Ministry of Health
& Family Welfare
Government of India

REDUCING RISK FACTORS FOR NONCOMMUNICABLE DISEASES IN PRIMARY CARE

Training Manual for Medical Officers

REDUCING RISK FACTORS FOR NON COMMUNICABLE DISEASES (NCDs) IN PRIMARY CARE

TRAINING MANUAL FOR MEDICAL OFFICERS

Developed by the
National Institute of Mental Health and Neuro Sciences, Bangalore
through the
World Health Organization-Government of India
Biennium Workplan**2015**

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The contributions of several other experts during the workshops for manual development are gratefully acknowledged (Annexure 5).

Foreword

Non-communicable diseases (NCDs) are currently the leading cause of mortality globally and also in India. Cancer, Diabetes, Cardiovascular disease (CVD), Chronic Respiratory Diseases and Common Mental Disorders are major causes of disability and premature mortality. They entail not only adverse health but economic and developmental consequences.

The rising burden of NCDs has generated an overall concern globally to formulate and implement effective strategies for their prevention and control.

In India, a national programme on cancer control was already ongoing for more than three decades. It was decided to integrate this programme with the NCD control programme and the National Programme for prevention and control of Cancer, Diabetes, Cardiovascular diseases and Stroke (NPCDCS) was launched in October 2010. The objectives of this programme include preventing and controlling NCDs through behaviour and life-style changes; providing early diagnosis and management of common NCDs; building capacity at various levels of health care; training human resources adequately and establishing palliative and rehabilitative care. The NPCDCS revised guidelines (2013-2017) seek to create adequate community resources for effective prevention, detection, referral and treatment through convergence/linkage with the ongoing interventions of the National Health Mission (NHM) including programmes such as the National Tobacco Control Programme (NTCP), National Mental Health Programme (NMHP), National Programme for Health Care of the Elderly (NPHCE) for NCDs, programmes that deal with communicable diseases like TB, as well as programmes like the RCH/Adolescent/School Health etc.

Towards this objective, it becomes important to train the health workforce in understanding the risk factors for NCDs in general and the preventable risk factors in particular. This will enable health personnel in the promotion of healthy lifestyles, reduction of risk factors, early identification and intervention, as well as encouraging treatment compliance and follow-up. As reducing many of the risk factors involves behavioural change, health personnel need to be trained to acquire the knowledge and skills to engage clinical and community populations, motivate them to change, initiate and maintain healthy behaviours that will ensure optimal health of the people.

A series of training manuals has thus been developed for different categories of health providers, including medical officers, counsellors and community health workers. Various experts have been involved in the development of these manuals. The National Institute of Mental Health and Neuro Sciences, Bangalore, was given the primary responsibility for developing the manualised training programmes. An expert group meeting held in Bangalore on 6 and 7 February 2014 provided the headstart for the manual development with suggestions on the content, format and delivery of the training. The draft manuals were developed by the NIMHANS team and revised based on the reviews of external experts. These manuals were then field tested and further revised. A second meeting of experts held at New Delhi on August 13, 2014 reviewed the final drafts and provided further suggestions on refinement as well as rolling out.

Optimal behaviour change occurs when persons have the knowledge of risks associated with a particular behaviour, the benefits of changing, the way in which change is possible and supported for such change. The medical officer needs an understanding of effective and brief counselling strategies that can be used in the busy clinical setting. The medical officer has a responsibility both for early diagnosis and intervention for NCDs as well as for the prevention of NCDs. Effective counselling can help to motivate persons to change, improve treatment adherence and help them to maintain such changes. We hope medical officers will use these training sessions effectively and be agents of change in a community. What they do will have a major impact on reducing the burden from non-communicable diseases in India.

LIST OF ABBREVIATIONS

AIIMS – All India Institute of Medical Sciences

ANM - Auxiliary Nurse Midwife

AUDIT - Alcohol Use Disorder Identification Test

BMI – Body Mass Index

CD - Communicable Diseases

CHW – Community Health Worker

CO – Carbon Monoxide

COPD – Chronic Obstructive Pulmonary Disease

COTPA – Cigarettes and Other Tobacco Products Act

DALY - Disability Adjusted Life Years

DASH - Dietary Approaches to Stop Hypertension

DM - Diabetes Mellitus

FIT- Frequency Intensity and Timing of exercise

GOI – Government of India

ICMR – Indian Council of Medical Research

MO - Medical Officer

NCD - Non Communicable Disease

NFHS - National Family Health Survey

NHM – National Health Mission

NIMHANS - National Institute of Mental Health and Neuro Sciences

NIN – National Institute of Nutrition

NPCDCS – National Programme for Prevention and Control of Cancer, Diabetes, Cardiovascular Diseases and Stroke

NRT – Nicotine Replacement Therapy

PHC – Primary Health Care

QPE - Quality Physical Education

SHG – Self help groups

SHS – Second hand smoke

TCC – Tobacco Cessation Clinic

WHO – World Health Organization

Introduction to the Training Manual

This training manual is intended as a facilitator's training manual for medical officers in primary care, in order to make them familiar with the behavioural and psychological risk factors for non-communicable diseases and provide them with the skills to identify and reduce these risks, particularly in the clinical setting.

An ideal facilitator for this manualised training would be a professional with a background in health, preferably public or mental health or humanities with a good knowledge of health and health behaviour change. The facilitator would need to have a good understanding of non-communicable diseases and their management, as well as risk factors that mediate these disorders. The facilitator would need to have knowledge of the NCD burden in India. In addition, she/he should be an effective facilitator with good communication and motivating skills. A working knowledge of the roles and responsibilities of the medical officers as well as other staff of the PHC would help the facilitator to train the medical officer in two important ways. The first is to both to provide intervention to patients that aim to address reduction of risks to NCDs. The second is to co-manage such risk reduction by interacting with and guiding the NCD counsellors and community health workers and ensuring that the patient's attempts to reduce risk are reinforced by the other health care providers. The facilitator must emphasize on the multidisciplinary team approach as the best approach to NCD risk reduction. Most importantly, the facilitator should be passionate about improving the health and well-being of our communities and convey to the participant medical officers that behaviour change is possible and can significantly reduce risk for many of the non-communicable disorders.

It would be desirable to have a co-facilitator who could conduct some of the sessions, answer questions, involve silent participants, distribute the handouts and make the sessions more lively and interactive.

Notes to the Facilitator

The training manual is planned for 3 days and will cover the following areas:

1. Introduction to risk factors and NCDs
2. Tobacco use
3. Alcohol use
4. Unhealthy diet
5. Physical inactivity
6. Teamwork and developing an integrated approach

   Each of the 5 risk factors is dealt separately. The training of the medical officers can either be conducted as a continuous 3 day programme or as standalone sessions for each risk factor. Teamwork and developing an integrated approach is the last session describing how the medical officer will work along with other health care providers as a multidisciplinary team in primary care.

- *A timetable* with specific contents and approximate time allocated for each risk factor is given. The facilitator is free to decide how to use this time to plan each session.

  Format of the training:

- ***1. Registration and Pre-training assessment.*** The participants should be advised to register themselves at least half an hour prior to starting the training programme on Day 1. The Pre-training assessment can be handed to each participant soon after they register and the filled forms collected prior to Session 1. Further details are provided under the section on pre and post-training assessment.

  2. ***Introduction on Day 1****:* The facilitator will open the session on Day I using an ice breaker. The participants will pair off and get to know each other (discuss about what one likes to eat, favourite movies, songs and so on).The aim is to gather information about the person and introduce him/ her to the group. This activity will take about 30 minutes.

  3. ***Opening and Closing session***: Each day will open with a 15 minute session on what was discussed and learnt the previous day. The closing session at the end of the day is to summarize what was discussed. The opening and closing session as an exercise is to link different risk factors and NCDs together as a whole.

Duration: 15 minutes

INSTRUCTION

Open the day by inviting participants to share what they learnt from the previous day's programme. It is worth taking some time over the opening session as the aim is to link one risk factor to another and so on.

A sample question is provided below.

Prompt question: Could some of you share about what you learnt and understood from the previous day's sessions? For instance, what was the risk factor (s) that was discussed and what action will the medical officer take?

CLOSING SESSION (at the end of each day)

INSTRUCTION

Close the day by inviting participants to share what they learnt from the day's sessions. It is worth taking some time over the closing session and give time to participants to share how they will transfer what they have learnt back to the field. Remember to link one risk factor to another and so on.

A sample question is provided below.

Prompt question: Could some of you share about what you take back from today's sessions? For instance, what was the risk factor (s) that was discussed and what action will the medical officer take?

4. ***Content of each session*** *(covering* risk factors):

- *Presentation of information:* The facilitator's style is interactive and generates discussion throughout with the purpose of linking the contents to how the medical officer will actually use it in the clinic. The slides used in the power point presentation have been linked with the training manual to make it easy for the facilitator.
- *Format:* Each risk factor begins with an introduction, broad aim and specific objectives.

- *INSTRUCTION* given at the beginning of each objective gives the facilitator instructions about the session.

- *Notes to the facilitator* give instructions about how an activity is to be conducted. It gives simple steps for the facilitator to follow.

- *Duration:* Approximate time for the entire presentation of each risk factor (e.g. diet, tobacco etc) and for each activity is given. The facilitator can use this time frame to plan sessions.

- ***Activities****:* Activities during each training session may be:

  - **Brainstorming** or whole group interaction, indicated by the letter '**B**' and the symbol 
  - **Group activity** or discussion in small groups, indicated by the letter **GA** and the symbol 
  - **Individual Activity**, indicated by letter **IA** the symbol 
  - **Role Play** is indicated by the letter **RP** and symbol 
- *Facilitator's reading material:* The facilitator should read the material before the session. Sources for specific information are quoted and included as references in the footnotes.

- *Handouts:* Copies of handouts will be made before the session and distributed either before or after the session. List of handouts are included at the end of each session.

- *Power point presentation:* A DVD containing the power point presentations accompanies the training manual. The slides for each session are reproduced in the manual to aid the facilitators.

- *Annexures* are at the end of the manual.

- *Materials for the training* need to be arranged in advance and they are as follows: LCD projector, writing board and markers or chalk, chart papers and felt pens, drawing pins to display charts, paper and pens for individual work, tables (for group work) and chairs.

- Before beginning the introduction session, the facilitator can invite questions regarding the training content.

Instruct participants about:

- Various administrative arrangements for the training (stay, food, travel etc)
- Go over the training schedule

- Distribute files and writing material
- Introduce the facilitators and co-coordinators for the workshop
- Tell the trainees about arrangements for drinking water, location of restrooms and answer questions regarding any other arrangements.

PRE/ POST TRAINING EVALUATION AND FEEDBACK

Instructions to the Facilitator:

- The facilitator will make two sets of the evaluation questionnaire, one for the pre-training evaluation and one for post-training evaluation.
- Pre – training questionnaire will be distributed soon after registration before the session begins (Day1). The facilitator will instruct the participants to tick the appropriate answer to each question. The facilitator/co-facilitator should collect all the response sheets and keep them carefully, as it is necessary to compare this with the post-training evaluation
- On the last day of training, a similar set is distributed (post - training). Participants are asked to fill out the questionnaire which is then collected prior to the valedictory
- An assessment of the change in the responses will be useful for the facilitator to gauge how much the participants learnt from the training.
- In addition to the post-training evaluation, a feedback about the training will also be useful to understand the strengths and weaknesses of the programme and make improvements for further training programmes.
- The Response Key is provided separately to help the facilitator mark the correct responses. Additional information is also provided along with the Response Key as it may help the facilitator discuss and clarify some of the concepts during the training programme.

The Pre-training and Post training evaluation questionnaire, training feedback forms and Response Key are provided as Annexures.

Training Schedule

TIME	DAY 1	DAY 2	DAY 3
9.00-10.30	WELCOME INTRODUCTION TO RISK FACTORS AND NCDs	RECAP ALCOHOL USE CONTD	PHYSICAL INACTIVITY CONTD.
10.30-11.00	**TEA**	**TEA**	**TEA**
11.00-1.00	TOBACCO USE	UNHEALTHY DIET	STRESS
1.00-1.45	**LUNCH**	**LUNCH**	**LUNCH**
1.45-3.30	TOBACCO USE CONTD.	UNHEALTHY DIET CONTD	STRESS CONTD.
3.30-3.45	**TEA**	**TEA**	**TEA**
3.45-4.45	ALCOHOL USE	RECAP PHYSICAL INACTIVITY	TEAMWORK AND DEVELOPING AN INTEGRATED APPROACH
4.45-5.00	CLOSING SESSION	CLOSING SESSION	EVALUATION CLOSING SESSION

Introduction to Risk Factors for NCDs and their inter-relationship

Session 1

Objectives of the session

By the end of this session, the participants will understand the following:

- The importance of preventing NCDs
- The various risk factors for NCDs
- Levels of intervention to address risk factors
- The role of the medical officer in the identification and reduction of risk factors in addition to NCD management
- Team approach to reducing risks for NCDs in the clinic and community

Organization of the session

- *Facilitator's reading material:* The facilitator should read the material before the session. Sources for specific information are quoted and included as references in the footnotes.

