison services for the patients and the staff dealing with substance use disorders
19. Caters to the need of high risk or special population with substance use disorders by taking necessary steps e.g. women, children, old age, homeless, and forensic etc.

Special attention needs to be given to the following elements:

- Effective Co-coordinating action across health, social care, and criminal justice agencies.
- Special initiatives are required for prevention and treatment interventions aimed at high risk groups.
- Direct provision of access to harm-minimization services i.e. needle of syringe exchange, vaccination programme and safer injecting drug use advice.
- Community substitution treatment for stabilization, maintenance and detoxification in patients and residential programmes i.e. therapeutic communities, rehabilitation programs and after care support.
- Services providing advice, information, assessment and referral are an important resource and valuable point of contact for individuals, friends and families.
- Structured provision of counseling and support should be made available
- Additional gateway services and referral services. e.g. Outreach services

Principles of organization of services and treatment

The following principles need to be kept in mind while organizing treatment services.

1. **Relevance**

   The services should be organized by acknowledging the current constraints i.e. inadequate availability of specialized staff and in substance dependence treatment center.

2. **Safety**

   The services should be organized in such a way that it ensures safety of the patient and the staff.

3. **Effective management of substance abuse related emergencies**

   The staff should be given adequate training to identify the emergencies due to substance use/misuse and to provide treatment at the earliest. It is necessary to develop assessment and treatment protocols, guidelines and in-service training of the nursing personnel.

4. **Recognition and treatment of substance use related problems by the primary health care staff.**

The nurses working in the PHC's should be trained to identify substance use related physical and psychological problems in those who seek treatment from the PHC, so that they can be referred early to the substance dependence treatment centers for counseling and treatment. These problems are identified and managed by non-specialist staff like medical officers, nurses and health workers. It is therefore necessary to develop guidelines for use of such non-specialist staff. Their training, particularly for the nurses and health workers needs to be planned and organized by Psychiatric nurses, in charge of the substance dependence treatment center.

Need for organization of nursing services: Treatment of substance use disorder requires well planned, organized strategy and co-coordinated effort by nurses. Substance use is a complex problem and has an impact on the occupational, health and social aspects of individuals. Hence, this has an important bearing on the planning and organization of nursing services. The planning and organization of nursing services should be well co-coordinated with the

management approaches for treating substance dependence. They include:

1. Pharmacotherapy
2. Brief Intervention
3. Psychosocial – Behaviour therapy, motivational counseling, cognitive therapy, supportive therapy, group therapy, occupational therapy, and diversion therapies like recreation, play, art therapy, yoga, self help group approaches etc.

The organization of nursing services is also interlinked with the several categories of professionals: General Practitioners, Psychiatrists, Psychologists, Psychiatric nurses, General Nurses, Social workers, Occupational therapist and ancillary staff. In addition, community leaders, spiritual leaders and volunteers, recovered-patients also play an important role in the treatment. Nursing personnel need to participate not only in the curative aspects of treatment but also in the psychosocial aspects of care which includes addressing various components of relapse prevention and after care. However, it is a very taxing process and would make a great demand on the nurse's time and energy. Therefore, to ensure quality of care and maximum utilization of the hospital resources, there should be enough number of nursing personnel and ancillary staff that are well trained in the various aspects involved in treatment program.

A reasonable standard for calculating nursing manpower requirement would be a 1:5 ratio, i.e. 1 nurse for 5 patients. The chief of nursing services would serve as the team leader and delegate and allocate the overall nursing manpower, and supervise and guide all the nurses and ancillary staff working in substance dependence treatment center.

Nursing services in the substance dependence treatment centers

a. Hospital based services

i. Out patient unit

Out patient unit of a substance dependence treatment center is an important area of care for the management of patients and for interaction with their family members. Nurses play vital roles in screening and registration, health education, brief counseling (to patients and family members), co-coordinating with other services like detailed work-up for acute problems and their management, dealing with investigations and medication and transferring the suitable patients to admission facilities of the deaddiction center. About 3 to 4 nurses are required to organize these services in the outpatient unit or clinic.

Nurse working in the OPD should provide brief intervention for the treatment seeking patients. Nurses need to be identified, trained and posted specifically for such brief interventions programmes to be conducted and monitored regularly. It is the responsibility of the nurse in-charge of the substance dependence treatment center to organize such nursing services.

ii. Inpatient unit

Nurses play a vital role in rendering services in the inpatient unit of the substance dependence treatment center. The nurse manager should be well equipped with leadership, communication and managerial skills. The nurse manager should select nurses who are skillful in tackling emergencies, empathetic and equipped with good communication skills. The nurses should not label the patients as an "addict," but treat the patient as unique and show respect towards them. At the same time nurses in the inpatient unit should be able to identify the manipulative and antisocial behaviour of the patients and to

set limits on their behavior when needed. Nurse should be able to ensure safety of their patients. One of the immediate goals may be detoxification of patients. The placement of nurses in the detoxification unit depends upon the number of patients in the unit. Ideally they will be 4 to 6 beds in detoxification units in any de-addiction center. At least 2 nurses should be organized in each shifts (morning, afternoon and night) plus 2 more nurses in the morning shifts. Intervention of psychosocial and medical units is also one of the immediate goal for nursing. Hence adequate nurses are needed to work in psychosocial and crisis intervention unit. 3 to 4 well trained nurses are essential to deal with the psychosocial problems of the patients and their family members. These nurses can be placed to work in general shift and they need to co-ordinate with multidisciplinary professionals in the nature of crisis.

Group meetings need to be held everyday and one of the nurses should be allotted the task of maintaining the minutes of the meetings. The meeting can be held at a lighter time of the day, preferably during the afternoon shift. Changes of shifts should be suitably planned, so that the nurses in the morning shift also get the opportunity to participate in conducting the group sessions.

In addition, about 5 patients should be allotted to each nurse. They need to act as primary nurse for their patients, so that the patients can get individualized attention for physical and psychosocial aspects of care. These individual sessions can be utilized especially to address any specific concerns, particularly of a sensitive nature, which the patient may feel uncomfortable to express while in a group.

A register should be maintained, to note when the patients are due for follow-up, depending on the date of discharge from the treatment center. The nurses should ensure that the patients allotted to them during the in patient care, come for follow-up regularly, at least for the first 6 months following discharge.

A 24-hour help line should be opened, and one nurse per shift, should be responsible to answer the phone calls, or take any messages. The patients should be made aware of this facility at the time of discharge.

Staff meetings should be held at least once a week to discuss specific patient concerns. The minutes of meetings held during the week should be discussed at these sessions. The staff meetings should also be utilized to address any difficulties the nurses may be facing, so as to prevent staff burnout.

One of the short term goals include management of medical and psychiatric co-morbid conditions like gastritis, liver problems, depression, anxiety psychosis etc. The services in the center should be well equipped with assembling and identification of medical and psychiatric problems so as to meet the needs of such patients in collaboration with Medical and Psychiatric services. At least 6 to 10 nurses distributed 5 in the morning, 3 in afternoon and 2 in night shifts is ideal. In addition to care of medical and psychiatric problems of patients, the nurses need to play an important role in family intervention for re-integration of patients into family life.

b. Community/ primary health centres

Nurses working in community should be well trained in the specific skills in organizing and co-coordinating various programmes with other professionals, psychiatrist, psychologists, community health nurses and social workers for rendering effective care in the community.

Detoxification i.e. treatment of withdrawal symptoms within the community is preferable, except for those with severe dependence, a history of delirium tremens or withdrawal seizures, an unsupportive home environment or previously failed attempts at detoxification. In such cases, in-patient services are recommended. Organization of effective and competent nursing services are very essential so that they are able to work and provide specific care in both detoxification treatment services in the community and in the in-patient services at main substance dependence treatment centers. They should be trained in effective techniques such as administration of essential medications, motivational interviewing, mobilizing community action, helping to establish self-help groups, providing health education, and encouraging healthy lifestyles. They should be trained in skills such as interviewing, counseling, enhancing individual coping skills and social support, crisis intervention, providing guidance about constructive use of leisure time, and in the ability to deal with local community fears, beliefs, taboos and attitudes.

Community health nurses and auxiliary nurse midwives/multipurpose health workers need to do home visits at regular intervals in order to obtain first-hand information about substance use/misuse, response to the treatment, psychosocial environment of the family, etc. Organization of community care nurses in the ratio of one nurse for 10 families will help in maintaining the overall health status of the patient and family.

