

Management of Substance Use Disorder in Primary Care

Prabhat K Chand, Mohan K Isaac

Summary

The primary care physician is best placed to treat substance abuser at an early stage. Alcohol and tobacco are the drugs most commonly encountered by the physician. It has been shown that disorders related to these substances can be easily diagnosed in primary care settings. Therapies such as brief intervention and motivational enhancement has been found to be effective in these settings too. Safe medicines are currently available and the physician can familiarise himself with these easily. This chapter deals with assessment and management of alcohol and tobacco use in primary care settings.

Introduction

Management of substance abuse is usually easier in the early stages of the disorder. At an early stage, the substance abusing person is most likely to present to the primary care physician with a variety of non-specific problems. The physician who is unaware may treat the physical symptoms without attending the underlying substance problem and its other consequences.

For effective management the physician needs to be competent in

- $\frac{3}{4}$ Screening patients for substance use
- $\frac{3}{4}$ Assessment of problems related to substance use
- $\frac{3}{4}$ Treatment
- $\frac{3}{4}$ Timely referral to specialized services

This chapter explores ways of management of substance abuse from a primary care physician's perspective and discusses its key elements. In India, Alcohol and tobacco are the major substances of abuse and will be the primary focus of this chapter.

ALCOHOL

“Does your heart sometimes sink when you find one of your patients has an alcohol problem? If so, you are not alone, many doctors rate this as a difficult area.”

General physician are in an ideal position to detect heavy drinking and to advise patients, as they are likely to present with various physical problems. Simply spending 5-15 minutes on a brief intervention can be highly effective in reducing the level of problem drinking.

Broadly alcohol misuse can be classified as follows:

Heavy drinking: Currently not experiencing any problem but if continued, at risk for liver damage, neuropathy, pancreatitis, and addiction to it

Problem drinking: Evidence of deterioration of physical, psychological or social condition i.e. not able to drive properly or absence from duty, or fighting, inappropriate behaviour under influence.

Male: >4 units/day or >14 units/week
Female: >2units/day or > 7units/week

Addiction/dependence: Evidence of tolerance, withdrawal, craving, physical/social/ psychological damage, impaired control over drink

The majority of people presenting to general practitioner clinic belong to the first two categories. Research has consistently shown the effectiveness of intervention in this population.

Screening

The symptoms with which the patient presents often gives clues to underlying alcohol misuse (box). Even directly asking about drinking is a part of life style assessment and routine health examination. This should be done irrespective of gender and type of presentation.

As the patient may deny or under-estimate the amount he drinks, the physician should establish a good therapeutic relationship with the patient. Showing empathy, understanding and being non-judgemental is the key to establishing a good therapeutic rapport. Wherever possible one should seek corroborative information from family members and involve them in treatment.

Detection and Intervention

Step I: Ask

In all: Do you use alcohol?

In current drinkers:

Frequency-How often do you drink?

Quantity-How much do you drink?

Duration-How long are you drinking?

Abstinence-How many days in past have you not drunk alcohol at a stretch?

Also assess associated withdrawal symptoms and high-risk behaviours i.e. repeated intoxications, drinking and driving. Some people may minimise the severity of problems and would say that they drink 'occasionally' or 'only at weekends' or 'only after work'. These need further exploration about actual drinking patterns and problems.

Clues

Symptoms

Gastrointestinal: poor appetite, indigestion, heart burn, dyspepsia, diarrhoea

Neurological: tremors, sweating, headaches, insomnia, burning legs

Cardiorespiratory: palpitations, chest pain, pneumonia

Musculoskeletal: backache, repeated injuries, rheumatism

Gynecological: menstrual problems, pre-menstrual disturbances etc.

Skin: bruises, flushing, rashes

Endocrinology: reduced libido, obesity

On examination

Conjunctiva injection

Bloated face

Periorbital puffiness

Parotid swelling

Smell of alcohol on breath

Flushing

Hepatomegaly etc.

Step II: Assess

In a patient who reports regular drinking, assess:

Physical damage: a small list is provided in the box. But a good physical examination may give evidence of early physical damage in problem drinkers.