- *Handouts:* Copies of handouts will be made before the session and distributed either before or after the session. List of handouts are included at the end of each session.

- *Powerpoint presentation:* A DVD containing the powerpoint presentations accompanies the training manual. The slides for each session are reproduced in the manual to aid the facilitators.

- ***Activities****:*

  Activities during the training session may include:

  - **Brainstorming** or whole group interaction, indicated by the letter '**B**' and the symbol 
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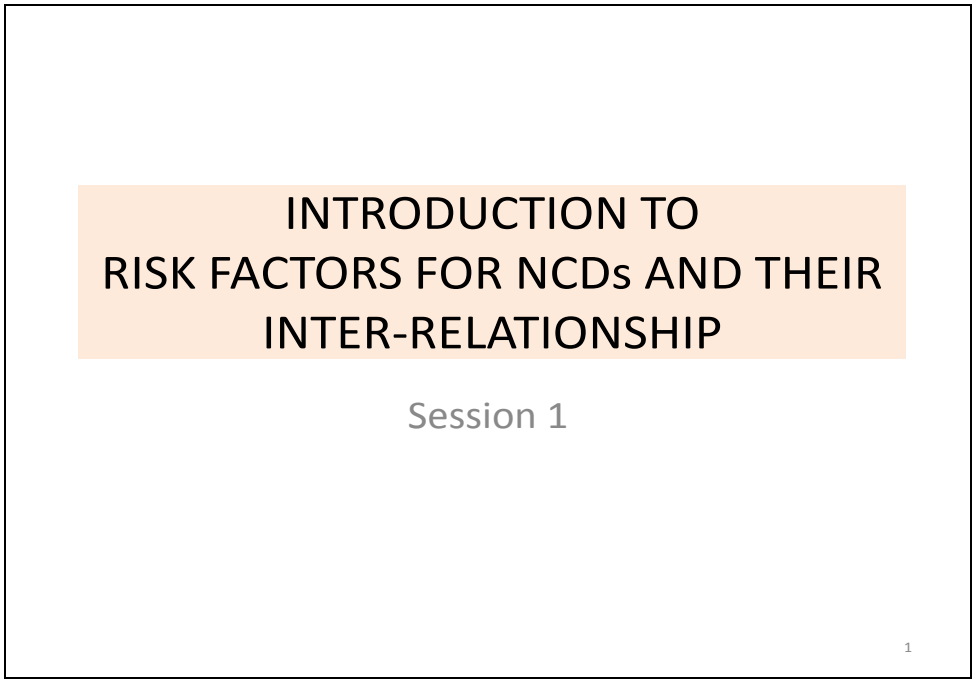


INTRODUCTION

Non communicable diseases (NCDs) are chronic conditions of non contagious origin. They have a prolonged course and can lead to functional impairment, disability or death. Cardiovascular diseases, diabetes, cancers, chronic respiratory diseases and common mental disorders (e.g. depression and anxiety) are common NCDs. Socio-cultural and technological advances, changes in lifestyle and behaviour have all played a role in the rise of NCDs.

Cardiovascular Diseases

In developing nations, altered diets and diminished physical activity are critical factors contributing to the acceleration of CVD epidemics, along with tobacco use[1]. CVDs are the leading cause of mortality in India. One in every fourth death is attributable to CVDs. Populations as well as individuals at risk must be protected through initiatives that take into account nutrition-based and other preventive strategies to protect and promote cardiovascular health.

Diabetes

In India, a disturbing trend in recent years is the shift in age of onset of diabetes to a younger age, its increase among the poor, in urban slum dwellers, in the middle class and even in the rural areas. Rapid changes in physical activity and dietary habits are attributed as causes. Early

[1] Reddy, K.S. Cardiovascular diseases in the developing countries: dimensions, determinants, dynamics and directions for public health action. Public Health Nutrition 2002; 5 (1A): 231-237

identification of at-risk individuals and appropriate lifestyle intervention are recommended to prevent or postponing the onset of diabetes[2].

Cancer

Rates of cancer are expected to double by 2030[3]. Where tobacco use in men is concerned, nearly half of all cancers at specific sites are associated with its use (35.6% to 50.0% in the six population based registries). The sites include: mouth (oral cavity), lip and tongue, oropharynx, hypopharynx, pharynx, oesophagus, larynx, lung and urinary bladder. In women, nearly one fifth of cancers occur at these sites, (10.1% to 17.3% in the six Registries), predominantly in oesophagus and oral cavity[4].
Childhood cancers also appear to be on the rise in India.[5]

Chronic Respiratory Diseases

Chronic respiratory disorders (including asthma, chronic obstructive pulmonary disease, occupational lung disease and sleep related breathing disorders) are estimated to become the third leading cause of death by 2030[6]. Low- and middle-income countries already shoulder much of the burden of COPD with almost 90% of COPD deaths taking place in these countries[7].

Common Mental Disorders

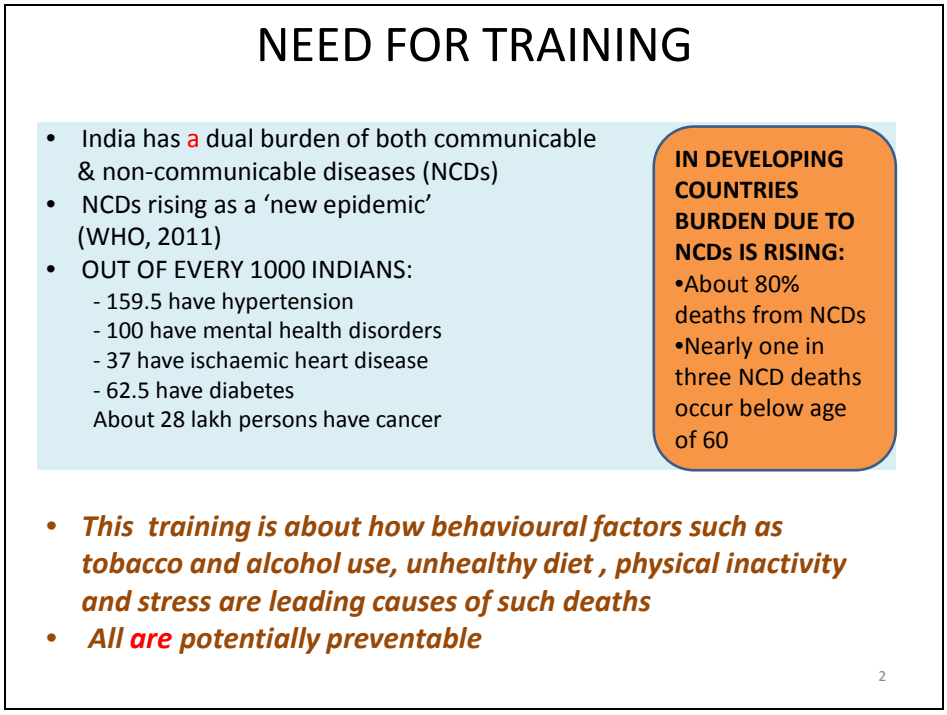
Depression is among the top ten causes of disease burden[8]. Meta-analytic studies (analysis of multiple research studies) have shown that anxiety and depression increase the risk of coronary artery disease in healthy populations by 26% to 81%[9,10].

The prevalence of major depression is consistently higher for persons with physical illnesses than for those without these disorders; e.g. 29% with hypertension, 22% with myocardial infarction, 27% with diabetes, and 33% with cancer[11]. Many researchers have evaluated the prevalence of

[2]Mohan VS. Sandeep R, Deepa BS, Varghese C. Epidemiology of type 2 diabetes: Indian scenario. Indian J Med Res 2007; 125:217-230.
[3] Takiar R, Nadayil D, Nandakumar A. Projections of number of cancer cases in India (2010-2020) by cancer groups. Asian Pac J Cancer Prev. 2010;11(4):1045-9
[4] Gupta PC, Ray CS. Tobacco Related Cancer - Its Impact on the Health Economy. Health Administrator 2007; Vol: XVII, Number 1: 85-92.
[5] Satyanarayana L, Asthana S, Labani PS. Childhood cancer incidence in India: a review of population based registries. Indian Pediatr 2014;51: 218-220
[6] World Health Organization. Burden of COPD. http://who.int/respiratory/copd/burden/en/
[7] Lopez AD, Shibuya K, Rao C, Mathers CD, Hansell AL, Held LS, et al. Chronic obstructive airway disease: Current burden and future projections. Eur Resp J.2006;27:397–412.
8 Patel V, Chatterji S, Chisholm D, Ebrahim S , Gopalakrishna G, Mathers C, Mohan V, Prabhakaran D , Ravindran RD, Reddy KS. India: Towards Universal Health Coverage. Chronic diseases and injuries in India. Lancet 2011; 377: 413–28.
9 Roest AM, Martens EJ, de Jonge P et al. Anxiety and risk of incident coronary heart disease: a meta-analysis. J Am Coll Cardiol 2010; 56:38-46.
10 De Graaf R, Bijil RV, Smit F et al. Risk factors for 12 month co-morbidity of mood, anxiety and substance use disorders: findings from the Netherlands Mental Health Survey and Incidence Study. Am J Psychiatry 2002; 159: 620-9.
[11]World Health Organization (2003) Investing in Mental Health. Geneva: WHO

common mental disorders in primary health care settings and report a prevalence of 21 to 42.3%[12]. Pathways leading to co- morbidity of mental disorders and other NCDs are bi-directional and care for persons with these conditions needs to be addressed under primary care.

Slide 2



There is a need for training health care providers in developing countries. Non Communicable Diseases (NCDs) account for approximately 68% of all causes of deaths across the world[13]. In low and middle income countries (LMIC), the burden due to NCDs is rising rapidly and nearly 80 percent of deaths from NCDs are from LMIC. Further evidence shows that 29 percent of NCD deaths in these countries occur below the age of 60. Among various causes, behavioural factors such as tobacco use, alcohol use, unhealthy diet and physical inactivity are leading causes of such deaths which are potentially preventable.

In India, we presently have a dual burden of both communicable and non-communicable diseases (NCDs). The prevalence of NCDs is, however, increasing and NCDs will become the 'new epidemic'.

[12] Shankar B.R, Saravanan B, Jacob K.S (2006). Explanatory models of common mental disorders among traditional healers and their patients in rural south India. Int J Soc Psychiatry 2006; 52:221-33.
[13]World Health Organization. Global Status Report on Non Communicable Diseases 2014. http://who.int/nmh/publications/ncd-status-report-2014/en/

More than half (53%) of all deaths in the age group 30-59 years were due to NCDs and of these, 29% were due to cardiovascular diseases and by 2020, cardiovascular will be the largest cause of disability and death. In 2003, approximately 30 million suffered from coronary heart disease[14].

Out of every 1000 Indians:

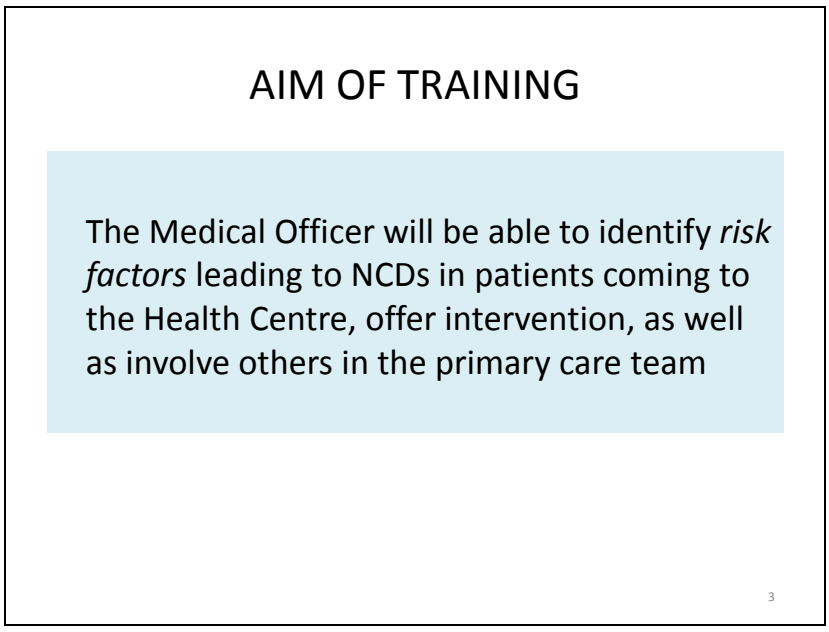
- 159 have hypertension (about 300/100 in urban areas)
- 37 have ischaemic heart disease (about 100/1000 in urban areas)
- 62.5 have diabetes (about 100/1000 in urban areas)[15]

There are an estimated 28 lakh persons with cancer.

The number of persons with hypertension is likely to nearly double by 2025[16]. In 2000, India had the highest number of diabetics in the world, followed by China and the United States.[17] While the global prevalence of diabetes is likely to double by 2030, the maximum increase is likely to be seen in India.