Coordinating with other sectors:

It is important that the primary health workers should work in collaboration with various sectors in the community and involve the community as well. Partnership between health workers, government agencies, social services, and voluntary groups is vital in dealing with substance use related problems in the community. Inter-sectoral collaboration should be a constant process, and should involve regular meetings, interactions and task assignments, in close contact with members of the community (community representatives). Their needs demand links between health professionals, social services, the voluntary sector, welfare agencies and the criminal justice system. This area requires special skills in organizing nursing services that are well versed in management and co-coordinating the multiple problems of the patients inter linked with medical psychological, social relationship development, employment and legal and criminal issues.

Evaluation and monitoring

Some targets demonstrating the effectiveness of the program can be:

- Number of cases per week
- Type of substances used
- Frequency of visits to individuals and families
- Proportion of cases referred
- Number of contacts with other sectors
- Number of people identified as being at risk
- Number of meetings with self-help groups
- Type and quantity of medications used
- Reduction in readmission rates
- Reduction in prevalence of substance and alcohol-related problems

c. Participation in Research

Nurses working in the substance dependence

treatment center need to participate and undertake research activities. Though each and every nurses working in the center will have to be involved in evidence based practice and routine research activities, 1 to 2 nurses needs to be identified in monitoring the ongoing research activities.

Physical Set up and staffing

An ideal physical setup is essential for treatment of patients having substance dependence. The following areas need to be given importance while setting up of Drug Dependence Treatment Center. There may be acute care rooms, general patient care units, single rooms, double rooms, or with 6 -10 beds, activity rooms, and therapy rooms on each floor. Besides these, there will occupational therapy unit and outpatient department having dispensary, laboratory and several counseling rooms etc.

Organizational set up of a Drug dependence treatment centre

Organization of nursing services in a drug dependent treatment centre is given in the Appendix.

Since the drug dependent treatment centre is providing extensive community outreach program. There has to be more number of staff nurses who will provide services in the community, mobile drug dependent treatment unit etc. there should be one Nursing Superintendent and 1 Deputy Nursing Superintendent and 3-4 Assistant Nursing Superintendents in a 200-250 bedded drug dependent treatment centre.

STAFFING

Nursing personnel should be recruited according to:

- Experience and expertise
- Work load
- Physical layout of the unit; and
- The availability of other health care providers and support staff

The centre should have two units and one 24 hour open emergency room with two intensive care units and also extensive OPD services in a center.

There is requirement of one Nursing Superintendent, with one deputy, four Assistant Nursing Superintendents and 88 nursing personnel (head nurses+staff nurses). Five Public health nurses are required for community outreach programmes. One continuing nursing education coordinator (with MSc-Psychiatric Nursing Background) and two nursing faculty are required to conduct training of nursing personnel and to carry out research activities.

Staffing pattern for one Unit

Beds: 100

General category: 90

ICU: 10

Personnel	Morning shift	Evening shift	Night shift
Head Nurse	1	1	1
Staff Nurses	14	12	7
Auxiliary staff/ Hospital attendants	5	5	2
PHN	5	0	0
Nursing Faculty	3	0	0

NURSE-PATIENT RATIO:

Morning shift:

OPD: 5 nurses

Helpline Nurse: 2

General category beds - 1:10

ICU - 1:5

Total: 14

Evening shift:

Helpline Nurse: 1

General category beds - 1:10

ICU - 1:5

Total: 12

Night shift:

Helpline nurse: 1

General category beds - 1:25

ICU - 1:5

Total: 7

In all, one chief of nursing services, 5 middle level nurse managers and 88 staff nurses (along with leave reserve) for two units having 100 beds each (2x100) would be required for a treatment center which is having at least 100 patients visiting outpatient department.

Note:

- About 5 patients are to be allotted to each nurse. These 5 patients should be seen by the respective nurse during her shift (morning/evening), for individual and family counseling sessions
- Group meetings should be conducted during the evening shifts
- Rotation of duties to be duly planned, so that all the staff gets equal amount of work load.

The ultimate goals of nurse manager of substance dependence treatment center would be to:

- Maintain drug free environment.
- Increase patient safety
- Improve overall patient outcomes;
- Avoid costly errors
- Increase patient and nurse satisfaction
- Reduce the occurrence of adverse events
- Decrease staff turnover rates
- Capitalize on experience and education of staff.
- Evaluate the services provided
- Plan for staff development and training programs.
- Carry out research.

Community health Services:

In future there may be community mental health centres in India. Hence, the community mental health nursing supervisor in the health centre has to be psychiatric nurse practitioner who has done Masters in Psychiatric Nursing. The Public Health Nurse (PHN) working in the community mental health centre with Diploma in Psychiatric Nursing should be preferred. The PHN is accountable to provide training to the Multi purpose Health Workers, (MPHW/ (male and female), Auxiliary nurse midwives (ANMs), Village Health Guides(VHG), and Accredited Social Health Activist(ASHA) to identify the substance users in the community and motivate them for treatment.

Nursing services in a community mental health centre/PHC is given in the Appendix

At present the existing Primary Health Care Center and Sub-Center and the staff working

there, have to under take all load related to substance dependence treatment and prevention. It is the responsibility of the PHN to detect the substance users in the community and refer them for treatment in the drug dependence treatment centre and follow them up after they have been treated to prevent lapse and relapse.

Liaison services and networking:

The PHN in the community (mental) health centre is responsible for liaison services. She/he has to form liaison network in the community with various organization and agencies thereby rendering rehabilitation services for the recovering patients. The main aim of the liaison is to equip the individuals with social skills, vocational skills necessary for them, and bring them back to the community as a responsible and functional citizen. These organizations will provide rehabilitative services like social and life skill training, stress reduction training, crisis intervention services, shelter services, vocational training and assisting in placement, family services. Liaison with the school health nurse will help the PHN to conduct regular drug awareness and prevention campaign in schools and early detection of substance users in school and referring for treatment and providing counseling to the children and their families
Liaison network of a Public/Community health nurse is given in Appendix II figure 3.

Expanded Role of nursing personnel

In near future, the nursing personnel would be required to participate in the following activities and programs:

- Prevention Program Services
- Drinking Driver Programs
- Programs for dealing with Lapse
- Programs for dealing with Relapse
- Harm Minimization program
- Transitional living Program for recovering patients
- Temporary Assistance for Needy Families
- Residential Services
- Drug Abuse Prevention and HIV/AIDS Awareness
- Women Empowerment
- Anti-Trafficking Campaign
- Consumer Protection Movement
- Relief and rehabilitation Work. Documentation and networking.
- Organization of activities in Joint Collaboration with NGOs.
- Programme for Youth Development
- Program for developing awareness of the public and sensitization of the media, officials and NGOs.
- Training of the staff of NGOs.
- Networking with concerned organizations
- De-addiction Camps
- Awareness and Preventive Education
- Workplace Prevention Program
- Innovative Interventions to Strengthen Community Based Rehabilitation.
- Technical Exchange and Man Power Development Program
- Surveys, Studies, Evaluation and Research

Suggested reading materials

1. Ronald J. Catanzaro (1968): Alcoholism The total treatment approach, USACharles Thomas Publisher. 289-300.

2. Carole. A. Shea etal (1999). Advanced practice Nursing in Psychiatric andMental Health Care. New York. Mosby Inc. 271-286, 327.
3. James B. and Mario R. Dalpoy (2002). Skill mix in the health care work force: Reviewing the evidence. Bulletin of the World Health Organization, Geneva, Switzerland.
4. Griffith Edwards and Marcus Grant (1980). Alcoholism treatment in Transition.Surrey, Biddles Ltd. 199-204.
5. Townsend Marry C. (1999):- Essentials of Psychiatric mental health nursing, F.A. Davis Company Philadelphia : 264 - 32.
6. Boyd Mary Ann (2001) "Psychiatric Nursing Contemporary Practice", 2nd edition, Lippincott Philadelphia New York Baltimore PP 616-654.
7. Sullivan E J. Nursing Care of clients with substance abuse. Missouri: Mosby;1995.
8. Stuart, Gail W., et al. Principles and Practice of Psychiatric Nursing, 8th ed., Mosby, 2005, 700 – 702

Suggested slides materials

Slide-1

Organization Of Nursing Services For Drug/ Substance Dependence Treatment Centre

Slide-2

Principles of organization of services and treatment

- Relevance
- Safety
- Effective management of substance abuse related emergencies
- Recognition and treatment of substance use related problem by the primary health care staff.