Psychological: stress, depression or anxiety

Occupational: Monday morning blues, going late to work, frequent absenteeism, accidents, inter personal problems etc

Legal: arrest or reprimanded for drunken driving, fights or brawls

Screening questionnaires

These help the physician in detection of problem drinking in patients with history of regular intake of alcohol. One or more positive responses on the CAGE questionnaire indicate problem drinking and more than three points suggest dependence.

Another widely used scale is the Alcohol use disorders identification test (AUDIT). An AUDIT score of more than eight indicates problem drinking and the need for intervention.

In depth assessment in persons

- Drinking
- >2-3 times/wk
- >2units/day in male />one unit/day in female
- Heavy episodic drinking

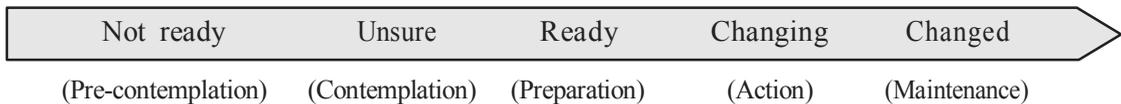
Laboratory investigations

Laboratory investigations assist in the detection of problem and heavy drinking and are outlined in the accompanying table.

Laboratory test	Abnormal values	Interpretation
MCV (Mean corpuscular volume)	Macrocytosis (>100 fL)	Detects approximately 20–30% of problem drinkers in general practice
GGT (Gamma glutamyl transferase)	Elevated GGT (>55 U/L)	Detects approximately 30% of problem drinkers in a general practice setting and 70–75% in a hospital setting
AST/ALT (Aspartate transferase/Alanine Transferase)	>1.5	Alcoholic liver damage

When alcohol problems are identified, it is important to evaluate patient’s perception about the problems and the need for reducing or stopping alcohol. As shown below the person’s response may vary from not willing to very well motivated for reduction in drinking.

Stages of change



In pre-contemplation stage, patients are not even considering change. As they become aware of reasons to alter behavior, they think about it, weigh pros and cons of changing- the contemplation stage. When the argument for change wins through, a decision point is reached. They are now ready to change and move into stage of action.

These changes involve alteration of life style, handling stress and successful coping. Stage changes occur slowly with time and may have repeated setbacks. The goal of each visit should be to help the person move along the continuum of change towards the reduction of alcohol use.

Step III: Advice

Many people are sensitive about their drinking and the offer of help will be more readily accepted if it is given in a spirit of concern for health and family well being. There should be mutual trust and respect. Dire warnings and judgemental statements do not work. Most physicians are pessimistic about being able to help excessive drinkers yet there is good evidence that as many as 75% respond well to brief intervention.

The steps of brief intervention are:

Feedback of personal risk

Be clear in informing the patient about how drinking is going to worsen his condition further. At the same time state your concern on the prescribed medicine and its interaction with alcohol. Focussing on physical problems and correlating with drinking reduces the patient's defensiveness.

E.g. "your drinking is going to worsen your stomach pain" // "I am concerned that your drinking is contributing to your easy tiredness and sleeping problem"

At the same time just treating the physical ailment without discussing about drinking, may be counterproductive and undermine the seriousness of problem drinking.

Similarly statements may help for minor problems i.e. sleep disturbance.

E.g. I am prescribing some medicines for symptomatic relief of your stomach pain but you will need to completely stop your drinking for some time to allow healing. Why don't you give up for two weeks and see the difference?

It is important to involve the spouse or an important family member and educate them regarding ill effects of alcohol on the patient's current health.

Responsibility

Emphasise that the decision about drinking is

the patient's responsibility and choice. No one else can make the change or decide for them.

E.g. "Now it is up to you to take a decision on drinking"

Advice

Give clear advice as a doctor to reduce drinking. The person can also make a balance sheet as shown and discuss about future plan with the doctor.

Balance sheet		
Drinking	Advantage	Disadvantage
Continue	Forget worries Escape responsibility	Family fights Health problems Cost
Reduce	Be like others Prestige	Pass time Gives kick
Stop	Health better Money save	Loss friends

Menu

Discuss variety of strategies for the patient to choose to achieve the goal. It is worth clarifying initially about patient's goal i.e. no change, cut down or stop. The impediments for the desired goal will be obvious from the interview or from the balance sheet. The common strategies are shown in box.