More than 10 lakh (1 million) new cancers are diagnosed each year in India, leading to 6-7 lakh deaths from cancer each year (figure for 2012)[18]

Slide 3



[14] Ministry of Health, Government of India. NPCDCS. A Manual for Medical Officers. Developed under Government of India-WHO Collaborative Programme (2008-2009). http:// gujhealth.gov.in/images/MANUAL_for_medical_officer.pdf
[15] WHO South-East Asia Regional Office. National Cardiovascular Disease Database. Supported by Ministry of Health and Family Welfare and World Health Organization.2005.
http://searo.who.int/india/topics/cardiovascular_diseases/NCD_Resources_National_CVD_database-Final_Report.pdf?ua=1
[16] Reddy KS, Shah B, Varghese C, Ramadoss A. Responding to the threat of chronic diseases in India. Lancet 2005; 366 : 1744-9
[17] Wild S, Roglic G, Green A, Sicree R, King H. Global prevalence of diabetes: estimates for the year 2000 and projections for 2030. Diabetes Care. 2004 May; 27(5):1047-53
[18] Mallath MK, Taylor DG, Badwe RA et al. The growing burden of cancer in India: epidemiology and social context. Lancet Oncol 2014;April 11:1-8.

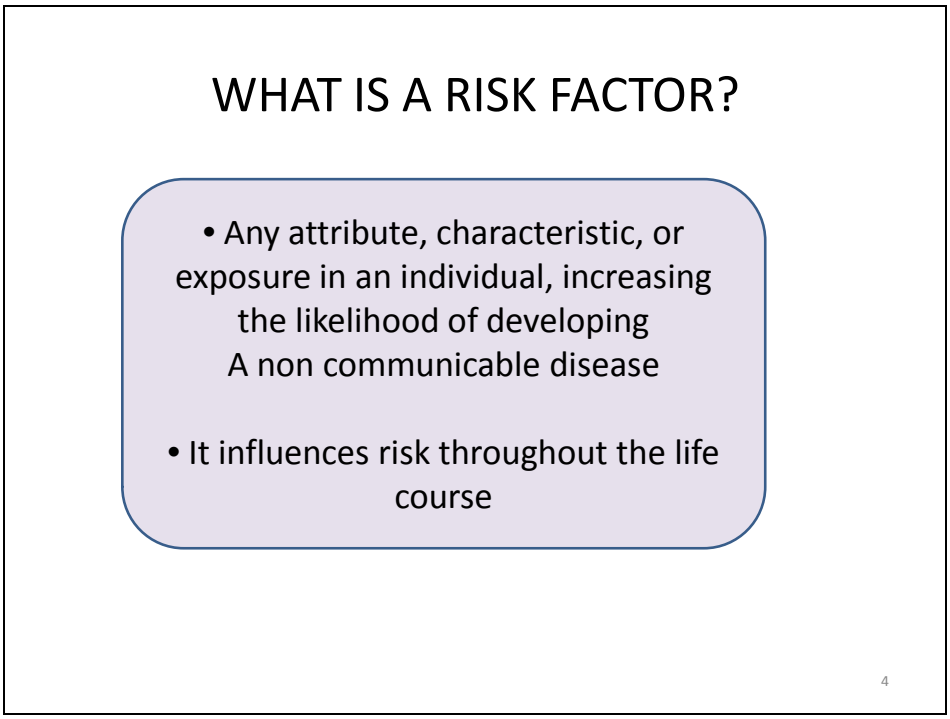
The training manual for Medical Officers can also be used for NCD programme Managers thus expanding the scope of the programme.

INSTRUCTION

Discuss the risk factors and NCDs and how they are interrelated. Generate discussion among participants to give examples from their field settings.

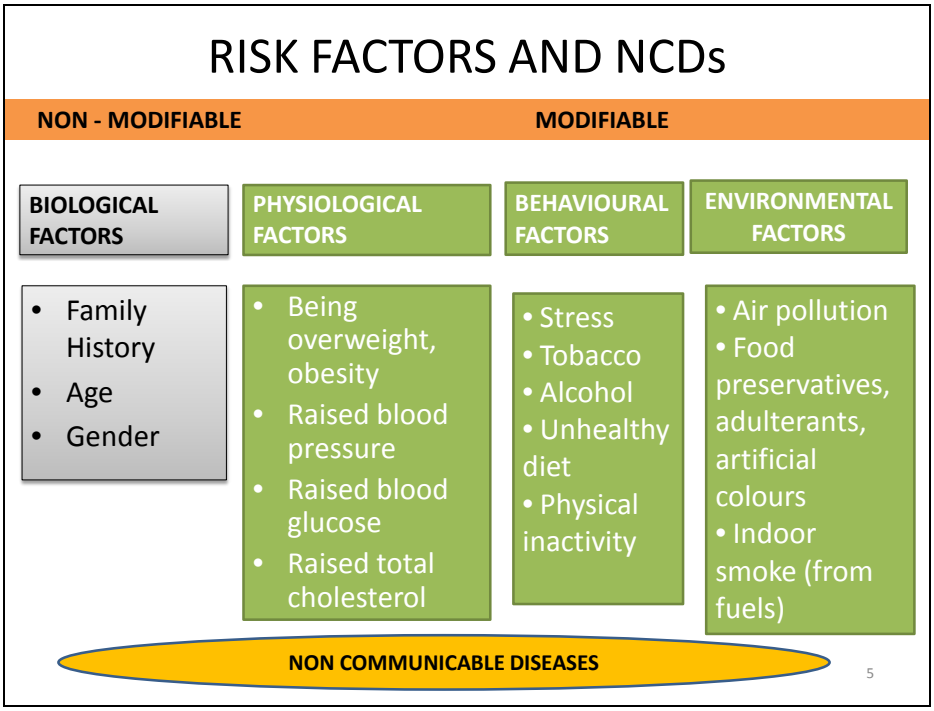
Total duration: 1 hour approximately

Slide 4



For example, a positive family history of heart disease or diabetes is a risk factor which increases the risk for the disease in the individual. Overweight and obesity are risk factors for many diseases. Use of tobacco and alcohol are risk factors that increase the likelihood of developing an NCD. Risk factors change throughout a person's life span and exposure to risk factors in childhood can have serious effects later in life.

Slide 5



Risk factors for NCDs can be classified as physiological, behavioural and environmental; or as non-modifiable and modifiable. There are also biological risk factors where there can be family history of illnesses, age and gender that contribute to disease.

Physiological risk factors are being overweight, obesity, raised blood pressure, raised blood glucose and raised total cholesterol. Behavioural risk factors are stress, use of tobacco, alcohol, unhealthy diet and physical activity that can be modified. Other factors that add to risk include environmental factors such as air pollution, food preservatives, adulterants, artificial colour and indoor smoke from fuels.

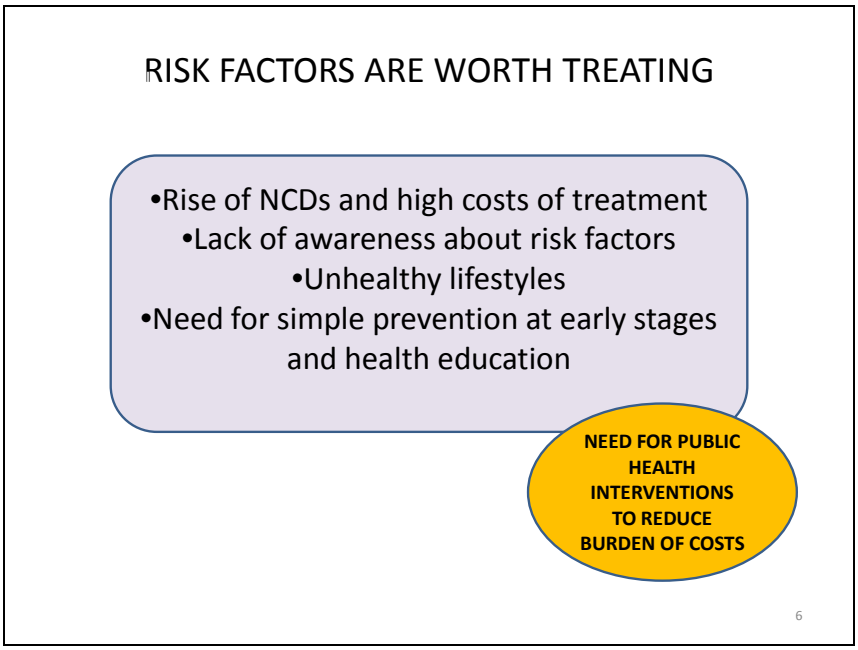
Behavioural risk factors: According to the World Health Organization[19] risk factors that are behavioural or physiological and hence modifiable are tobacco and harmful alcohol use, unhealthy diet (low fruit and vegetable intake), physical inactivity and stress. Alcohol consumption especially binge drinking leads to hypertension, stroke and in some atrial fibrillation and cardiomyopathy. To address these risk factors, primary prevention and health promotion is part of management.

Social factors like poverty, living conditions and cultural practices can influence risk for NCDs.

Risk factors can also be thought of as proximal or recent (e.g. recent lifestyle) or distal or a long time in the past (e.g. childhood undernutrition or obesity).

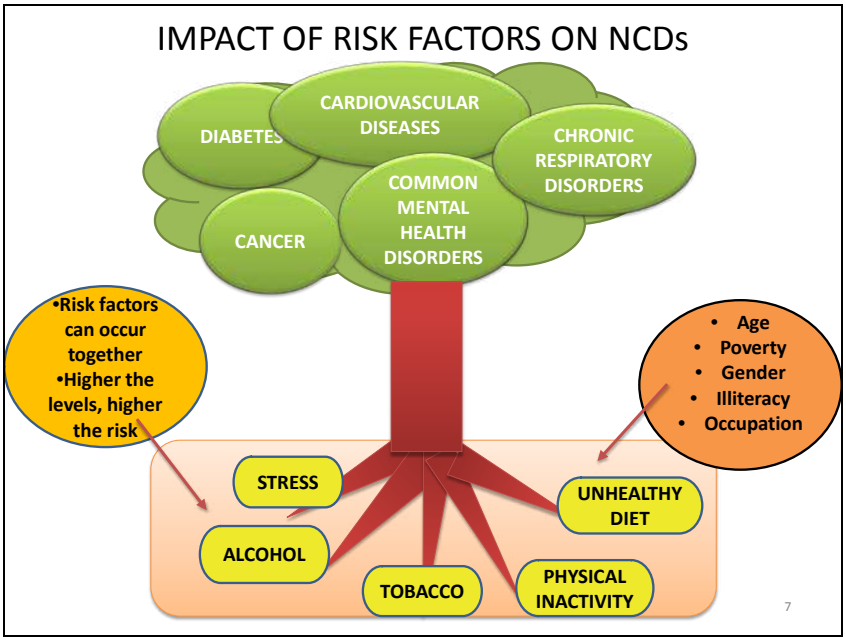
[19]World Health Organization. Non communicable diseases fact sheet. January 2015. http://who.int/mediacentre/factsheets/fs355/en/

Slide 6



Risk factors are worth treating: Lack of awareness of risk factors, poor technical competence at different health interventions and high costs of treatment play a role in the rise of NCDs. For instance, the reason for developing diabetes and heart attacks at an early age is largely due to poor consumption of fruits and vegetables, unhealthy diet, increased use of tobacco and alcohol and a sedentary lifestyle. There is a need for simple public health interventions to tackle major NCD risk factors through urgent preventive action at early stages. Primary prevention through health education and secondary prevention through case management of NCDs and their common risk factors are sustainable and cost effective.

Slide 7



Various risk factors can occur together: For instance*, one* person can have high blood pressure, high blood sugar, obesity as well as dyslipidemia (persons with higher levels have higher risks) and small elevations of risk factors are much more harmful than isolated elevation of single risk factors).

Age, poverty, gender, levels of education and occupation play a role in the development of the NCDs: The Integrated Disease Surveillance Project (IDSP) -NCD risk factors survey (2007-2008)[20], Phase-I was carried out in seven states of India namely, Andhra Pradesh, Kerala, Madhya Pradesh, Maharashtra, Mizoram, Tamil Nadu and Uttarakhand and the household coverage was 4905. Some of the findings were as follows:

Tobacco and alcohol use: In India, one in three adults used tobacco in any form. This includes nearly one in two males and one in five females who use tobacco.[21]. A similar pattern of increasing prevalence with age and decreasing with level of education was also observed with current alcohol drinkers and use of tobacco and alcohol use started at a younger age contributing to the high risk of NCD at later ages.

Physical inactivity was the leading cause of diabetes, hypertension and coronary heart disease: More female respondents were in the category of low physical activity as compared with males across all the age groups. Rural population was doing more physical work than urban. High prevalence of excess weight was recorded in all the age groups except the younger age and was prevalent in both sexes, but higher in urban population compare with rural.

Unhealthy diet was a major risk factor of many NCDs: High proportion of population was taking inadequate amount of fruits and vegetables which increases the risk of NCD. Its distribution across all age groups, education, occupation and residence was found very high.