Slide-3

Management Of Drug/Substance Dependence Treatment

- Pharmacotherapy
- Brief Intervention
- Psychosocial Interventions

Slide-4

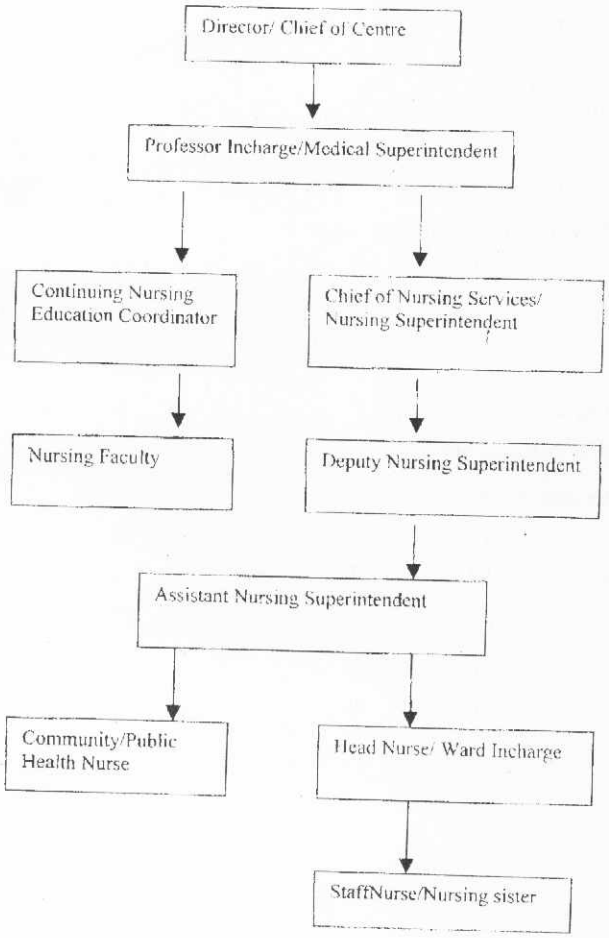
Team Members

- General Practitioners / physician
- Psychiatrists
- Psychologists
- Psychiatric nurses
- General Nurses
- Social workers
- Occupational therapist
- Auxiliary staff
- Others (community leaders, spiritual leaders and even volunteers and recovered-patients)

S

Slide 5

Organization of nursing services in a drug dependence treatment centre



Slide-6

Nursing services

- Out patient unit
- Inpatient unit
- Community/primary health centers

Slide-7

Staffing

- Principles of staffing
- Experience and expertise
- Type of assignment
- Work load
- Physical layout of the unit
- The availability of other health care providers and support staff

Slide 8

Staffing: Unit staffing pattern

Team Leader: Chief of Nursing Services

Personnel	Morning shift	Evening shift	Night shift
Head Nurse	1	1	1
Staff Nurses	14	12	7
Auxiliary staff/ Hospital attendants	5	5	2
PHN	5	0	0
Nursing Faculty	3	0	0

Slide 9

Liaison - network of a Public Health Nurse/ Community Mental Health Nurse

Slide-10

Extended and Expanded Role of Nurse

- Prevention Program Services
- Drinking Driver Programs
- Programs for dealing with Lapse

  Programs for dealing with Relapse
- Harm Minimization program
- Transitional living program for recovering patients
- Temporary assistance for needy families
- Residential Services
- Drug Abuse Prevention and HIV/AIDS Awareness
- Women Empowerment
- Anti-Trafficking Campaign
- Consumer Protection Movement
- Relief and rehabilitation work.
- Collaboration with NGOs.
- Programme for youth development
- Program for developing awareness

Slide-11

Extended and Expanded Role of Nurse

- Training of the staff of NGOs.
- Networking with concerned organizations
- De-addiction camps
- Awareness and preventive education
- Workplace prevention program
- Innovative interventions to strengthen community based rehabilitation.
- Technical exchange and man power development program
- Surveys, studies, evaluation and research

Appendix 1

Suggested Performa for Clinical Assessment in Substance Use Disorder

A. Socio-demographic profile

Name, age, sex, marital status, qualification, occupation, type of family and place of residence

B. Details of substance use

1. Age of initiation
2. List of substances abused
3. Frequency of use
4. The quantity taken usually (usual dose)
5. The time lag since last use (last dose)
6. Whether need to increase the quantity of substance consumed in order to produce the same effect (tolerance)
7. The effect of the use of a particular substance and signs and symptoms of intoxication
8. Presence/ absence of physiological/ psychological symptoms and signs when the particular substance is not taken/ reduced. (withdrawals)
9. Compelling need/ urge to take the substance

C. Complications associated with substance use

1. Physical: long term health hazards associated with substance use
2. Psychological: chronic mental effects associated with substance use.
3. Financial: losses suffered/debts incurred
4. Occupational: frequent absenteeism at work, constant change of job, memos issued, periods of unemployment
5. Familial – social: frequent fight with spouse/ other family members, neglect of responsibility at home, social outcast
6. Legal: involvement in illegal activities to sustain substance use, arrests/ charges on account of substance use, caught driving under intoxicated state, drinking brawl.

D. High risk behaviors: presence of injection use/ unsafe sexual practices

1. Injection risk: sharing of needles/ sharing syringes/ water used for rinsing; reuse of needles, syringes, unhealthy practice of injecting
2. Sexual risk: contact with commercial sex workers, unprotected sexual intercourse

E. Past abstinence attempts:

1. Number of attempts made
2. Duration of each attempt
3. Reason for abstinence
4. Whether treatment sought
5. Nature of treatment sought: pharmacological, psychological or combined
6. Reason for relapse

F. Reason for seeking treatment and motivation level of individual: whether seeking treatment by self or brought forcibly by family member;

G. Presence of co-morbid psychiatric illness such as affective disorder, psychotic disorder and personality disorder/ traits.

H. Presence of family history of Substance use, psychiatric illness, current living arrangements

I. Premorbid personality: especially presence/absence of Antisocial personality disorder.

J. Physical examination

Vital signs – Pulse, Blood pressure, Respiratory rate

Systemic examination – Cardiovascular, Respiratory, Abdominal and Nervous system

K. Mental status examination

General appearance and behavior of the patient (dressing, grooming, mannerism, motor activity, and eye contact); Affect (mood) (does he appear happy, sad, anxious? Is it sustained throughout the interview?); Speech (rate, volume, pitch, coherence, relevance); The content of the patient's thought (delusions, obsessions, depressive thought, suicidal ideas); Perceptual disturbances (illusions, hallucinations) and Cognitive functions of the patient.

Appendix 2

Drug Abuse Screening Test (DAST)

The following questions concern information about your involvement and abuse of substances. Substance abuse refers to:

(1) The use of prescribed or "over the counter" substances in excess of the directions

(2) Any non-medical use of substances

The questions DO NOT include alcoholic beverages.

The questions refer to the past 12 months. Carefully read each statement and decide whether your answer is yes or no. Please give the best answer or the answer that is right most of the time. Click on the box for Yes or No.

Top of Form

1.	Have you used substances other than those required for medical reasons?	☐ Yes	☐ No
2.	Have you abused prescription substances?	☐ Yes	☐ No
3.	Do you abuse more than one substance at a time?	☐ Yes	☐ No
4.	Can you get through the week without using substances?	☐ Yes	☐ No
5.	Are you always able to stop using substances when you want to?	☐ Yes	☐ No
6.	Have you had "blackouts" or "flashbacks" as a result of substance use?	☐ Yes	☐ No
7.	Do you ever feel bad or guilty about your substance use?	☐ Yes	☐ No
8.	Does your spouse (or parents) ever complain about your involvement with substances?	☐ Yes	☐ No
9.	Has substance abuse created problems between you and your spouse or your parents?	☐ Yes	☐ No
10.	Have you lost friends because of your use of substances?	☐ Yes	☐ No
11.	Have you neglected your family because of your use of substances?	☐ Yes	☐ No
12.	Have you been in trouble at work because of your use of substances?	☐ Yes	☐ No
13.	Have you lost a job because of substance abuse?	☐ Yes	☐ No
14.	Have you gotten into fights when under the influence of substances?	☐ Yes	☐ No
15.	Have you engaged in illegal activities in order to obtain substances?	☐ Yes	☐ No
16.	Have you been arrested for possession of illegal substances?	☐ Yes	☐ No
17.	Have you ever experienced withdrawal symptoms (felt sick) when you stopped taking substances?	☐ Yes	☐ No
18.	Have you had medical problems as a result of your substance use (e.g., memory loss, hepatitis, convulsions, bleeding, etc.)?	☐ Yes	☐ No
19.	Have you gone to anyone for help for a substance problem?	☐ Yes	☐ No
20.	Have you been involved in a treatment program especially related	☐ Yes	☐ No

Score 1 point for Yes (1-3; 6-20) 1 point for No (4,5) Cut Off Score: 6

Skinner HA. The Substance Abuse Screening Test. Addictive Behaviours, 1982;7:363-71.