Keeping a diary of drinking occasions, amount of drink per week is helpful in keeping track of drink.

Menu (Alternate strategies)
Recognising and avoiding trigger situations
<ul style="list-style-type: none"> • Planning ahead to limit drinking • Pacing one's drinking • Learning to cope with everyday problems that encourage drinking • Finding alternate sources of enjoyment

Self-efficacy

Patient needs to be encouraged to be optimistic and to bring about the changes in drinking behaviour. It is best to aim for specific short-term goals at first so that the patient gets a sense of control or achievement.

E.g. A person who is able to abstain for 2-3 weeks should be encouraged to continue it.

Step IV: Agree

The final choice for future alcohol intake is best left to the person. The low risk or moderate drinking option is advisable if person wants to continue drinking. The moderate drinking needs to be carefully planned and discussed and is best preceded by period of abstinence. Abstinence is strongly advised in certain conditions.

Low risk or moderate drinking

- Men: # 2 units/day, # 4 units/ occasion
- Women: # 1unit/day, # 3 units/ occasion
- Over 65 yr: # 1unit/day, #3 units/ occasion
- No drinking at least 3 days/week

Abstinence

- Addicted/dependence
- Significant physical damage
- Failed in moderate/controlled drinking

Family h/o of alcohol dependence

Step V: Monitor (Follow up)

Whatever the agreed goal, it is essential that the doctor regularly review the patient's progress. The most important task at the first interview is to gain the patient's interest in tackling his or her drinking problem and to ensure

that he or she returns for the next appointment. At this time, the short-term achievements and problems can be reviewed and further goals agreed. Supportive laboratory test i.e. GGT, MCV, AST, ALT are useful objective means of monitoring progress and results and their implication should be discussed with patient.

Progress should be reviewed regularly over a year. The first six months of progression often gives good impression of longer-term prognosis.

Relaps
e

Most patients will drink again whatever the original goal of treatment, but this need not be a catastrophic relapse involving the loss of all that has been achieved. It is to be viewed as an opportunity for the patient to learn from. The important issues to be addressed are mentioned in the box. Relapse is not the end of the road. One common cause of relapse is complacency and overconfidence that this problem is in the past and drinking will be now safe.

Relapse

- When?
- Where?
- What preceded?

How is he going to handle it in future?

Late stage alcohol problems

Persons, who drink regularly, having developed tolerance, craving, or significant problems, are considered to be addicted or dependent. This group of patients need detoxification and more intensive counselling for management. Abstinence is the goal in these groups. They need pharmacological intervention to handle withdrawal symptoms and future abstinence.

Detoxification/ management of withdrawal symptoms

It is a process that provides safe withdrawal from alcohol. The common withdrawal

symptoms like insomnia, tremors, irritability, restlessness, sweating, increase pulse rate usually begins 6-8 hr of last drink, reaches its peak at 24-48 hr and subside in next 7days.

Mainstay of management is pharmacotherapy and most of cases can be managed on an out-door basis. Roughly for one unit of alcohol, 1mg of diazepam, 5mg of chlordiazepoxide needed.

Drug	Dose	Trade name	Interval	Comments
Diazepam	10-40mg	Calmpose	6hr-8hr	Safe
Chlordiazepoxide	50-120mg	Librium	6hr-8hr	Safe
Lorazepam	4-12mg	Ativan	6hr-8hr	Safe even in liver disease

Additionally, intramuscular injection thiamine 100mg/day for five days should be given followed by oral vitamin B complex orally for two weeks.

In a few patients, the withdrawal becomes severe and can present as confusion, disorientation, seizure and generalised tremors. This condition is known as delirium tremens and requires inpatient intensive treatment.

Pharmacotherapies for alcohol dependence

Pharmacotherapeutic agents may be prescribed for alcohol dependent individuals generally after the phase of acute alcohol withdrawal is over. This coupled with a comprehensive rehabilitation program with individual and family counselling, relapse prevention, coping skills and is essential for a successful treatment outcome.