Overall, NCD risk factors were prevalent across all socioeconomic and demographic categories of population in phase-I states.

RISK FACTORS AND NCDs:

Tobacco use is a known or probable cause of many diseases including heart disease; cancer, stroke, chronic obstructive pulmonary disease and digestive tract disease and also has significant adverse effects on pregnancy. Smokeless tobacco use causes oral cancer of the lip, tongue, mouth, and throat areas and digestive system cancers. Chronic respiratory diseases like asthma

[20] National Institute of Medical Statistics, Indian Council of Medical Research (ICMR), 2009,IDSP Non-Communicable Disease Risk Factors Survey, Phase-I States of India, 2007-08.National Institute of Medical Statistics and Division of Non-Communicable Diseases, Indian Council of Medical Research, New Delhi, India.

[21]Global Adult Tobacco Survey India 2009-2010. Ministry of Health and Family Welfare, Govt of India. http:// mohfw.nic.in/WriteReadData/l892s/1455618937GATS%20India.pdf

World Health Organization. http://who.int/tobacco/surveillance/en_tfi_india_gats_fact_sheet.pdf

and COPDs (chronic obstructive respiratory diseases) can develop in tobacco users and second hand smokers

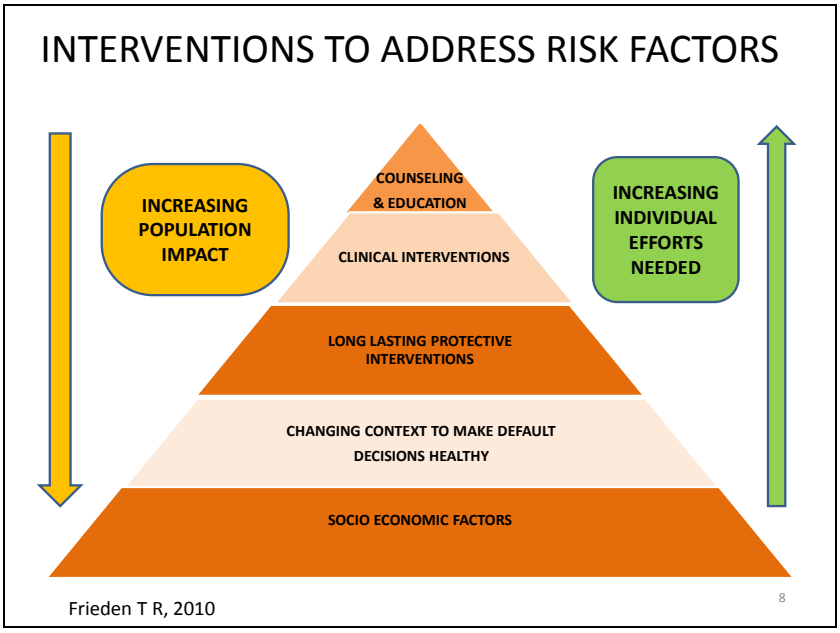
Alcohol consumption and health and social outcomes are complex and multi-dimensional. Alcohol use is linked to many diseases and injury conditions including liver cirrhosis, several cancers (liver, laryngeal, esophageal and orpharyngeal cancers), injuries and hemorrhagic strokes. 5.1% of the global burden of disease and injury was attributable to alcohol as measured in disability adjusted life years (DALYs).[22]

Diet with a low consumption of fruit and vegetables has been identified as a risk factor in the development of a range of chronic diseases, including coronary heart disease, stroke and many forms of cancer. Diet rich in salt, sugar, saturated/transfats are considered unhealthy.

Lack of physical activity leads to obesity, dyslipidemia (lower high-density lipoprotein levels), insulin resistance, diabetes mellitus, as well as high blood pressure. Physical inactivity is a well-established risk factor for coronary heart disease (CHD) and is associated with about a two-fold increase in risk of CHD.

Stress is known to worsen physical conditions and can come in the way of seeking help, treatment adherence and outcome[23]. Modifiable risk factors such as tobacco and alcohol may be used to cope with stress. Stress can also impact diet and physical activity.

Slide 8

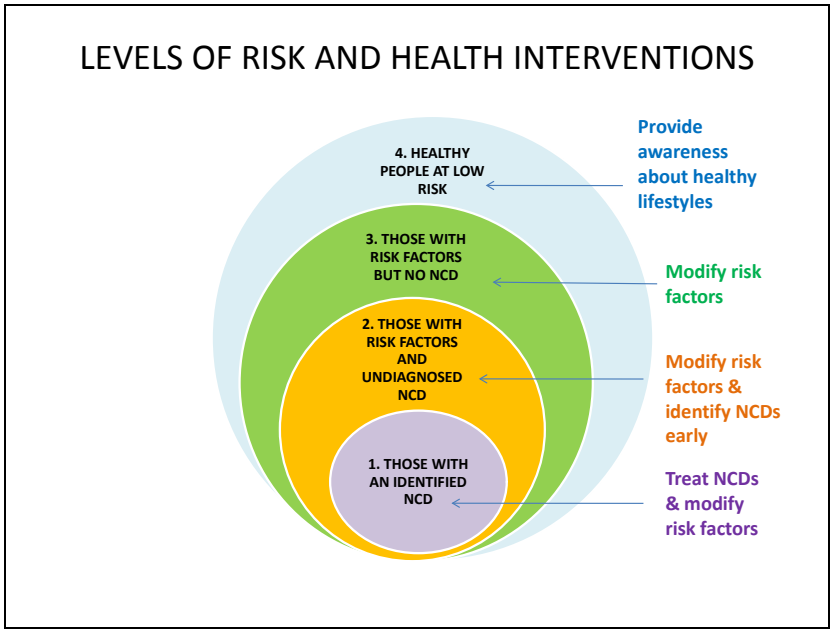


[22]World Health Organization. Global Status Report on Alcohol and Health. http://who.int/substance_abuse/publications/global_alcohol_report/msb_gsr_2014_1.pdf?ua=1

[23] Ngo VK, Rubinstein. A, Ganju.V, Kannellis.P, Loza.N et al. Grand Challenges: Integrating Mental Health Care into Non Communicable Disease Agenda. PLoS Med 2013; 10(5): e1001443.doi:10.1371/journal.pmed.1001443.

Population based interventions are likely to have a greater impact than individual interventions. An outstanding example of population based initiatives is the iodisation of salt, which had a remarkable impact on reducing Iodine deficiency disorders. Poverty alleviation measures, access to good food, access to recreational facilities, and access to health care are important. The first 3 sections of the pyramid depicted above lie with the health sector[24].

Slide 9



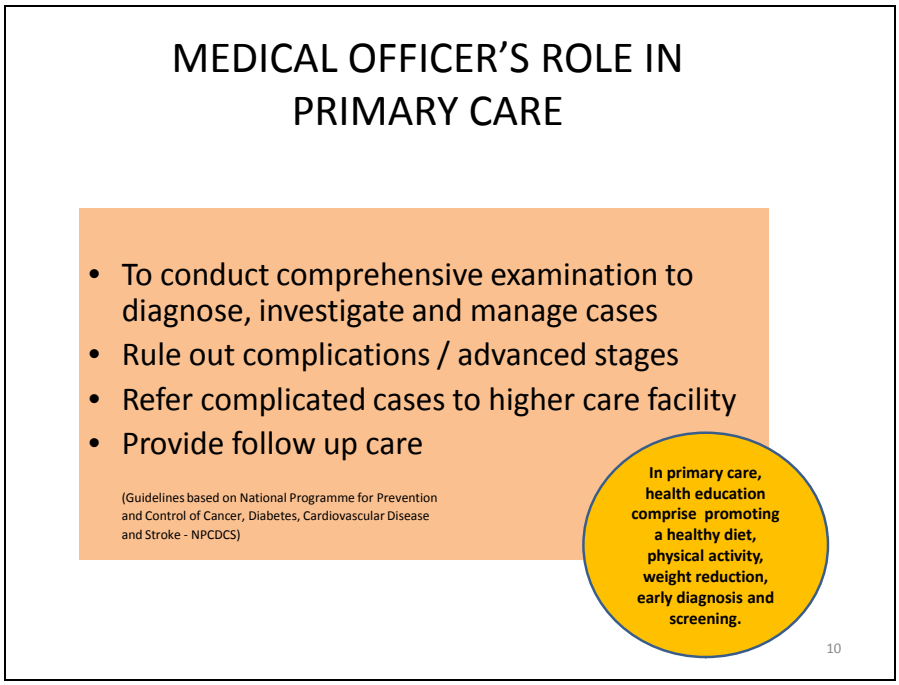
In terms of populations to be addressed by the medical officer, the circles indicate 4 groups and their levels of interventions:

1. Those with an identified NCD: This group will benefit from appropriate treatment of the NCD, an assessment of risk factors and guidance to modify the risk factors for better control of the NCD, preventing other NCDs and preventing complications from the NCD.
2. Those with risk factors and undiagnosed NCD: This group will benefit from early detection and intervention for the NCD and guidance to modify the risk factors.
3. Those with risk factors but no NCD: This group will benefit from guidance to modify the risk factors to lower risk for NCD and early warning signals.
4. Health persons without risk factors: This group will benefit from encouragement to lead a healthy lifestyle with awareness on risk factors and ways of avoiding them.

The interventions are best carried out by a multi-disciplinary team working both in the community and in the health clinic.

[24]Frieden TR. A framework for public health action. The Health Impact Pyramid. Am J Public Health. 2010 April; 100(4): 590–595.

Slide 10

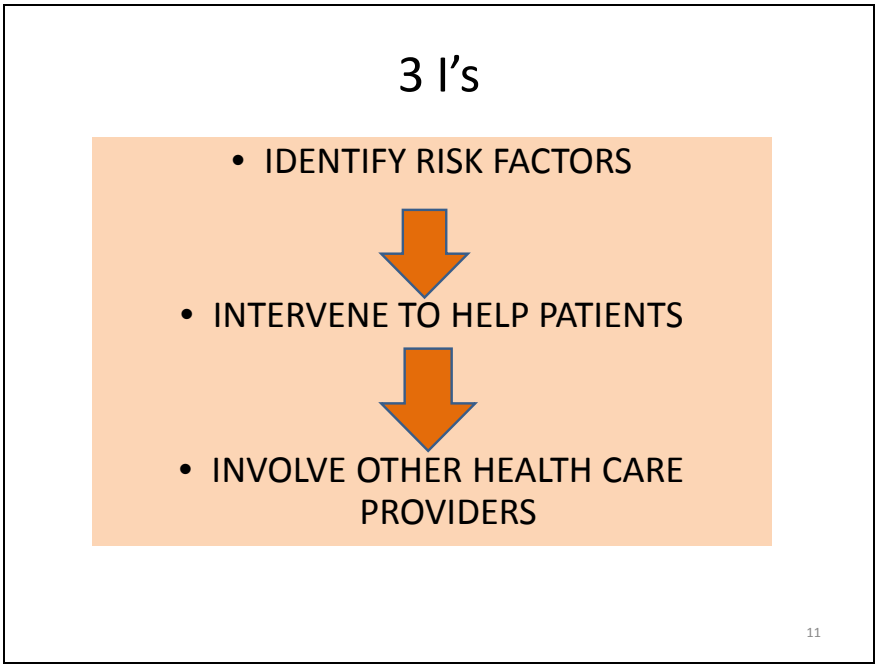


Addressing risk factors is a component of the National Programme for Prevention and Control of Cancers, Diabetes, Cardiovascular Diseases and Stroke (NPCDCS): According to the Operational Guidelines (NPCDCS), services in primary care include health promotion, psycho -social counseling and simple steps to manage the health problem[25]. Health education includes promoting a healthy diet and physical activity, weight reduction, early diagnosis and screening. These services would become a part of existing primary health care and referrals to district hospitals and above would be needed for more specialized health care for NCDs. The NPCDCS operational guidelines have been modified in 2013[26] (annexure 5) and circulated to all states.