Appendix 3

The Alcohol Use Disorders Identification Test

Read questions as written. Record answers carefully. Begin the AUDIT by saying "Now I am going to ask you some questions about your use of alcoholic beverages during this past year." Explain what is meant by "alcoholic beverages" by using local examples of beer, wine, vodka, etc. Code answers in terms of "standard drinks". Place the correct answer number in the box at the right.

1. How often do you have a drink containing alcohol?
   - (0) Never [Skip to Qs 9-10]
   - (1) Monthly or less
   - (2) 2 to 4 times a month
   - (3) 2 to 3 times a week
   - (4) 4 or more times a week

2. How many drinks containing alcohol do you have on a typical day when you are drinking?
   - (0) 1 or 2
   - (1) 3 or 4
   - (2) 5 or 6
   - (3) 7, 8, or 9
   - (4) 10 or more

3. How often do you have six or more drinks on one occasion?
   - (0) Never
   - (1) Less than monthly
   - (2) Monthly
   - (3) Weekly
   - (4) Daily or almost daily

4. How often during the last year have you found that you were not able to stop drinking once you had started?
   - (0) Never
   - (1) Less than monthly
   - (2) Monthly
   - (3) Weekly
   - (4) Daily or almost daily

5. How often during the last year have you failed to do what was normally expected from you because of drinking?
   - (0) Never
   - (1) Less than monthly
   - (2) Monthly
   - (3) Weekly
   - (4) Daily or almost daily

6. How often during the last year have you needed a first drink in the morning to get yourself going after a heavy drinking session?
   - (0) Never
   - (1) Less than monthly
   - (2) Monthly

(3) Weekly

(4) Daily or almost daily

7. How often during the last year have you had a feeling of guilt or remorse after drinking?

   (0) Never

   (1) Less than monthly

   (2) Monthly

   (3) Weekly

   (4) Daily or almost daily

8. How often during the last year have you been unable to remember what happened the night before because you had been drinking?

   (0) Never

   (1) Less than monthly

   (2) Monthly

   (3) Weekly

   (4) Daily or almost daily

9. Have you or someone else been injured as a result of your drinking?

   (0) No

   (2) Yes, but not in the last year

   (4) Yes, during the last year

10. Has a relative or friend or a doctor or another health worker been concerned about your drinking or suggested you cut down?

    (0) No

    (2) Yes, but not in the last year

    (4) Yes, during the last year

Skip to Questions 9 and 10 if Total Score for Questions 2 and 3 = 0

Interpretation of AUDIT scores:

Total scores of 8 or more are recommended as indicators of hazardous and harmful alcohol use, as well as possible alcohol dependence. AUDIT scores in the range of 8-15 represent a medium level of alcohol problems whereas scores of 16 and above represented a high level of alcohol problems.

Bottom of Form

Read questions as written. Record answers carefully. Begin the AUDIT by saying “Now I am going to ask you some questions about your use of alcoholic beverages during this past year.”Explain what is meant by “alcoholic beverages”by using local examples of beer, wine, vodka,etc. Code answers in terms of “standard drinks.” Place the correct answer number in the box atthe right. Saunders JB, Aasland OG, Babor TF, DeLaFuente JR and Grant M. Development of the Alcohol Use Disorder Identifi-cation Test (AUDIT) : WHO collaborative project on early detection of persons with harmful alcohol consumption.Addiction, 1993;88:791-804.

Appendix 4

CAGE questionnaire

Alcohol dependence is likely if the patient gives 2 or more positive answers:

* Have you ever felt you should CUT down your drinking?
* Have people ANNOYED you by criticising your drinking?
* Have you ever felt bad or GUILTY about your drinking?
* Have you ever had a drink first think in the morning to steady your nerves or get rid of a hangover (EYE- opener)?

Mayfield D, McLoed G and Hall P. The CAGE Questionnaire : Validation of a new alcoholism instrument. AmericanJournal of Psychiatry, 1974;131:1121-23.

Appendix 5

The 12 Suggested Steps of Alcoholics Anonymous 1.

1. We admitted we were powerless over alcohol-that our lives had become unmanageable.
2. Came to believe that a Power greater than ourselves could restore us to sanity.
3. Made a decision to turn our will and our lives over to the care of God as we understood Him.
4. Made a searching and fearless moral inventory of ourselves.
5. Admitted to God, to ourselves and to another human being the exact nature of our wrongs.
6. Were entirely ready to have God remove all these defects of character.
7. Humbly asked Him to remove our shortcomings.
8. Made a list of all persons we had harmed, and became willing to make amends to them all.
9. Made direct amends to such people wherever possible, except when to do so would injure them or others.
10. Continued to take personal inventory and when we were wrong promptly admitted it.
11. Sought through prayer and meditation to improve our conscious contact with God, as we understood Him, praying only for knowledge of His will for us and the power to carry that out.
12. Having had a spiritual awakening as the result of these steps, we tried to carry this message to alcoholics, and to practice these principles in all our affairs.

Source: ALCOHOLICS ANONYMOUS
The Story of How many Thousands of Men and Women Have Recovered from Alcoholism Second Edition Alcoholics Anonymous Publishing, inc. New York City 1955 pp. 59-60

Appendix 6

Michigan Alcohol Screening Test

The MAST Test is a simple, self scoring test that helps assess if you have a drinking problem. Please answer YES or NO to the following questions:

Please answer YES or NO to the following questions:

1.	Do you feel you are a normal drinker? (“normal” - drink as much or less than most other people)	YES or NO
2.	Have you ever awakened the morning after some drinking the night before and found that you could not remember a part of the evening?	YES or NO
3.	Does any near relative or close friend ever worry or complain about your drinking?	YES or NO
4.	Can you stop drinking without difficulty after one or two drinks?	YES or NO
5.	Do you ever feel guilty about your drinking?	YES or NO
6.	Have you ever attended a meeting of Alcoholics Anonymous (AA)?	YES or NO
7.	Have you ever gotten into physical fights when drinking?	YES or NO
8.	Has drinking ever created problems between you and a near relative or close friend?	YES or NO
9.	Has any family member or close friend gone to anyone for help about your drinking?	YES or NO
10.	Have you ever lost friends because of your drinking?	YES or NO
11.	Have you ever gotten into trouble at work because of drinking?	YES or NO
12.	Have you ever lost a job because of drinking?	YES or NO
13.	Have you ever neglected your obligations, your family, or your work for two or more days in a row because you were drinking?	YES or NO
14.	Do you drink before noon fairly often?	YES or NO
15.	Have you ever been told you have liver trouble such as cirrhosis?	YES or NO
16.	After heavy drinking have you ever had delirium tremens (D.T.’s), severe shaking, visual or auditory (hearing) hallucinations?	YES or NO
17.	Have you ever gone to anyone for help about your drinking?	YES or NO
18.	Have you ever been hospitalized because of drinking?	YES or NO
19.	Has your drinking ever resulted in your being hospitalized in a psychiatric ward?	YES or NO

20. Have you ever gone to any doctor, social worker, clergyman or mental health clinic for help with any emotional problem in which drinking was part of the problem? YES or NO

21. Have you been arrested more than once for driving under the influence of alcohol? YES or NO

22. Have you ever been arrested, even for a few hours because of other behavior while drinking? YES or NO

(If Yes, how many times _____)

Scoring

Please score one point if you answered the following:

1. No
2. Yes
3. Yes
4. No
5. Yes
6. Yes

7 through 22: Yes

Interpretation of the scores:

Add up the scores and compare to the following score card:

0 - 2 No apparent problem
3 - 5 Early or middle problem drinker
6 or more Problem drinker

Selzer ML. The Michigan Alcoholism Screening Test : The quest for a new diagnostic instrument. American Journal ofPsychiatry, 1971;127:1653-58.