Disulfiram (Antabuse, deaddict, esperal, disulfiram)

Disulfiram was the mainstay of pharmacological treatment for alcohol dependence for a long time. It acts by irreversibly inhibiting aldehyde dehydrogenase and leading to accumulation of acetaldehyde. This triggers an unpleasant reaction when alcohol is ingested and this acts as a psychological deterrent to drinking alcohol. This form of aversive therapy is effective in motivated and reliable patients who have good

social support who can monitor its intake.

Disulfiram alcohol reaction: flushing, headache, palpitations, dyspnoea, nausea, hypotension, and prostration when alcohol is ingested. It varies in intensity between individuals and usually occurs within 10 minutes of taking alcohol and reaches a peak at 20–30 minutes and last for 1–2 hours.

Contraindications: psychosis, ischaemic heart disease, severe hepatic or renal disease.

Dose: It is to be administered only after patient understands disulfiram alcohol interaction and informed written consent is taken. Patients need to abstain from alcohol for at least one day before administration of disulfiram and for at least one week after cessation of treatment. Disulfiram is available as 250 mg tablets, and is commonly prescribed once daily

Naltrexone (Naltima, Nodict)

Alcohol consumption is thought to produce a feeling of well being brought about by the release of endorphins in the brain and stimulation of opiate receptors. This reinforces drinking of alcohol and ultimately leads to relapse. Naltrexone competitively blocks opioid receptors and reduces the reinforcing and rewarding effects of alcohol. Naltrexone at 50 mg/day significantly reduces the risk of relapse to heavy drinking and the frequency of drinking.

Drug	Trade name	Dose	Comments
Disulfiram	Disulfiram, deaddict, esperal	250mg/day	Work best if patient is motivated, good social support
Naltrexone	Naltima, Nodict	50mg/day once day	Anticraving agent, work with positive family history of addiction
Acamprosate	Acamprol 333mg/tablet	4-6 tablets thrice day	Can be started during detoxification, least side effects
Topiramate	Topmac, Topaz	200-300 mg/day	Latest agent, needs slow building of dose (25'!200mg/day),c/i in renal stone

Acamprosate (Acamprol)

It predominantly suppresses excitatory glutaminergic neurotransmitters and decreases craving.

Side effects: mild and transient. Diarrhoea occurs in few patients but is reduced by taking medication with a meal

Contraindications: renal insufficiency, hepatic failure

Dose and duration: available as 333mg/tablet. <50kg=4tablets in three divided dose, >50kg =6tablets in three divided dose

Conclusion

Alcohol is second only to tobacco as a cause of substance induced morbidity and mortality. It is a risk factor for many cancers, liver disease, road fatalities, homicides and suicides. As one in five patients who visit a primary care physician drink alcohol at hazardous levels, physicians play a unique and vital role in early identification and prevention of alcohol related harm.

Tobacco

Tobacco is a major cause of morbidity and mortality all over world. In India, it is estimated that 65% of men and 33% women use

tobacco in some form. At the same time about one fifth of tobacco used in India is as smokeless type i.e. guthka, tooth paste etc. The process of stopping smoking is often a cyclical one, with the smoker sometimes making multiple attempts to quit and failing before finally being successful. Approximately 70 to 80% of smokers would like to quit smoking and approximately one-third of current smokers attempt to quit each year. 90% of these unassisted quit attempts fail.

MANAGEMENT

The 5 A's is a brief intervention method used to guide the clinician in tobacco cessation Counseling. This method is found to be effective and takes only 5-15 minutes.

ASK

Ask all the patients about tobacco use at the time of history taking

5 A's of Intervention

- ASK
- ADVISE
- ASSESS
- ASSIST
- ARRANGE

“Do you smoke or chew tobacco?”/Have you ever used tobacco ? Are you using now?”

Also enquire about amount and type of tobacco used by the patient. It is important to check about the duration and any associated complications.

Screening

One of the easy ways to assess whether the person needs help is by asking the two questions given in the box. A “yes” response to either of these questions would suggest that the person need help in stopping tobacco.