[25]Ministry of Health and Family Welfare, Government of India. Operational Guidelines, NPCDCDS. (2010-12). http:// *health.bih.nic.in/Docs//**Guidelines-NPCDC**S.pdf*

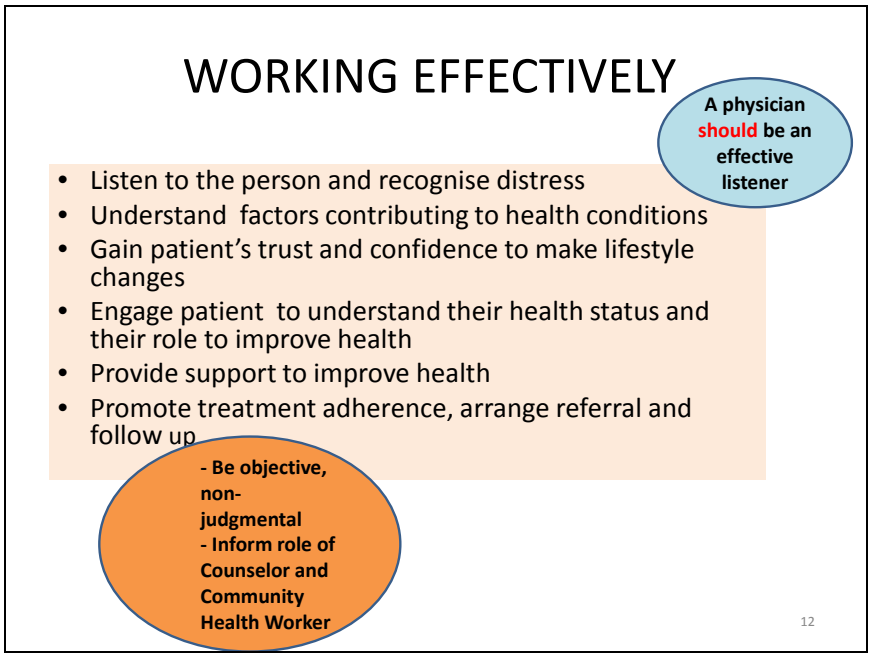
[26] Ministry of Health and Family Welfare, Government of India. NPCDCS Operational Guidelines Revised 2013-2017. DGHS, MOHFW 2013

Slide 11



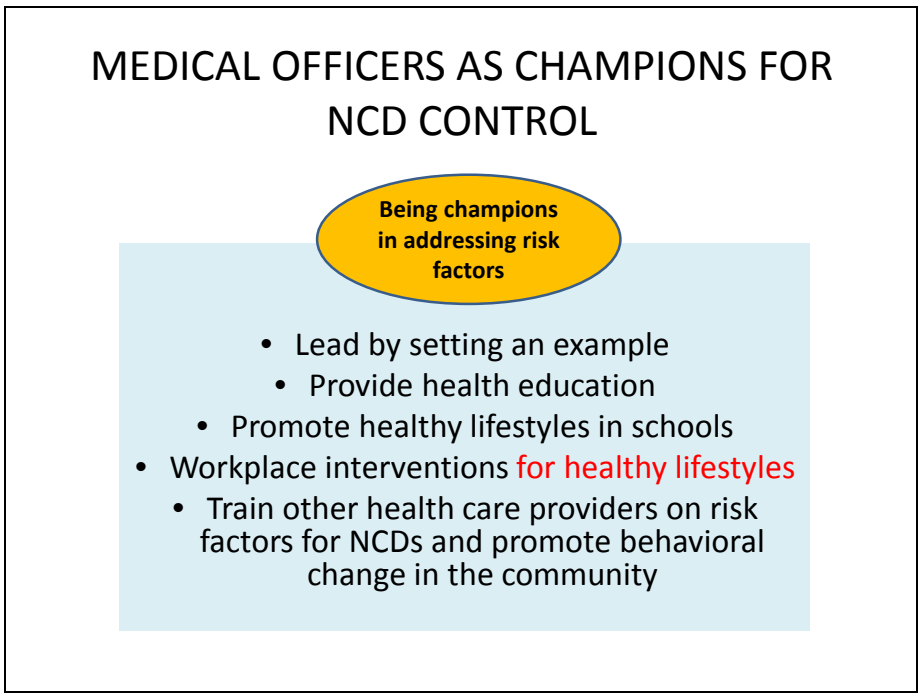
THE 3 I's: The aim of the 3 day training is to discuss the how the Medical Officers will *identify* risk factors in patients (with help of nurse for screening), *intervene* and *involve* other health care providers (link Counselor for behaviour change and Community Health Worker for follow up via home visits). Severe cases will be referred to specialists and the District Hospital for further management but can be counselled regarding the importance of reducing risk factors prior to referral and at follow-up.

Slide 12



As part of general medical practice, physicians come across patients with bodily complaints and excessive health concerns. In such a scenario, Medical Officers may be generally uncomfortable in taking up the role of a counselor and providing a comfortable environment to talk about their 'real - life stresses (this is often attributed to lack or inadequate training to recognize emotional needs of patients or to lack of time)[27]. A few minutes of advice from a physician can result in significant behaviour change. Developing the ability to listen and give complete attention can greatly enhance the trust and confidence between the patient and doctor. This is often important in improving the patient's motivation and efforts to make lifestyle changes. It can help the patient to recognise how emotional distress can affect health, how he/she can play an important role in improving his/her own health, both by treatment adherence and addressing risk factors. Being objective, non - judgemental and linking the patient to other health care providers is part of the process.

Slide 13



Medical Officers can lead by setting an example and become champions in addressing risk factors and NCDs in primary care in the community. They can influence the public and be change-makers in society in a number of ways viz. public talks, communication through audio-visual media, messages on social networks, participation in school and workplace programmes on health and wellness and by being advocates of healthy lifestyle by themselves adopting these practices.

[27]Murthy S, Isaac MK, Chandrashekar CR, Kishore Kumar KV. Mental Health Care by Primary Care Doctors. National Institute of Mental Health and Social Sciences, Shree 2005:Bangalore.

INSTRUCTION

At the end of the session, end with this video clip, which is an awareness video encouraging persons to get tested for diabetes and hypertension. Have a brief discussion on how similar awareness needs to be brought in to address risk factors.

Raise awareness on NCDs, but also raise awareness on their prevention

Awareness on NCD.mp4 (Right click on link and open hyperlink)

14

Tobacco use as a risk factor for NCDs

Session 2

Objectives of the session

By the end of this session, the participants will understand the following:

- Health problems associated with tobacco and tobacco as a risk factor for NCDs
- Environmental effects of smoking and other forms of indoor air pollution
- Reasons for tobacco initiation and maintenance
- Laws related to tobacco use
- Identification of tobacco use among patients
- Interventions for tobacco cessation
- Involvement of other care providers in tobacco cessation activities in the clinic and community

Organization of the session

- *Facilitator's reading material:* The facilitator should read the material before the session. Sources for specific information are quoted and included as references in the footnotes.

- *Handouts:* Copies of handouts will be made before the session and distributed either before or after the session. List of handouts are included at the end of each session.

- *Power point presentation:* A DVD containing the power point presentations accompanies the training manual. The slides for each session are reproduced in the manual to aid the facilitators.

- ***Activities****:*

  Activities during the training session may include:

  - **Brainstorming** or whole group interaction, indicated by the letter '**B**' and the symbol 
  - **Group activity** or discussion in small groups, indicated by the letter **GA** and the symbol 
  - **Individual Activity**, indicated by letter **IA** the symbol 
  - **Role Play** is indicated by the letter **RP** and symbol 

INTRODUCTION

India faces the burden of both smoking and smokeless forms of tobacco. According to the Global Adult Tobacco Survey (2010)[28], 47% of men and 20% of women use tobacco in either smoking or smokeless forms. Tobacco causes a variety of diseases including cancer, cardiovascular disease and respiratory diseases. It kills more than AIDS, legal and illegal drugs, road accidents, murder and suicide put together[29]. One in ten adult deaths globally are attributed to tobacco use. Of the global deaths due to ischaemic heart disease, 11% are attributed to tobacco use. More than 70% of deaths from lung, trachea and bronchus cancers are attributable to tobacco use[30].

Poor awareness: Unfortunately, most people are unaware about the dangers of tobacco use and cannot name specific diseases caused by tobacco use other than cancer. People may generally know that tobacco use is harmful, and view it as a bad habit, but believe they can reduce or stop tobacco use well in time before health problems occur. Dangers about tobacco use have not been adequately explained. Even among those who are aware, most tobacco users will be unable to quit by themselves and up to half of them will die from tobacco-related illnesses. In India, smokeless tobacco use is widely accepted among both men and women[31].

[28] Global Adult Tobacco Survey (GATS) Fact Sheet India: 2009-2010. http://*nccd.cdc.gov/gtssdata/Ancillary/DownloadAttachment.aspx?ID=964*

[29]Centers for Disease Control and Prevention. Annual smoking-attributable mortality, years of potential life lost and productivity losses- United States, 1997-2001. http://cdc.gov/mmwrhtml/mm5114a2.html

[30] World Health Organization. Tobacco Free Initiative. http://who.int/tobacco/health_priority/en/

[31] World Health Organization. Tobacco Cessation: A Manual for Nurses, Health Workers and other Health Professionals 2010. Murthy P, Nattala P, Salkar S (eds) ISBN 978-92-9022-379-5 (NLM classification: WM 290)

The Non-Communicable Disease Risk Factors Survey, Phase-I States of India, 2007-08 in seven states of India studied tobacco as a risk factor found that increasing pattern of prevalence was seen with increasing age of people and a declining pattern of prevalence with increasing level of education. Prevalence of tobacco use among the occupation of agriculture and manual workers was high compared with others.

Tobacco use and health problems[32]*:*

There are many diseases including NCDs associated with tobacco use. Tobacco causes harm independent of other risk factors. Tobacco use is directly related to many NCDs. Tobacco use also occurs with other risk factors such as alcohol, stress (tobacco used to cope), poor diet practices and inadequate physical activity.

- Heart and circulatory system: hypertension, peripheral vascular disease, myocardial infarction, strokes and peripheral arterial disease. Smokers have a two-to three fold greater risk of suffering sudden cardiac death than non-smokers, the risk increasing with increased exposure to cigarette smoke.
- Increased CVDs along with raised body lipids (cholesterol and triglycerides), obesity, physical inactivity, poor nutrition and excessive alcohol consumption. Diabetes can also increase the risk of CVDs.
- Oro-pharynx/larynx: inflammation, ulcers, pre cancerous conditions and cancers, including cancers of pancreas, kidney, urinary bladder. Active smoking is responsible for a majority of lung cancer-related deaths aged over 35. Smokers are ten times more likely to die from lung cancer than non-smokers, and heavy smokers are 15 to 25 times more at risk than non-smokers. Duration and intensity of smoking can influence the risk of developing lung cancer and heavy smokers have upto 20 times the risk of developing laryngeal cancers compared with non-smokers.
- *Bidi* smokers have a two-fold higher risk of developing oral cancer and five times higher risk of developing cancer of the base of the tongue and oropharynx than non-smokers.
- Strokes: Smokers are at two to four times the risk of having a stroke than non-smokers and those with hypertension are at a much higher risk for haemorrhagic stroke.
- Respiratory system: cancer, tuberculosis, asthma, COPD, interstitial lung disease
- Sexual and reproductive system: erectile dysfunction (men), impaired menstrual cycle, early menopause (women), reduced fertility, cancers
- Immune system: reduced immune response, increased infection
- Bones: brittle bones, osteoporosis
- Skin, eye and ear diseases: psoriasis, cataract, macular degeneration, ear infections
- Smokers report higher levels of tiredness or fatigue, reduced well-being and satisfaction with life and have increased incidence of psychological symptoms such as depressed mood and anxiety

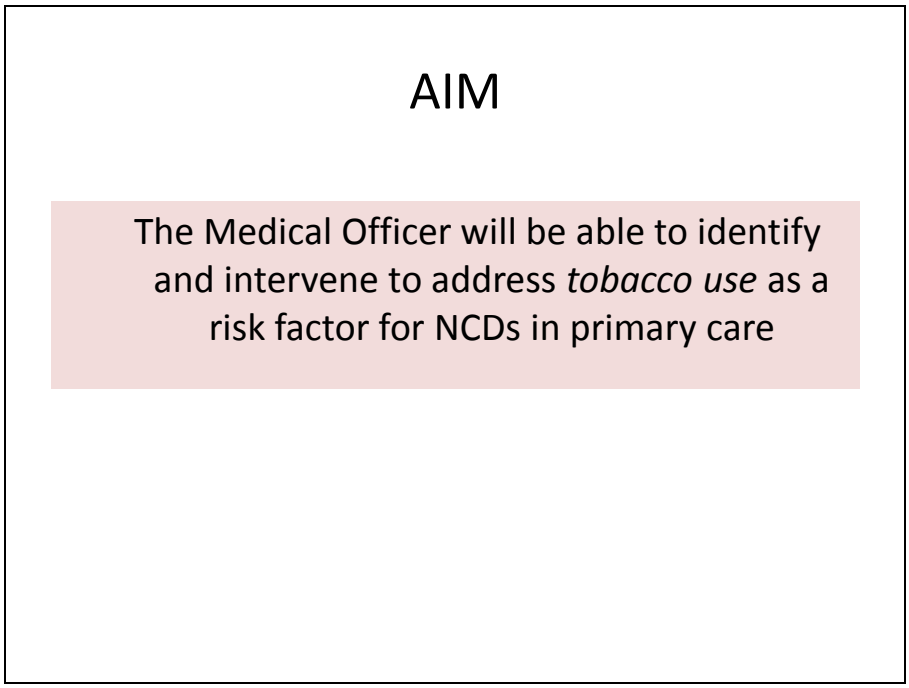
[32] World Health Organization. Helping People Quit Tobacco: A Manual for Doctors and Dentists. World Health Organization, Regional Office for South-East Asia 2010. Murthy P, Mohan M, Hiremath S (eds) ISBN 978-92-9022-380-1 (NLM classification: WM 290)

- Smokeless tobacco also causes many of the tobacco-related diseases that smoking causes.
- In South Asia, 90% of patients with oral cancers are tobacco chewers and the risk is higher among those who use both tobacco and alcohol

This session on tobacco use will help the Medical Officers to understand the linkages of tobacco to other risk factors and non-communicable diseases. The objectives are to identify tobacco use as a risk factor, intervene to help tobacco users to stop tobacco use and involve of other health care providers in preventing tobacco use and providing support for cessation.