Appendix 7

Nurses' Observation Scale For Inpatient Evaluation (NOSIE=30)

Subject's Name _____Rater's Signature_____

Sex _____ Male _____ Female Date_____ Time_____AM/PM

Directions Please rate the patient's behavior as you observed it during the last three days only. Indicate your choice by filling in one block for each item, using this key.

1. Is sloppy. 0__ 1__ 2__ 3__ 4__

2. Is impatient. 0__ 1__ 2__ 3__ 4__

3. Cries. 0__ 1__ 2__ 3__ 4__

4. Shows curiosity and interest in activities around him/her. 0__ 1__ 2__ 3__ 4__

5. Sits, unless directed into activity. 0__ 1__ 2__ 3__ 4__

6. Gets angry or annoyed easily. 0__ 1__ 2__ 3__ 4__

7. Hears things that are not there 0__ 1__ 2__ 3__ 4__

8. Keeps his/her clothes neat. 0__ 1__ 2__ 3__ 4__

9. Tries to be friendly with others 0__ 1__ 2__ 3__ 4__

10. Becomes upset easily if something doesn't suit him/her. 0__ 1__ 2__ 3__ 4__

11. Refuses to do the ordinary things expected of him/her. 0__ 1__ 2__ 3__ 4__

12. Is irritable and grouchy. 0__ 1__ 2__ 3__ 4__

13. Has trouble remembering. 0__ 1__ 2__ 3__ 4__

14. Refuses to speak. 0__ 1__ 2__ 3__ 4__

15. Laughs or smiles at funny comments or events. 0__ 1__ 2__ 3__ 4__

16. Is messy in his/her eating habits. 0__ 1__ 2__ 3__ 4__

17. Starts up a conversation with others 0__ 1__ 2__ 3__ 4__

18. Says he/she feels blue or depressed 0__ 1__ 2__ 3__ 4__

19. Talks about his/her interests. 0__ 1__ 2__ 3__ 4__

20. Sees things that are not there. 0__ 1__ 2__ 3__ 4__

21. Has to be reminded what to do. 0__ 1__ 2__ 3__ 4__

22. Sleeps, unless directed into activity. 0__ 1__ 2__ 3__ 4__

23. Says that he/she is no good. 0__ 1__ 2__ 3__ 4__

24. Has to be told to follow hospital routine. 0__ 1__ 2__ 3__ 4__

25. Has difficulty completing even simple tasks on his/her own. 0__ 1__ 2__ 3__ 4__

26. Talks, mutters, or mumbles to him/herself. 0__ 1__ 2__ 3__ 4__

27. Is slow moving or sluggish. 0__ 1__ 2__ 3__ 4__

28. Giggles or smiles to him/herself for no apparent reason. 0__ 1__ 2__ 3__ 4__

29. Is quick to fly off the handle. 0__ 1__ 2__ 3__ 4__

30. Keeps him/herself clean. 0__ 1__ 2__ 3__ 4

Source: Honigfeld G, Gillis RD, Klett CJ. (1965). Nurses'observation scale for inpatient evaluation: a new scale for measuring improvement in chronic schizophrenia. Journal of Clinical Psychology, 21, 65-71 Honigfeld G, Gillis RD, Klett CJ. (1966). NOSIE-30: A treatment-sensitive ward behavior scale. Psychological Reports, 19, 180-182. Copies and Score Available Online; E-mail: hunter.hansen@bubbs.biola.edu

Appendix 8

CONSENT FORM FOR DISULFIRAM THERAPY

CONSENT FOR THE ADMINISTRATION OF DISULFIRAM

Disulfiram alcohol reaction: Disulfiram plus alcohol may produce reactions. Even a small amount of alcohol taken while on disulfiram may produce redness of the face, throbbing in the head and neck, headache, breathing difficulties, stomach distress, vomiting, sweating, thirst, chest pain, fast heartbeat, faintness, marked uneasiness, weakness, sensation of surroundings revolving around you, blurred vision, and confusion. Rarely in severe reactions, there may be a decrease in breathing, shock, acute heart failure, unconsciousness, convulsions, and death.

Side effects: Side effects of disulfiram taken alone may include drowsiness, numbness in extremities, metallic taste, and/ or allergic skin reaction. Liver damage is an uncommon reaction.

I have been informed that I must not drink alcoholic beverages while receiving disulfiram. I have been warned to avoid alcohol in disguised form i.e. sauces, vinegars, cough mixtures, mouthwashes and even aftershave lotions and backrubs. I understand that reactions, as described above, may occur with alcohol up to 14 days after ingesting disulfiram.

I have been counseled by the undersigned physician about disulfiram, the dosage, the need for administration of the disulfiram and the precautions and possible complications resulting from drinking alcoholic beverages, and the absorption or inhalation of alcohol in disguised form while taking disulfiram. I have had an opportunity to ask questions, and understand the benefits and risks of disulfiram.

I have been given the disulfiram booklet. This contains an identification card along with relevant information about disulfiram alcohol reaction with consequent treatment in advent of a disulfiram alcohol reaction.

I understand that disulfiram will be given to me on a monitored/ unmonitored basis.

Signature of person to receive disulfiram	Date and Time
Signature of witness	Date and Time
Signature of the counseling physician	Date and Time

Reference for 'Addiction Severity Index' Scale: http://www.tresearch.org/resources/instruments/ASI_5th_Ed.pdf

Appendix 9

Appendix 9

Readiness To Change Questionnaire

Please think about your current situation and drinking habits, even if you have given up drinking completely. Read each question below carefully, and then decide to what extent you agree or disagree with the statements

SD-Strongly Disagree D-Disagree U-Unsure A-Agree SA-Strongly Agree

		SD	D	U	A	SA
1.	There is no need for me to change my drinking habits.	____	____	____	____	____
2.	I enjoy my drinking, but sometimes I drink too much.	____	____	____	____	____
3.	I have reached the stage where I should seriously think about giving up or drinking less alcohol.	____	____	____	____	____
4.	I am trying to stop drinking or drink less than I used to.	____	____	____	____	____
5.	I was drinking too much at one time, but now I've managed to cut down (or stop) my drinking.	____	____	____	____	____
6.	It's a waste of time thinking about my drinking because I do not have a problem.	____	____	____	____	____
7.	Sometimes I think I should quit or cut down on my drinking.	____	____	____	____	____
8.	I have decided to do something about my drinking.	____	____	____	____	____
9.	I know that my drinking has caused problems, and I'm now trying to correct this.	____	____	____	____	____
10.	I have changed my drinking habits (either cut down or quit), and I'm trying to keep it that way.	____	____	____	____	____
11.	There is nothing seriously wrong with my drinking.	____	____	____	____	____

12. My drinking is a problem sometimes. ____ ____ ____ ____ ____

13. I'm preparing to change my drinking habits (either cut down or give up completely). ____ ____ ____ ____ ____

14. Anyone can talk about wanting to do something about their drinking, but I am actually doing something about it. ____ ____ ____ ____ ____

15. It is important for me to hold onto the changes I've made, now that I've cut down (or quit) drinking. ____ ____ ____ ____ ____

16. I am a fairly normal drinker. ____ ____ ____ ____ ____

17. I am weighing up the advantages and disadvantages of my present drinking habits. ____ ____ ____ ____ ____

18. I have made a plan to stop or cut down drinking, and I intend to put this plan into practice. ____ ____ ____ ____ ____

Heather, N., Luce, A., Peck, D., Dunbar, B. & James, I. (1999). The development of a treatment version of the Readiness to Change Questionnaire. Addiction Research, 7(1), 63-68.

Appendix 10

Job description for chief of nursing services for Substance Dependence treatment Centre

Nursing superintendent

Job summary

The Nursing Superintendent is responsible for the nursing services. She works under the guidance of Center chief and is assisted by the head nurses, staff nurses, ancillary staff and the hospital attendants. She is also in charge of training of students and staff.

Job Specification

- o Educational qualification and experience: B.Sc Nursing. Specialized training is desirable.
- o Work experience in general areas - 10 years.
- o Prior experience of working in substance/ substance dependence treatment facility is desirable
- o Good physical and mental health
- o Administrative and Human relation skills.

Details of the duties performed

She coordinates the activities of the nursing and ancillary personnel in her unit to provide highest quality of nursing care. Nursing Superintendent of center will carry out all functions with the help of Assistant Nursing Superintendent and Head nurses.