1. Do you find it difficult not to smoke/chew in situations where you would normally do so?
2. Have you tried to stop smoking for good in the past but found that you could not?

ADVISE

In a clear, strong and personalized manner, urge every tobacco user to quit. It is important for the person to be aware of the complications of tobacco use.

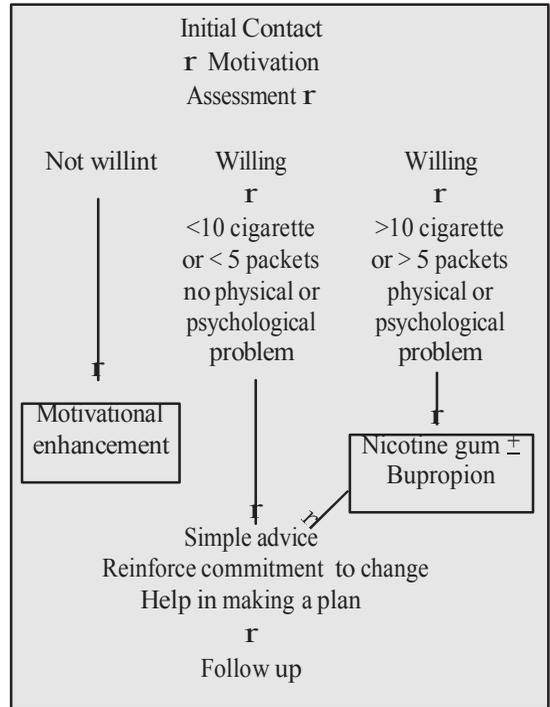
<p>If you smoke, have no problems yet You have Twice the risk of heart attack Six times the risk of emphysema Ten times the risk of lung cancer Increased risk of colorectal cancer, skin cancer And Life span 5-8year shorter</p>	<p>If chewing tobacco, you have high risk for Increased risk of leukoplakia 5 times increased risk of oral cancer Stained and abraded teeth Gingivitis, dental caries, bad breath Poor wound healing</p>
--	--

It is useful to tie tobacco use to current health and its social, economical costs as well as its impact on children and other house hold members.

ASSESS

During initial contact with the patient assess his motivation to quit smoking or chewing. Usually very few people think of cessation of smoking at any given point of time. Motiva-

tion to stop can be assessed by means of simple direct questions about their interest and intentions to quit. Past attempts of quitting if present can be used to encourage further and longer abstinence.



ASSIS

T

1. Patients willing to change

Physician should discuss with them the benefits of stopping tobacco use and at the same time encourage them to do so. Another important thing is to make a plan on how to stop use. The important points while making plan are:

a) *Identify* what works and what does not work i.e. “What worked well last time when you stopped using tobacco?” What did not work? What were the problems?”

b) *Triggers*: These are situations or thoughts that initiates tobacco use and can be the reason for restarting tobacco use after a few days/weeks of abstinence. It is important to identify these and developing strategies to handle them.

Common triggers	Handling
Boredom/ Stress/anxiety smoke	Spend time which person enjoy like listening songs, exercise etc.
Mood (positive or negative)	Spend time with friends/family member who do not tobacco or smoke.
Party	Substitute with other behaviors i.e. playing games, creative pursuits.

Craving:

This is one of common impediments in tobacco cessation. Generally, craving is strongest in the first week and lasts for 30-90 seconds each time. As the days pass, the intensity of cravings reduces.

Most withdrawal symptoms are self limiting and are not very disabling.

Handling Craving
<ul style="list-style-type: none"> • Avoid smoking situation • Drink 2 glass of water • Think again reason for quitting • Exercise or take bath • Eat sugar rich food • Deep breathing

c) Explore use of medications i.e. nicotine gum, patch or Bupropion tablets

Nicotine gum

It is now available in India. Each chewing gum contains 2mg of nicotine and is to be chewed like any other chewing gum. It is to be chewed slowly and should remain in mouth for at least 30 minutes for effective absorption. It is more effective in heavy smokers but can be used as and when required to

decrease craving after quitting smoking or chewing tobacco. One can use an average of 10 to 15 gums per day but most patients in India do not require such high doses.

Duration of treatment: 6- 12 weeks.