Total duration: 2hours 45 minutes approximately

Slide 2



Slide 3

LEARNING OBJECTIVES

A. IDENTIFY tobacco use as a risk factor for NCDs (Ask and Assess)
B. INTERVENE to provide support for tobacco cessation (Advise and Assist)
C. INVOLVE other health care providers in the prevention of tobacco use and support for cessation (Arrange)

3 I's

INSTRUCTION

Play a small video clip to highlight the harm caused by tobacco.

Slide 4

LEARNING OBJECTIVE

A. IDENTIFY tobacco use as a risk factor for NCDs (Ask and Assess)

Play video clip

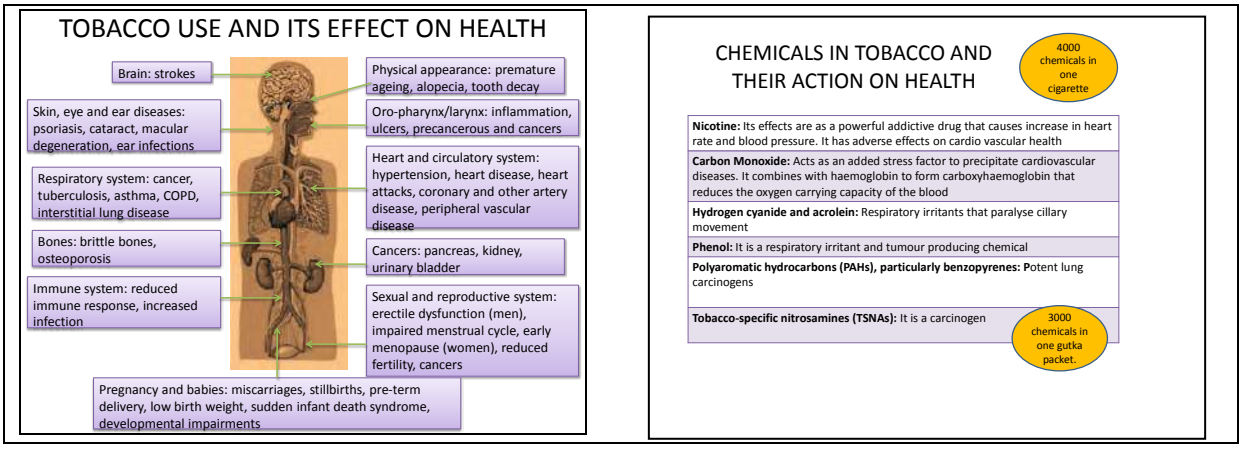
Tobacco Terror Eng.mpg
(Right click and open hyperlink)

INSTRUCTION

Discuss using brainstorming, about tobacco use as a risk factor and its effect on health and NCDs and the importance of asking about tobacco use to patients coming to the Health Centre. Diagrams and flowcharts can be used to illustrate the linkages.

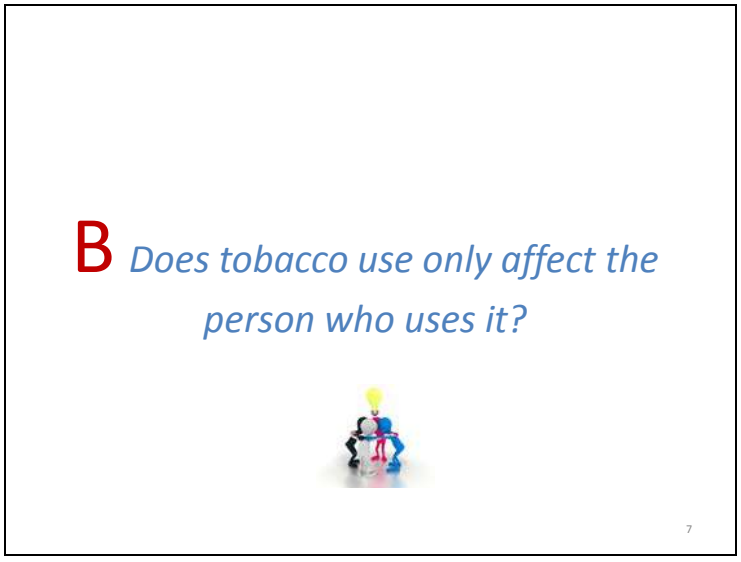
Slide 5 & 6

WHY IT IS IMPORTANT TO IDENTIFY TOBACCO USE?



There are 4000 chemicals in one cigarette and 3000 chemicals in one gutka packet[33]. The Medical Officer can use this information when giving advice to patients on the harmful use of tobacco on health.

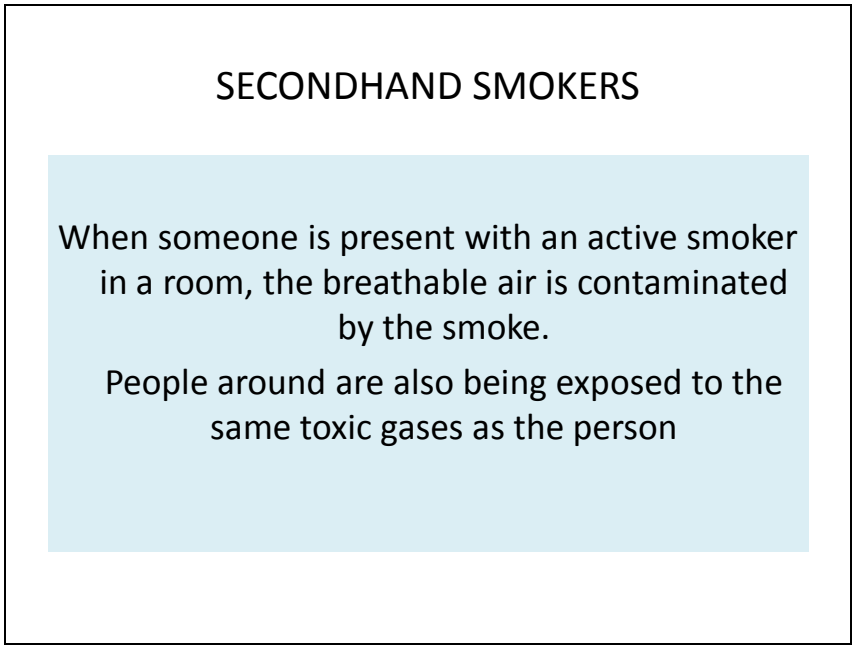
Slide 7



Generate discussion and write the points on the board.

[33]National Cancer Institute. Second hand smoke: questions and answers 2010, http://cancer.gov/images/Documents/3770da1d-1c3a-4a1c-905f-944140049158/Fs10_18.pdf

Slide 8



Second Hand Smoke

When someone is present with an active smoker in a room, the breathable air is contaminated by the smoke. That means people around are also being exposed to the same toxic gases as the person. A 'passive smoker' is therefore at risk to develop cancers, heart and lung diseases as the active smokers. Second hand smoke is a complex mix of thousands of chemicals. At least 50 substances in second hand smoke have been shown to cause cancer that can enter the body through the lungs before being absorbed into the blood stream.

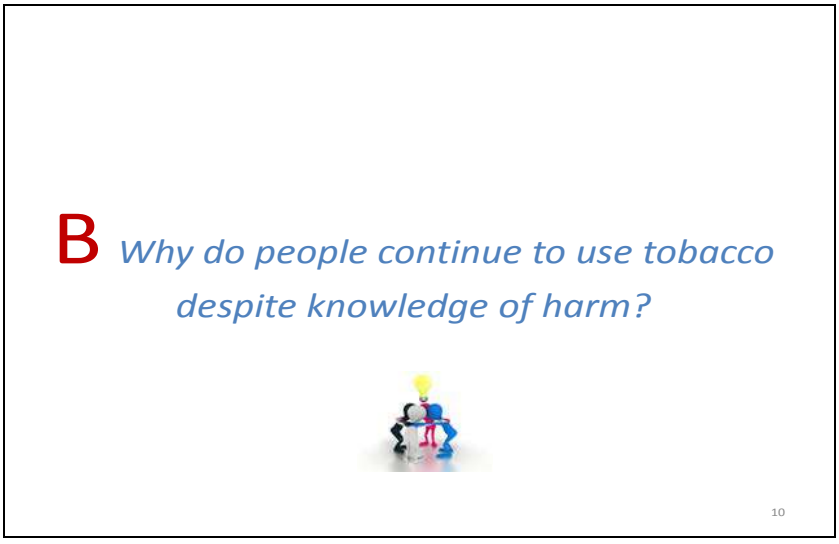
Slide 9

Other environmental pollutants

In additional to tobacco smoke, persons living in the household may be exposed to multiple other environmental pollutants that have serious health consequences. One major source of indoor air pollution in India is smoke from the use of solid fuels (wood, coal, charcoal, dung, crop wastes). Women and young children are often the first victims of indoor smoke-related acute and chronic respiratory and cardiovascular illnesses. Other consequences that have been described are peri-natal adverse outcomes like still-birth and low birth weight[34], cancers of the nasopharynx, larynx, lung and leukaemias[35]. According to WHO estimates, in 2012, 4.3 million people die prematurely each year across the world due to household air pollution[36].

The incompletely burned combustion products of biomass fuels include suspended particulate matter, carbon monoxide, polyaromatic hydrocarbons, polyorganic matter, formaldehyde, etc., which have adverse effects on health. The combustion of coal results in production of oxides of sulfur, arsenic, and fluorine. Pollutants such as aldehydes, volatile, and semivolatile organic compounds are produced from resins, waxes, polishing materials, cosmetics, and binders. Biological pollutants like dust mites, moulds, pollen, and infectious agents produced in stagnant water, mattresses, carpets, and humidifiers also pollute indoor air.[37] Indoor air pollution may also have an impact on outcome of tuberculosis, cataract, asthma, cardiovascular health, and cancers.

Slide 10



Generate discussion and write the points on the board.

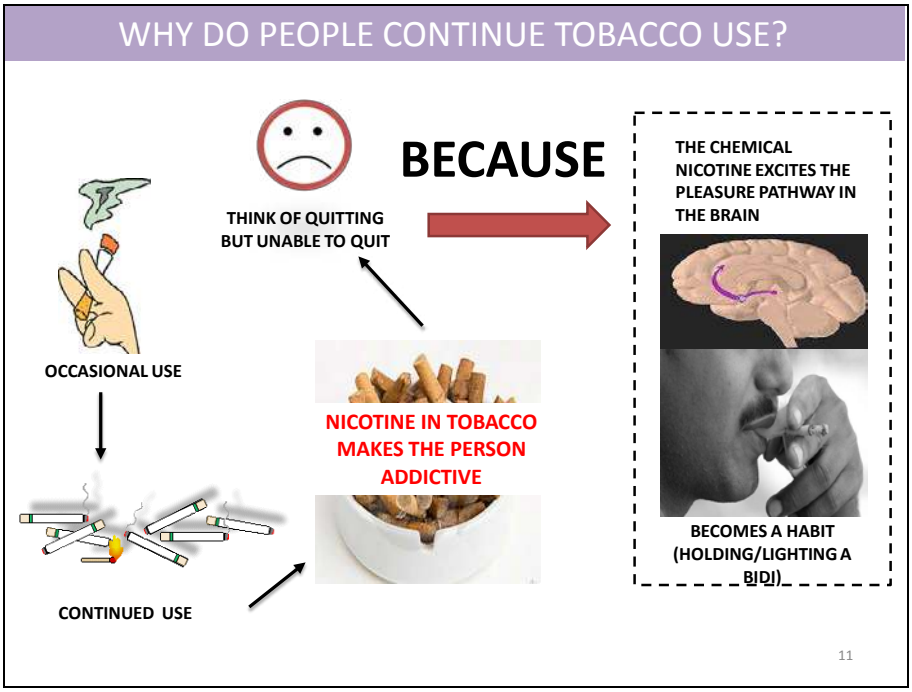
[34] Bassani DG, Jha P, Dhingra N, Kumar R. Child mortality from solid-fuel use in India: A nationally-representative case-control study. BMC Public Health. 2010; 10:491.

[35] Kankaria A, Nongkynrih B, Gupta SK. Indoor Air Pollution in India: Implications on Health and its Control. Indian J Community Med. 2014 Oct-Dec; 39(4): 203–207.

[36] World Health Organization. Household (Indoor) air pollution. http://who.int/indoorair/en/

[37] Zhang J, Smith KR. Indoor air pollution: A global health concern. Br Med Bull.2003; 68:209–25.

Slide 11



How does tobacco cause addiction?