I -Administrative

* Management of patient care through delegation of duties for the following functions
* Admission of patients, according to the hospital policy. It should be ensured at the time of admission that the patients are not carrying any substances or alcohol bottles with them (repeated appraisals to be made during visitors' hours to make sure they do not supply patients with substances.).
* Orientation of patient and his family to the ward regulations and routine.
* Assessment of nursing needs and assigning patient care to the staff.
* Observing, recording and reporting of vital signs, intake and output and other parameters, to the concerned authorities.
* Ensuring safety of the patients – patients in delirium, psychotic, suicidal tendencies, potentially violent
* Assisting in planning and administering therapeutic diets to the patients – patients with hepatitis, hepatic cirrhosis, diabetes mellitus, hypertension, anemia, vitamin deficiencies, etc.
* Meeting the psychological, social, spiritual and rehabilitative needs of the patients.
* Imparting health education to patients and their relatives
* Accompanying the doctor during rounds and implementing the instructions
* Assisting in direct care of patients when required

* Planning and carrying out individual and group sessions for the patients and families

* Discharging patients according to the policy and collection of hospital bills etc.
* Coordinating patient care with the other members of the health team and maintaining good interpersonal relationships
* Delegating staff on rotation basis for any special services run by the hospital - community clinics,day care clinics, tobacco cessation clinics, etc.
* Ensuring regular follow-up of the patients. A register should be maintained, to note when the patients are due for follow-up, depending on the date of discharge from the treatment center.
* Ensuring that any helpline run by the hospital is attended to on a 24-hour basis. At least one nurse per shift should be responsible to answer the phone calls, or take any messages. The patients should be made aware of this facility at the time of discharge.

* Management of personnel through delegation of duties for the following functions

* Assisting in recruitment of staff
* Orientation of new personnel to the ward situation and their duties and responsibilities
* Establishing good interpersonal relationships between members of the nursing team
* Supervision of the staff, students and non-nursing personnel
* Acting as a liaison officer between the ward staff and the hospital administration
* Writing and submitting confidential reports of the staff working under her
* Assisting the administration in the assessment of personnel for fixation of salaries, promotion or other benefits
* Work for staff development by arranging in-service and continuing education programs, providing opportunities for becoming members of professional and community organizations
* Maintenance of supplies and equipments through delegation of duties for the following functions
* Indenting, stock verification, emergency substances, etc.
* Management of emergencies through delegation of duties for the following functions
* Deals appropriately with emergencies such as shock, seizures, patient violence, acute withdrawal-related complications, etc.
* Writes reports of critical incidents and sends to concerned authorities
* Information processing

Handing and taking over of duties, maintenance of records and reports, including reports of group meetings held for the patients, giving information about any convening ward conferences, and sending circulars, etc.

II- Supervision and Teaching through delegation of duties for the following functions

Delegation and direct supervision of the care provided by the nursing personnel and auxiliary staff working under her, including individual and group counseling sessions conducted, holding informal and formal education programs in the ward about relevant topics such as motivation enhancement, relapse prevention, follow-up care, findings of current research, etc. Staff meetings should be held at least once a week to discuss specific patient concerns. The staff meetings should also be utilized to address any difficulties

the nurses may be facing, to prevent staff burnout in the long run.

III- Self-Development and Staff Development

Utilizing available learning opportunities, attending continuing education programs and refresher courses, go for higher studies. Organize training programs and workshops.

IV-Relationship to other Jobs

The Nursing Superintendent works in collaboration with almost all the other departments in the hospital – laboratory, central supply room, dietary department, physiotherapy, occupational therapy, and radiology etc.

V- Research

Participating in any ongoing research studies, and being constantly alert for possible nursing issues / problems in the ward, which can be tested through systematic research to improve quality of care, are important functions of Nurse manager.

B-Job Description for Staff Nurse

Job Title: Nursing sister grade I or grade II

Job Specification

- o Educational qualification and experience: Diploma/B.Sc Nursing. Specialized training is desirable.
- o Prior experience of working in substance/ substance dependence treatment facility is desirable
- o Good physical and mental health

Details of the Duties to be Performed

* Admission of Patients: Patient interviewing and detailed work-up, physical examination of various body systems, and use of appraisal data to formulate appropriate nursing diagnosis.
* Patient Care: The nurse is responsible for providing direct nursing care to the patients, based on the plan of care formed according to the nursing diagnoses.
* Participate in assessing and treating emergencies i.e. delirium tremens, withdrawal-related psychosis, and seizures, etc.
* Administration of medications as per prescription: detoxifying agents, anti-psychotics, and vitamin supplements, etc.
* Observation of patients for continued withdrawal signs, side-effects of medications, vitals, intake and output; close monitoring to be carried out especially in patients with delirium tremens, frankly psychotic patients, and patients admitted to the ICU etc.
* Deals appropriately with emergencies such as shock, seizures, violent behaviour, acute withdrawal-related complications, etc.
* Maintain records and reports.
* Provide routine physical care, for patients in acute withdrawal, delirium and patients unable to care for themselves.
* Psychosocial aspects of care: this is important components of care for patient and their family members, which involves motivational counseling, carrying out individual counseling sessions, group meetings addressing various issues of relapse prevention, conducting special sessions, both individual and group, for spouses and children of the patients.
* Discharge: instructions about medications, follow-up days, should be clearly explained

to the patients and their families. Information about Alcoholic Anonymous, Al-Anon and other self-help groups or any rehabilitation facilities available in the community should be provided as part of discharge counseling.

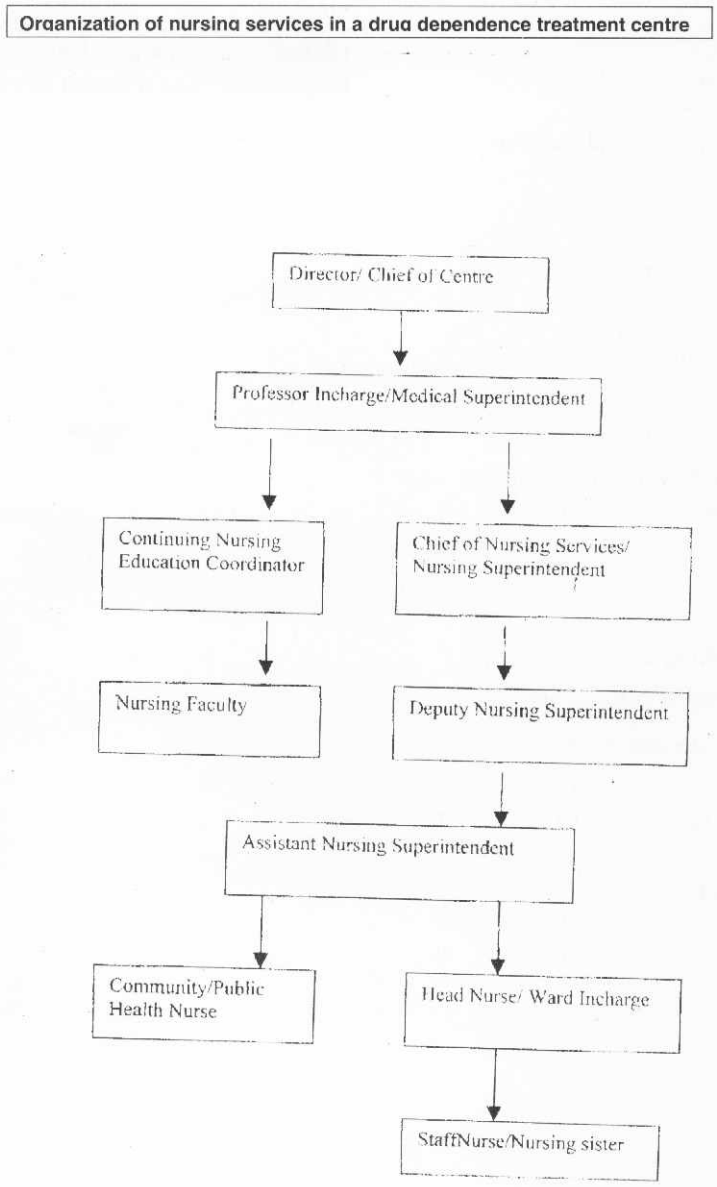
* Follow-up and after- care: a register should be maintained, to note when the patients are due for follow-up, depending on the date of discharge from the treatment center. The nurse should ensure that the patients allotted to her during in-patient care, come for follow-up regularly, at least for the first 6 months following discharge, through telephone or email contacts, letters, etc. Home visits should be planned if the patient fails to turn up, despite these efforts. Reinforcement of relapse prevention aspects, appropriate handling of lapses and relapses, are integral part of follow-up services. All positive behavioral changes made should be duly acknowledged and positive reinforcement given.