Bupropion

Bupropion, an antidepressant also helps in tobacco cessation and taking it along with nicotine gum increases the chance of success.

Dose: Patient should first set a QUIT DATE (no tobacco) after discussion with physician. Bupropion sustained release (150 mg) should be started two weeks prior to this and patient should be advised to progressively decrease tobacco consumption.

Duration: for 7-12 weeks. If no significant progress toward abstinence by the 7th week, it is unlikely he will quit during that attempt and treatment can be discontinued.

Contraindication: seizure disorder

ARRANGE Follow up

Set a follow up date about 2 weeks after quitting and reassess the situation. There is every likelihood that patient may slip back to earlier pattern. If so, be accepting and empathetic, reassess the situation and may plan accordingly.

Patient unwilling to change

Patients unwilling to make a quit attempt during a visit may lack information about the harmful effect of tobacco, may have fears or concerns about quitting or may be demoralized because of previous relapse. Such patients may respond to motivational intervention that provides the clinician an opportunity to educate, reassure and motivate the person.

Increase motivation to quit(5 R's)
<ul style="list-style-type: none"> • Relevance • Risks • Rewards • Road block • Repetition

Relevance: Encourage the patient to indicate why quitting is important for him and his current health. It works best when the issue is relevant to patient's disease status risk, family or social situations, health concerns etc.

Risks: Discuss with the patient about short and long term risk of continued tobacco use. Highlight the conditions that are most relevant for the patient. Also emphasize that smoking filtered cigarette, low tar or smokeless tobacco will not eliminate these risks.

Rewards: Ask the patient to identify potential benefits of stopping tobacco use.

<p>Rewards</p> <ul style="list-style-type: none"> • Improved health • Dental hygiene • Feel better physically and psychologically • Good example for children • Reduced wrinkling and aging
--

Roadblocks : Ask the patient to identify barriers or impediments to quitting and reassure that these can be handled if he would try quitting.

<p>Roadblocks (Barriers)</p> <ul style="list-style-type: none"> • Fear of failures • Withdrawal symptoms • Loss of pleasure • Constipation • Depression
--

Repetitions : The motivational intervention should be repeated every time an unmotivated patient visits the clinic. Tobacco user who has failed in previous quit attempts should be told that most people make repeated quit attempts before they are successful.

Conclusion :

Tobacco dependence is a chronic disease that needs treatment. Effective treatment methods are now available and should be used with every current and former tobacco user.

Suggested Reading

1. Benegal V, Murthy P, Shantala A, Janakiramaiah N. Alcohol related problems : a manual for medical officers. Deaddiction Centre, National Institute of Mental Health and Neurosciences, Bangalore, India, 2002.
2. Coleman T. ABC of smoking cessation: Use of simple advice and behavioral support. British Medical Journal, 2004, 328:397-399.
3. Johnstone C. Effective brief interventions in problem drinking. The Practitioner, 243, 1999:614-618.
4. Latt N, Saunders JB. Alcohol misuse and dependence: assessment and management. Australian Family Physician, 2002,31:1079-1085
5. Molyneux A. ABC of smoking cessation: Nicotine replacement therapy. British Medical Journal, 2004,328:454-456.
6. Patton A. ABC of alcohol. British Medical Journal publishing group, Tavistok Square, London, 1994.
7. Ray R. Treatment principles and issues in management of addictive behavior. In: Substance use disorder: a manual for physician (ed by) Rajat Ray, Drug Deaddiction Treatment Center, Department of Psychiatry, AIIMS New Delhi, 2002, 85-97.
8. West R. ABC of smoking cessation: Assessment of dependence and motivation of quit. British Medical Journal, 2004,328, 338-339.