- Once inside the brain, nicotine, like most addictive drugs, triggers the release of chemicals associated with euphoria and pleasure.
- Like other substances finally there is release of dopamine at the pleasure centre and continued use causes dependence.
- In addition to chemical effects, experience of holding and lighting a cigarette or bidi, associating a smoke with coffee, alcohol or food, can maintain the habit.

According to Global Adult Tobacco Survey, about 46% of current smokers and 45% of users of smokeless tobacco planned to quit or thought about quitting. Less than half (46%) of smokers and just about one-quarter (27%) of users of smokeless tobacco were advised to quit by a health care provider.[38] Very few smokeless tobacco users quit by themselves. Only 1% of daily smokeless tobacco users have quit on their own, making the quit ratio 5%, even lower than the 2% spontaneous quit rates among smokers (quit ratio 13%).

[38] Global Adult Tobacco Survey (GATS), India Fact sheet (2009-2010) http://mohfw.nic.in/WriteReadData/l892s/1455618937GATS%20India.pdf

Slide 12

COTPA

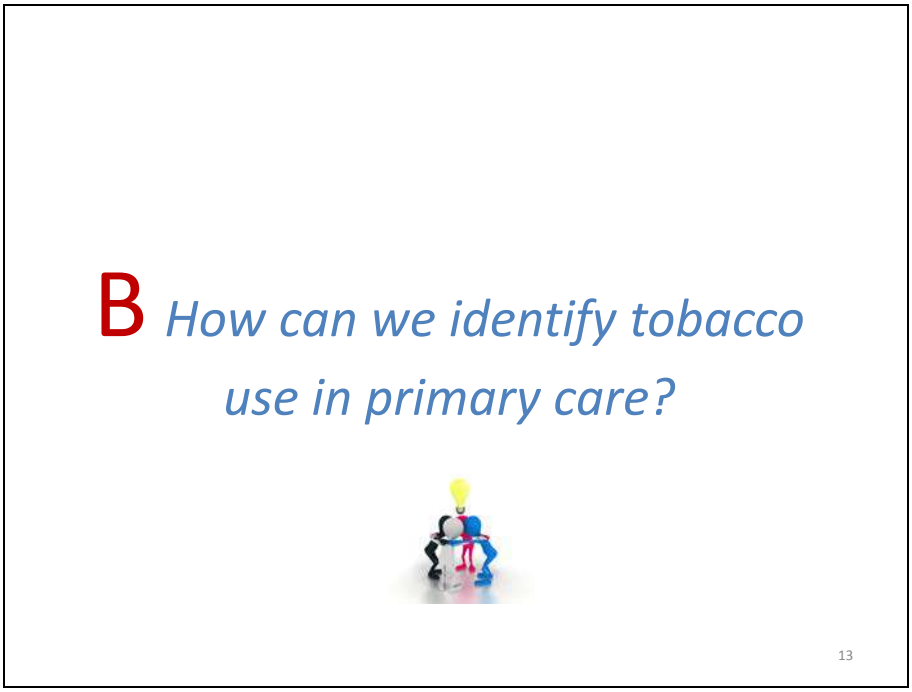
The law in our country bans smoking in public places.

In order to protect the public from the adverse and harmful effects of tobacco use and second hand smoke (SHS) and to discourage the consumption of tobacco, the Government of India enacted the Tobacco Control law titled "Cigarettes and other Tobacco Products (Prohibition of Advertisement and Regulation of Trade and Commerce, Production, Supply and Distribution) Act, (COTPA) 2003".[39] According to COTPA:

- No one is allowed to smoke in public places
- Tobacco products should not be advertised
- Tobacco products should not be sold near educational institutions
- Tobacco packets should carry warnings about the risks of using tobacco

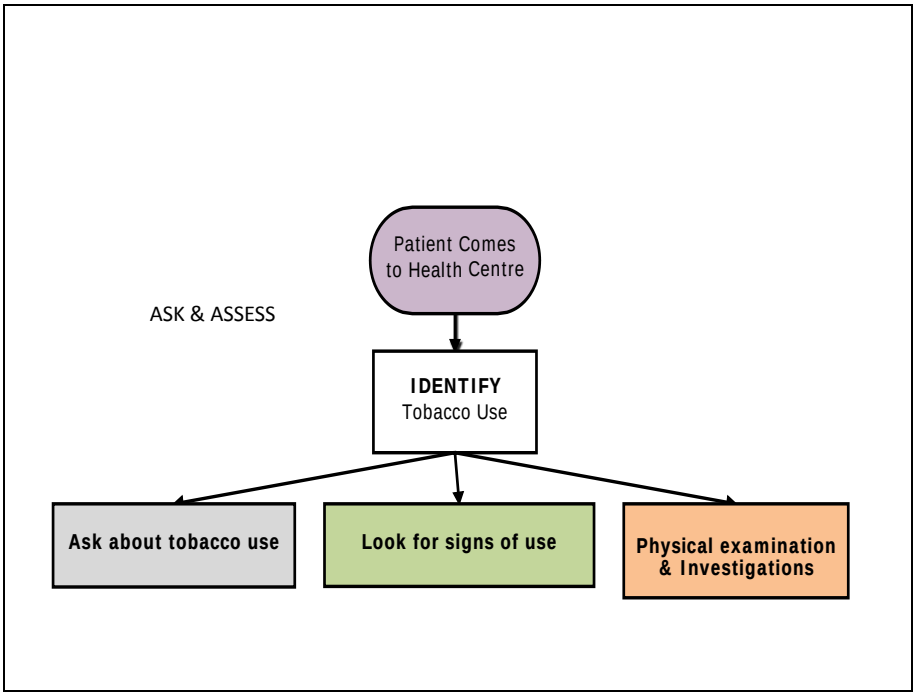
[39] State Anti Tobacco Cell, Karnataka. COTPA 2003. http:// satckarnataka.in/cotpa.html

Slide 13

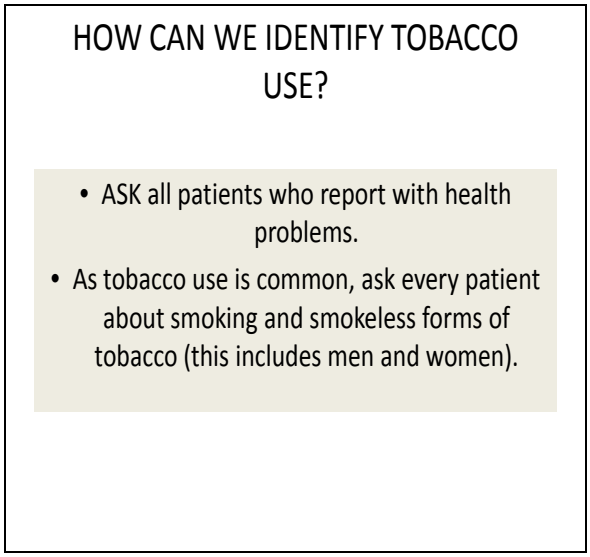


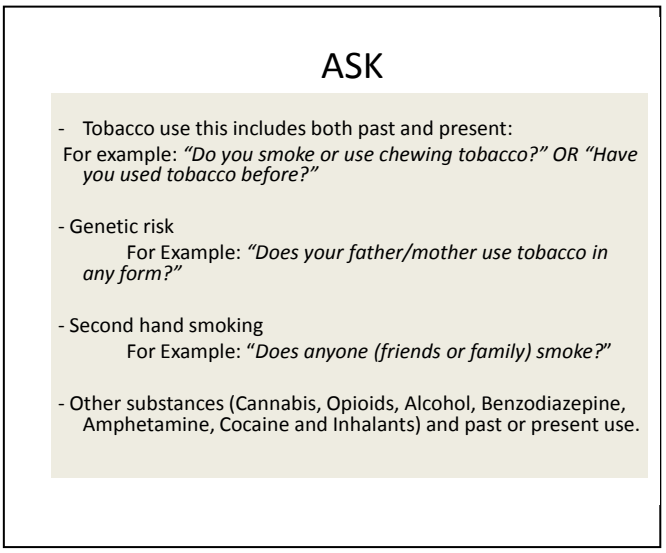
Generate discussion and write them on the board.

Slide 14



Slide 15 and 16





Tobacco use may be hidden and patients rarely spontaneously report use. Therefore, the Medical Officer should ask about tobacco use to all patients who report with health problems. As tobacco use is common, ask every patient about smoking and smokeless forms of tobacco as well as exposure to tobacco smoke (this includes men, women and children for exposure to environmental smoke).

WHAT TO ASK?

- Ask about tobacco use, present and past
- Asking about past quit attempts is helpful in knowing what helps the patient quit and what does not
- Asking about a family history is often helpful to make the patient understand that he or she may have a biological predisposition to addiction and also explain how tobacco addiction is a disease that can run in families much like other NCDs.
- Asking about second hand smoking is useful to understand whether the person is exposed to tobacco smoke at home or at work.
- It is well known that tobacco users may also use alcohol as well as other drugs. Each of these are risk factors for both communicable and non-communicable diseases. When they occur together, they can worsen and complicate many diseases.

Slide 17

LOOK FOR SIGNS OF USE

WITHDRAWAL SYMPTOMS (COMBINATION OF PHYSIOLOGICAL AND PSYCHOLOGICAL PROBLEMS):

Irritability
Fatigue
Insomnia
Cough
Nasal Drip
Dizziness
Lack of Concentration
Constipation
Headaches
Hunger
Craving for tobacco

- Stained gums, teeth, fingers
- Odour

Slide 18

PHYSICAL EXAMINATION AND INVESTIGATIONS

Oral examination

Urinary and Salivary cotinine can be useful in monitoring recent use

Cardiac examination

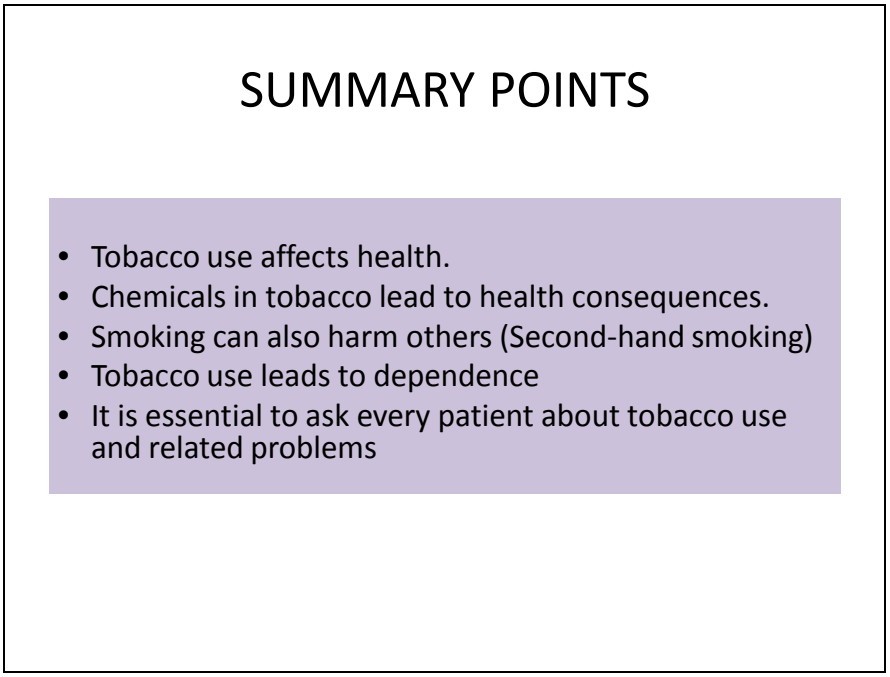
*CO estimation test is used to test the level of Carbon monoxide in the body

Interpretation:
0-6 ppm = Normal
7 to 10 ppm = Risky
10 and more ppm = Danger

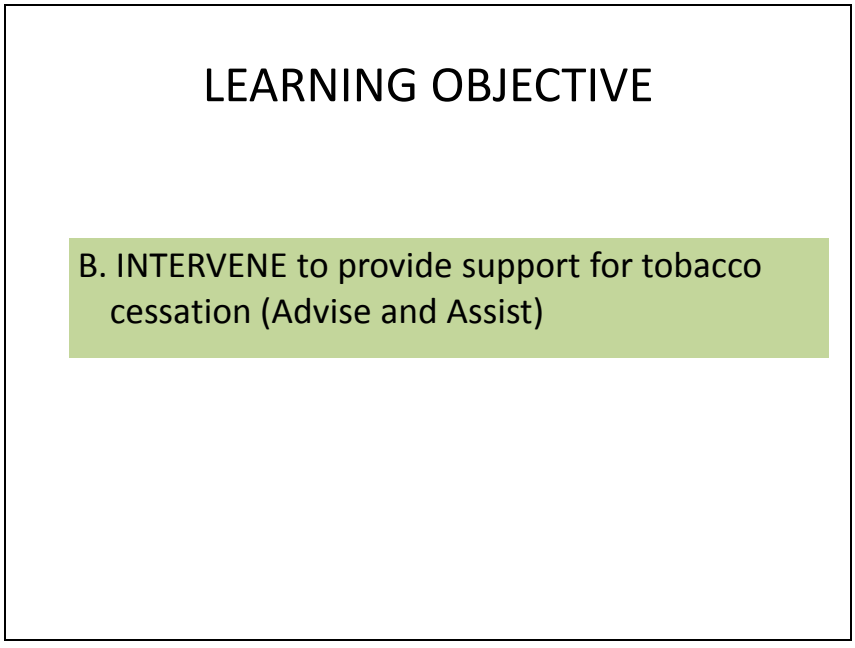
Respiratory examination (*CO estimation and Pulmonary Function Tests can be useful)

Carbon monoxide in the breath can help to provide feedback to the patient on the risks from smoking and also monitor a reduction in smoking at follow-up. This can be done through a carbon monoxide measuring instrument which is not very expensive and can be used in primary care. Investigations like pulmonary function tests may be available only in specialized centres.