* Maintenance of supplies and equipments Indenting, maintain inventory of equipment and substances etc.

Appendix 11

Organizational set up of a Substance dependence treatment centre

Slide 5

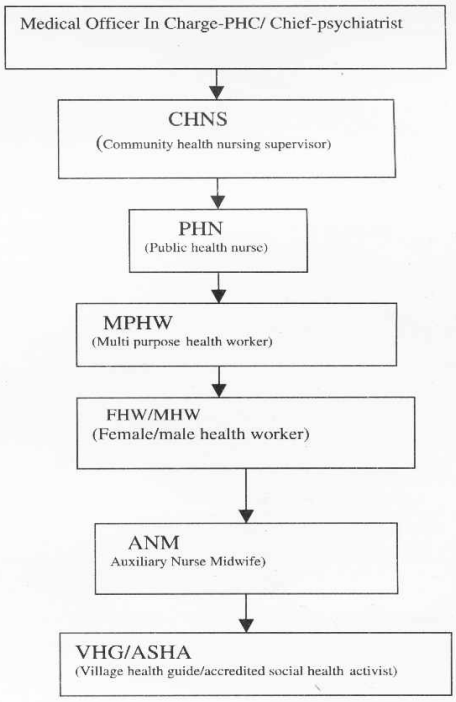


Appendix 12

Nursing services in a community mental health centre/PHC

Appendix 12

Nursing services in a community mental health centre/PHC



Glossary

Abstinence: Discontinuation and avoidance of further use of a substance.

Abuse: This term essentially connotes a pattern of unhealthy, prolonged consumption of a substance, which interferes with social, occupational, or personal functioning of an individual.(N.B: The word 'abuse' when used non-specifically may cover both abuse and dependence phenomena.

AIDS: Acquired Immunodeficiency Syndrome

Alcoholics Anonymous (AA): A voluntary fellowship concerned with the recovery and continued sobriety of the alcoholic.

Alcoholism: Synonymous with alcohol dependence

Aversive Conditioning: A form of behavior therapy that is used to reduce the occurrence of undesirable behavior, such as sexual deviations or drug addiction. Conditioning is used, with repeated pairing of some unpleasant stimulus with a stimulus related to the undesirable behavior. An example is pairing the taste of beer with electric shock in the treatment of alcoholism.

Biofeedback: Use of a signal, such as muscle tension, to control a normal involuntary physiological process.

Cirrhosis: Chronic liver disease marked by scarring of liver tissue and eventually liver failure.

Classical Conditioning: In classical conditioning, an unconditioned stimulus is paired with a natural reinforcement. The response which was initially produced by the reinforcement becomes conditioned so that it occurs when the unconditioned stimulus is given (even when no natural reinforcement is given).

Codeine: a natural product of opium (0.5% of the opium extract). Structurally, it is related to morphine but less potent.

Community: A community usually refers to a group of people who interact and share certain things as a group (e.g. sharing an environment, belief, resources, preferences, needs or risks) affecting the identity of the participants and their degree of adhesion.

Co-morbidity: Co-morbidity is defined as the presence, either simultaneously or in succession, of two or more specific disorders in an individual within a specified period.

Craving: A powerful, intense, often uncontrollable, desire for drugs.

Crisis Intervention: Intervention provided when a crisis exists to the extent that the usual coping resources threaten individual or family functioning.

Cross Dependence: Condition in which one substance can prevent the withdrawal symptoms associated with physical dependence on a different substance.

Cross Tolerance: Condition in which tolerance of one substance results in a lessened response to another substance.

Delirium: an etiologically non-specific syndrome of accute onset characterised by concurrent disturbances of consciousness and attention, perception, thinking, memory, psychomotor behaviour, emotion and the sleep-

Glossary

wake cycle.

Dementia: a syndrome due to the disease of the brain, usually of a chronic or progressive nature, in which there is a disturbance of multiple higher cortical functions, including memory, thinking, concentration, orientation, comprehension, calculation, learning capacity, language and judgement. However, the consciousness is not clouded.

Denial: Unconsciously refusing to admit that someone is abusing substance(s).

Dependence: A cluster of physiological, behavioural and cognitive phenomena in which use of a substance or a class of substances takes on a much higher priority for a given individual than other behaviours that once had greater value. (N.B: **Addiction** is a much older term than both 'abuse' and 'dependence'. It is now omitted from technical language because of its negative connotation. However, the term still is retained in popular usage. It denotes either abuse or dependence).

Detoxification: A process of withdrawing a person from a specific psychoactive substance depandence in a safe and effective manner.

Drug: any chemical which, when administered, alters the functioning of one or more systems of the organism.

Dual Diagnosis: Patients with a substance use disorder with a comorbid psychiatric manifestation.

DUI: Driving Under the Influence of alcohol or any substance, licit or illicit, if it impairs the driving function

Fetal Alcohol Syndrome (FAS): A pattern of birth defects, cardiac abnormalities, and developmental retardation seen in some babies of alcohol abusing and/or alcoholic mothers.

Hallucination: Perception of objects or experience of sensations with no real external cause; can be auditory, visual, olfactory, tactile and gustatory.

Hallucinogen: Chemical substance which can distort perceptions to induce delusions or hallucinations.

HIV: the human immunodeficiency virus, the causative agent of Acquired Immunodeficiency Syndrome (AIDS).

Illicit Drugs: Drugs, whose use, possession, or sale is illegal.

Illusions: misperception or misinterpretation of real external sensory stimuli.

Inhalant: Volatile substance that is commonly inhaled or huffed. E.g. include petrol, glue, thinners, etc.

Insight: ability of the patient to understand the true cause and meaning of a situation.

Intoxication: a transient condition following the administration of a psychoactive substance, resulting in disturbances in level of consciousness, cognition, perception, behaviour or affect, or other psychophysiological functions and responses.

Lapse: the initial (single) episode of substance use following a period of abstinence, synonymous with "slip."

Glossary

Mentally Ill Chemical Abuser (MICA)/ Men-tally Ill Substance Abuser (MISA)/ Chemical Abusing Mentally Ill (CAMI): Terms used to describe patients with a psychiatric disorder having a comorbid substance use disorder.

Methadone: A synthetically produced, long-acting opiate, commonly used as a maintenance agent to treat opioid dependence. This is likely to be available in our country soon.

Morphine: Major sedative and pain-relieving agent found naturally in opium.

Motivation: The internally generated state that stimulates us to act.

Narcotic: A substance having the power to produce a state of sleep or drowsiness and to relieve pain with the potential of producing dependence.

Nicotine: The main active ingredient of tobacco.

Opiates: Any of the psychoactive substances that originate from the opium poppy.

Opioid: Any chemical that has opiate like effects.

Over-the-Counter Drugs: Drugs, that are legally sold without a prescription. E.g. paracetamol, cough syrups, etc.

Placebo: A pharmacologically inert substance that may elicit a significant reaction entirely because of the mental set of the patient or the physical setting in which the drug is taken.

Prescription Drugs: A controlled drug available only by the order of a licensed physician.

Problem Drinking: An informal term describing a pattern of drinking associated with life problems. It is used broadly to describe harmful use of alcohol, including alcoholism.

Prognosis: The prospect of recovery as anticipated from the usual course of a disease.

Psychedelic: Substance producing an intensely pleasurable state of altered perception. E.g. LSD.

Psychoactive Substance: Any chemical substance that alters mood or behavior as a result of alterations in the functioning of the brain.

Psychological Dependence: A compulsion to use a substance for its pleasurable effects. Such dependence may lead to a compulsion to misuse it. A craving and compulsion to use a substance that is psychologically rather than physiologically based, e.g., compulsive gambling is a purely psychological dependence: a similar effect may come from substance use.

Psychosis: a psychological state characterized by hallucinations, delusions or disorganized behavior; impaired reality testing.

Psychotherapy: The treatment of emotional or behavioral problems by psychological means, often in one-to-one interviews or small groups by a trained specialist.

Psychotropic drug: A chemical which induces change primarily in some aspect(s) of mental functioning; for example, an antidepressant is meant to relieve mental depression.

Rehabilitate: To restore to effectiveness or normal life by training etc., esp. after imprisonment or illness.

Glossary

Relapse Prevention: A therapeutic process to help a person recovering from problem drug use to enable him to stay away from it. It involves changing his faulty behavior, thinking and lifestyle.

Relapse: Recurrence of substance use after a period of sobriety/ abstinence.