Suggested slides for OHP

Slide 1: Introduction

Intervention is easy in the early stage of the disorder

Physician should be competent in:

- Screening patients for substance use
- Assessment of problems related to substance use
- Treatment
- Timely referral to specialized services

Slide 2: Alcohol

Problem patterns of drinking include:

- Heavy drinking: at risk for damage i.e. hepatitis, neuropathy, gastritis & addiction
- Problem drinking: evidence of damage in physical/psychological/social
- Addiction: development of tolerance, craving, withdrawal symptoms, morning drinking, impaired control over drink

Slide 3: Screening

Physician should have a high index of suspicious and pick of clues

Pay attention to non specific symptoms i.e.tiredness, insomnia, weight loss, indigestion etc which may indicate an underlying alcohol problem

Routinely enquire about alcohol as a regular part of history taking

Slide 4: Detection and Intervention

Step I: ASK:

Do you drink alcohol?

L

Yes

Frequency- quantity-duration-type

Check withdrawal symptoms, high risk behaviors i.e. drink driving, fights & physical damage, unprotected Sex under intoxication

Slide 5: Step II:Assess

Detailed assessment required in persons

Drinking

>2-3 times/wk

>2units/d in male />one unit/d in female

Heavy episodic drinking

On screening questionnaire

Yes on any one item of CAGE

Score of > 8 on AUDIT

Slide 6: Assess

With the help of laboratory investigations:

Raised MCV, GGT, AST/ALT ratio

Stage of motivation

Not ready **P** unsure **P** ready **P** changing **P** changed

Slide 7: Step III: Advice

Be non judgmental, express concern regarding health

Feedback personal risk

Stress on personal responsibility

Advice specifically and clearly regarding desirable change

Provide a Menu /future plan

Indicate Optimism

Slide 8: Step IV: Agree

Final choice on drinking left to the patient

Agree on low risk or moderate drinking if abstinence not being considered by patient

On the need for regular monitoring

Involve the family member i.e. spouse

Slide 9: Agree...

Strongly advice Abstinence in patients with:

Dependence

Significant physical damage

Failed attempts at moderate drinking

Family history of alcohol dependence and related complications

Regular follow up is essential

Slide 10: Alcohol dependence

Considered late stage alcohol problem

Detoxification essential

Benzodiazepine mainstay for detoxification

Additional specific pharmacotherapy along with counseling helps

Abstinence is the goal

Slide 11: Relapse

Most patient do restart drinking
 Do not panic as relapse is natural in the course of alcohol use

Assess: When, Where, Preceding event for relapse
 Advise: How is patient going to handle relapses in future?

Slide 12: Tobacco

ASK

Do you find it difficult not to smoke in certain situations?

Have you tried to quit smoking in the past but could not?

“Yes” to either of these questions-person need help

Advise

Strongly urge all users to quit in a clear, strong, and personalized manner.

CLEAR- “Quit now, not just when you are ill”.

STRONG- “Quit now and protect health

PERSONALISED- Tie use to adverse impact.

Slide 13: Advise...

Benefits of quitting

20 MINS - B.P, Pulse & Body Temperature returns to normal

8 HRS – CO level in blood & O₂ level becomes normal

24 HRS - Chances of heart attack decrease

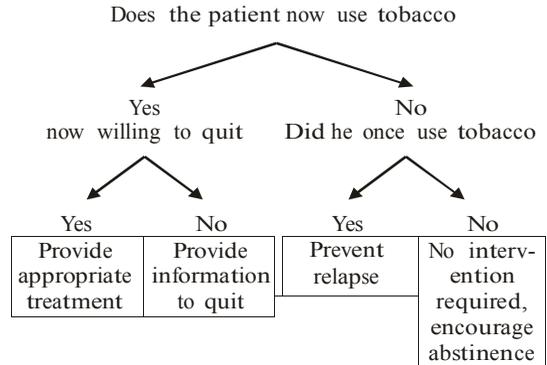
72 HRS- Bronchial trees relax, lung capacity, breathing easier

2 WKS- 3 MONTHS - Circulation improves, walking easier

5 YRS - Lung cancer death risk decreases by 50%

10 YRS - Lung cancer death risk drops to the level of a non-smoker.

Slide 14: Assess



Slide 15: ASSIST

Help with a quit plan:

Set a quit date

Tell family, friends/request help

Avoid, Remove tobacco

Relapse Prevention

Discuss triggers/challenges

Review past experience and lessons learnt

Help the user to obtain extra-treatment social support from workmates, family and friends

Recommend use of approved pharmacotherapy.