Reverse Tolerance: State produced by a particular substance, process, or individual, such that lower dosages of the same substance produce the same amount and quality of the desired or observed effect that previously was observed only with higher dosages.

Self-help Group: Group of individuals with similar problems that meets for the purpose of providing support and information to each other and for mutual problem solving; E.g. Alcoholics Anonymous.

Stimulant: Any of several substances that act on the central nervous system to produce excitation, alertness and wakefulness. Medical uses include the treatment of hyperkinetic disorder (ADHD) and narcolepsy. E.g. Amphetamine.

Syndrome: cluster of signs and symptoms occurring together. E.g. dependence syndrome.

Synergism: Effect of a combination of drugs taken simultaneously, which is greater than the sum of the effects of the same drugs when taken separately.

Therapeutic Community: Setting in which persons with similar problems meet and provide mutual support to help overcome those problems, with fairly structured rules, guidelines, etc. It is a residential program with emphasis on changing the individual's behavior and attitude to fit him into the society.

Tolerance: Condition in which a person must keep increasing the dosage of a substance to maintain the same effect. Tolerance develops to most psychoactive substances.

Tranquilizers:

Major – Substances used to relieve symptoms of severe psychosis (e.g. Haloperidol), currents Known as anti psychotics.

Minor – Substances with sedative and anti-anxiety effect (e.g. Diazepam); known as anxiolytics.

Withdrawal Syndrome: The onset of a predictable constellation of signs and symptoms following the abrupt discontinuation of, or rapid decrease in dosage of a psychoactive substance.

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List of De-addiction Centres in India

Central Institute/Hospitals

1. All India Institute of Medical Sciences,New Delhi
2. Dr.R.M.L.Hospital, New Delhi
3. Lady Hardinge Medical College &Hospital, New Delhi
4. P.G.I.M.E.R., Chandigarh
5. J.I.P.M.E.R., Pondicherry
6. NIMHANS, Bangalore

Centres of Excellence (Funded by UNDCP)

7. K.E.M. Hospital, Bombay
8. I.P.G.M.E.R., Calcutta

Andhra Pradesh

9. Osmania General Hospital (Shifted toInstitute of mental health,Hyderabad), Hyderabad
10. SVRRGG Hospital, Tirupati
11. Govt. General Hospital, Warangal

Assam

12. Guwahati Medical College, Guwahati
13. Assam Medical College, Dibrugarh
14. Silchar Medical College, Silchar
15. District Hospital, Johrat
16. Civil Hospital, Dhubri
17. Civil Hospital, Diphu
18. Civil Hospital, Tejpur
19. Civil Hospital, Karimganj
20. Civil Hospital, Nalbari
21. Civil Hospital, Nagaon

Chandigarh Administration

22. Govt. Medical College, Chandigarh

Delhi

23. Central Jail, Tihar, New Delhi
24. Institute of Human Behaviour & Al-lied Sciences, Delhi

Gujarat

25. Medical College, Baroda
26. Medical College, Ahmedabad

Goa

27. Asilo Hospital, Mapusa (Goa)

Haryana

28. Medical College Rohtak
29. District Hospital, Ambala

Himachal Pradesh

30. Indira Gandhi Medical College, Shimla
31. District Hospital, Mandi
32. District Hospital, Dharamshala

Jammu & Kashmir

33. Medical College, Jammu
34. Medical College, Srinagar
35. District Hospital, Baramulla
36. District Hospital, Kathua

Karnataka

37. Govt. Medical College, Bangalore

Kerala

38. Govt. Medical College, Trivandrum
39. General Hospital, Erankulam
40. Medical Collge, Kottayam
41. Medical Collge, Kozhikode
42. Medical College, Trissur
43. Academy of medical Sciences,Pariyaram, Kannur, Kerala

List of De-addiction Centres in India

Madhya Pradesh

44. District Hospital, Mandsaur
45. District Hospital, Ratlam
46. District Hospital, Ujjain
47. District Hospital, Indore
48. District Hospital, Gwalior
49. District Hospital, Jabalpur

Chattisgarh

50. District Hospital, Raipur

Maharashtra

51. Mahatma Gandhi Institute of MedicalSciences, Sevagram, Wardhi
52. District Hospital, Nasik

Manipur

53. Regional Institute of Medical Sciences,Imphal
54. District Hospital, Imphal
55. District Hospital, Sajiva
56. District Hospital, Chandel
57. District Hospital, Churachandpur
58. District Hospital, Ukhrul
59. District Hospital, Moreh
60. District Hospital, Thoubal
61. District Hospital, Bishnupur
62. District Hospital, Senapati
63. District Hospital, Tamenglong

Meghalaya

64. District Hospital, shillong

Mizoram

65. District Hospital, Aizawal
66. District Hospital, Lunglei
67. District Hospital, Saiha
68. District Hospital, Champhai
69. District Hospital, Serchhip
70. District Hospital, Lawngtlai

Nagaland

71. Naga Hospital, Kohima
72. District Hospital, Mukokchung
73. District Hospital, Tuensang
74. Civil Hospital, Dimapur
75. Civil Hospital, Wokha
76. Civil Hospital, Mon
77. District Hospital, Zunheboto
78. District Hospital, Phek

Orissa

79. S.C.B.Medical College, Cuttack

Pondicherry

80. General Hospital, Karaikal
81. Govt. General Hospital, Pondicherry

Punjab

82. Medical College, Patiala
83. Medical College, Amritsar
84. District Hospital, Bhatinda
85. Medical College, Faridkot

Rajasthan

86. SMS Medical College, Jaipur
87. Medical College, Udaipur
88. Medical College, Jodhpur
89. Medical College, Kota
90. Medical College, Ajmer
91. Medical College, Bikaner

List of De-addiction Centres in India

Sikkim

92. STNM Hospital, Gangtok
93. District Hospital, Namchi
94. District Hospital, Gyalshing(W.Sikkim)

Tamil Nadu

95. Madras Medical College, Madras
96. Medical College, Madurai
97. Govt. Headquarters Hospital, Nagercoil
98. Govt. Stanley medical College and Hospital, Chennai
99. Govt. Medical College and Hospital,Coimbatore
100. Govt. Medical College and Hospital,Tirunelveli
101. Govt Mohan Kumaramangalalm Medi-cal College and Hospital, Salem
102. Govt. Medical College and Hospital,Thanjavur
103. Govt. Medical College and Hospital,Tuticorin
104. Govt. Kilpauk Medical College andHospital, Chennai
105. Govt. Chengaipattu Medical Collegeand Hospital, Chengaipattu
106. Govt. KAP Viswanathan Medical Col-lege Hospiatl, Tirichirapalli

Tripura

107. Kumarghar Rural Hospital, Darchai

Uttar Pradesh

108. Institute of medical Sciences, BanarasHindu University, Varanasi
109. Gorakhpur Medical College,Gorakhpur
110. King George Medical College,Lucknow
111. Medical College, Meerut

Uttranchal

112. Base Hospital Sringar, Garhwal

West Bengal

113. North Bengal Medical College, Siliguri
114. Burdwan Medical College, Burdwan
115. Bankura Medical College, Bankura

Arunachal Pradesh

116. District Hospital, Tezu
117. District Hospital Changlang
118. District Hospital, Khonsa

Bihar

119. Jawaharlal Nehru Medical College,Bhagalpur,
120. Shri Krishna Medical College,Muzaffarpur
121. Anurag Narayan Medical College,Gaya
122. Sadar Hospital, Munger

The Drug De-addiction Programme was initiated by the Ministry of Health & Family Welfare in 1988. Under this programme, The National Drug Dependence Treatment Centre, All India Institute of Medical Sciences has been conducting regular training courses in substance abuse management for physicians and has published a manual as an aid.

There is a growing realization that nursing personnel have an important role to play in all aspects of substance abuse ranging from identification, assessment, treatment and rehabilitation. Unfortunately, the training they receive as part of their academic curriculum is inadequate. It has been decided that regular training courses are needed for imparting this training. However, there is no formal document in existence that can help in training. Keeping these factors in mind the NDDTC decided to publish a manual with financial support from WHO (India).

The chapters in this manual are written by experts in the field and include assessment, pharmacological and non-pharmacological management, care in hospital and camp settings and care of substance dependence patients in medical and surgical units. Other chapters include correlation with HIV, nicotine dependence, legal issues and organizational aspects.

Appendices include commonly used scales for assessment and a list of De-addiction centres in the country.