Slide 19



Slide 20



INSTRUCTION

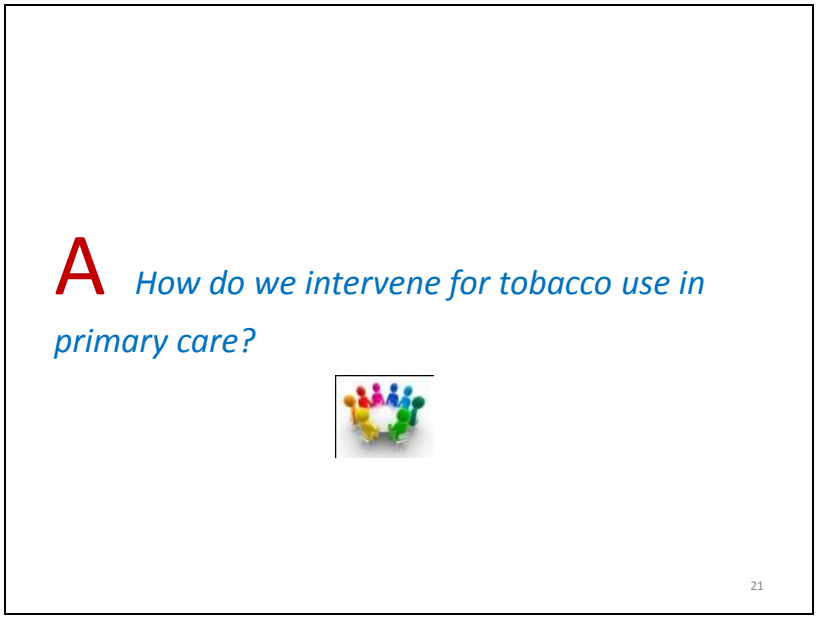
Discuss using brainstorming, steps to manage tobacco use as a risk factor seen in patients at the Health Centre. There will be patients who are non-users, past users and those who are presently using tobacco. Flow charts have been used to illustrate the steps for care.

ACTIVITY (GROUP WORK)

Duration: 30 minutes

Divide participants into small groups. The groups will discuss how we intervene for tobacco use in primary care. Provide chart paper and pens to make presentations (15 minutes). Each group can nominate a representative to make the presentation. Generate discussion during the presentation.

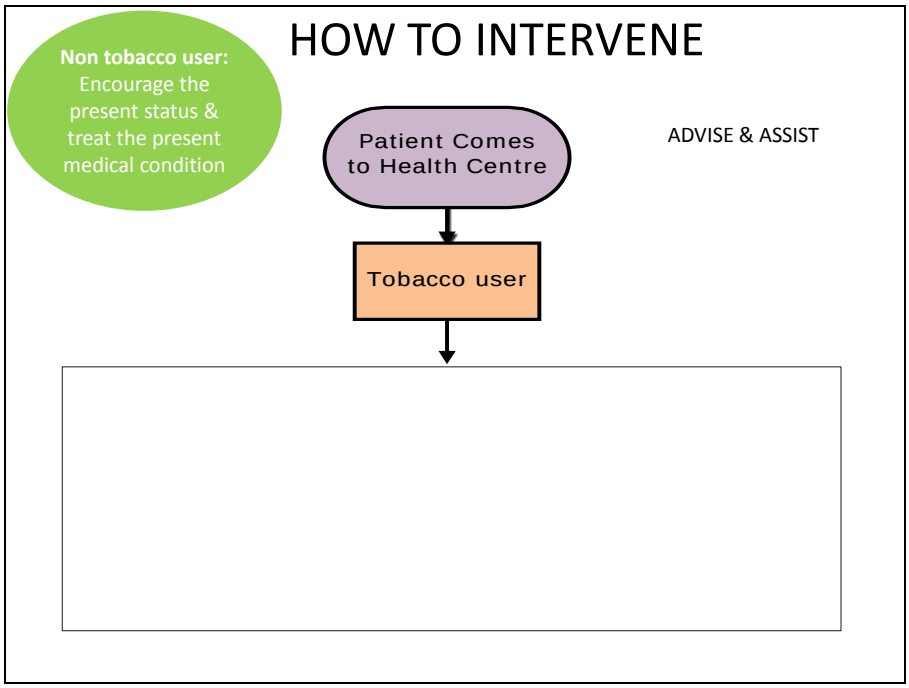
Slide 21



There is evidence about how patients take notice of the Medical Officer's advice about tobacco and other drugs including alcohol and its impact on health. Smoking related counselling intervention provided by physicians is well received by patients and associated with higher 6 month cessation rates.[40] Experience from India has shown that counselling improves cessation rates in clinical and community settings [41,42].

[40] Ockene JK, Kristeller J, Goldberg R. Increasing the efficacy of physician-delivered smoking interventions. Journal of General Internal Medicine January, February 1991, Volume 6, Issue 1, pp 1-8.
[41] Murthy P, Sadichcha S. Tobacco cessation services in India: recent developments and the need for expansion. Ind J Cancer 2010; 47 (5): 69-74.
[42] Santosh Kumar K, Sarma PS, Thankappan KR. Community-based group intervention for tobacco cessation in rural Tamil Nadu, India: a cluster randomised trial. Journal of Substance Abuse Treatment 2012; 43:53-60.

Slide 22



Slide 23

WHAT ARE THE COMMON PROBLEMS DURING ABSTINENCE AND HOW TO INTERVENE?

Lack of support for cessation

Give follow up dates, keep telephonic contact and identify support (family, friends)

Negative mood or depression

Involve counselor, prescribe medication and refer to specialist

Prolonged withdrawal symptoms

Use an approved pharmacotherapy or adding/ combining counseling and medication to reduce strong withdrawals

Weight gain

Suggest physical activity and exercise, healthy diet, and say that weight gain is normal and to watch it.

Feels deprived/ drop in motivation

Reassure the user that such feelings are common. Praise and encourage patient's efforts to quit.

Slide 24

PHARMACOTHERAPY

- There are many pharmacological agents which support process of quitting and act on the brain to reduce craving and withdrawal symptoms
- Medication can be of 2 kinds:
  1. Nicotine replacement therapy (NRT)
  2. Non nicotine replacement therapy
- NRT – nicotine chewing gums
- Non-NRT – Bupropion, Varenicline, Nortryptiline

Medication is useful for those tobacco users who have tried to quit unsuccessfully on their own in the past. Some people are also unable to tolerate withdrawal symptoms and request additional help from medication.

Pharmacological approaches are mainly of two kinds: nicotine replacement therapy and non-nicotine replacement therapy.

When using nicotine replacement, the patient is advised to substitute the tobacco with NRT straightaway. For non-NRT treatment, the patient is advised to set a quit date 7-10 days after starting the medication. Regular follow-up to maintain the motivation and provide support is extremely important to aid the cessation attempt.

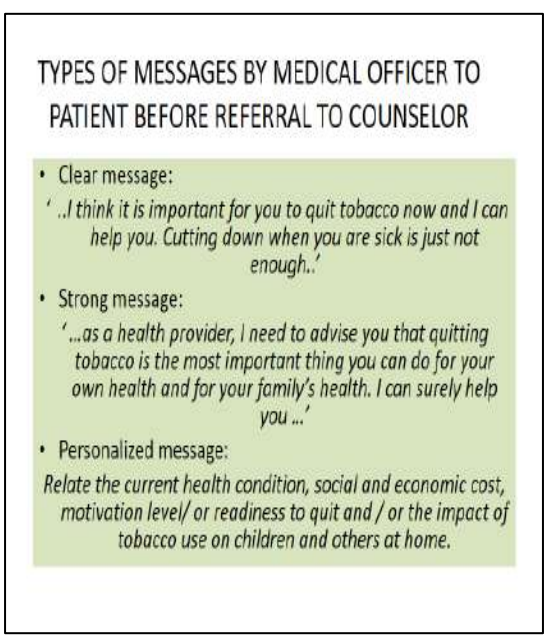
For more information on pharmacotherapy refer to the table below.

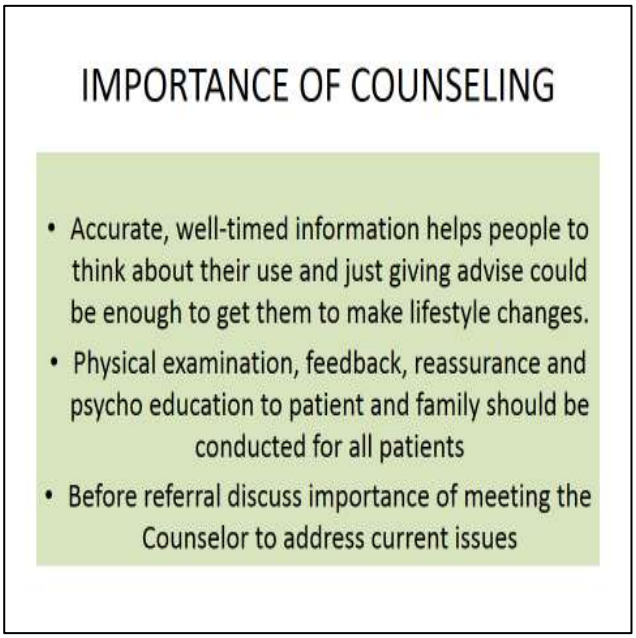
NICOTINE REPLACEMENT THERAPY (NRT)			
	Dosage and duration	Side effects	Contraindications/ Precautions
Nicotine gum	For 1-24 cigarettes/bidis - 2mg gum (upto 24 pieces/day) for 12weeks For ≥25 cigarettes/bidis – 4mg gum (upto 24 pieces/day) for 12 weeks Chewers need about half or a quarter of the dose as prescribed for smokers.	Mouth soreness, burning in the mouth, throat irritation, dyspepsia, nausea, vomiting, hiccups and excess salivation	Gastric ulcers, myocardial infarction or stroke in the past two weeks or poorly controlled cardiovascular disease. If a patient has any serious medical condition, refer to an appropriate specialist.
Nicotine patch	21mg/24 hours for 4 weeks then 15mg/24 hours for 2	Local skin reaction, insomnia	Myocardial infarction or stroke in the past two weeks or poorly

	weeks then 7mg/ 24 hours for 2 weeks.		controlled cardiovascular disease. If a patient has any serious medical condition, refer to an appropriate specialist.
Nicotine inhaler	6-16 cartridges/day for 6 months	Local irritation of mouth and throat	As above
Nicotine nasal spray	1-2 doses/hour for 3 to 6 months	Nasal irritation, irritation of throat, coughing and Watering of eyes.	As above
NON NICOTINE REPLACEMENT THERAPY (NON- NRT)			
Bupropion	150mg OD for 3days followed by 150mg BD for 7 to 12 weeks.	Agitation, restlessness, insomnia, gastrointestinal upset, anorexia, weight loss, headache and lowering of seizure threshold (at doses above 600 mg/day). Rarely allergic reactions can occur, including skin rashes, fever, muscle and joint pain.	History of allergy, tumours of central nervous system, severe liver diseases, undergoing unsupervised withdrawal of alcohol or benzodiazepenes, uncontrolled seizures, pregnant and lactating women, those below 18 years, and persons on monoamine oxidase inhibitors.
Varenicline	Initially 0.5 mg once daily for the first three days, increased to 0.5 mg twice daily for the next four days, and then increased to 1mg twice daily for 12 weeks. The person can quit one week after initiating Varenicline	Agitation, depression, restlessness, insomnia, bad dreams, suicidal ideations, gastrointestinal upset and headaches. Allergic reactions may occur rarely.	Pregnant women, children or people with mental illness. Stop treatment if changes in mood and behaviour, agitation and suicidal ideations occur.
Nortryptiline	75-150 mg daily	Drowsiness, dizziness, dry mouth, blurred vision, constipation, weight gain, or trouble urinating	Allergy, prostatic problems, liver problems, recent MI, thyroid dysfunction, bipolar mood disorder or psychosis, glaucoma, seizure

Combination therapy: This is when pharmacotherapy and behavioural therapy are used and is recommended as the best approach for tobacco cessation.

Slide 25 and 26





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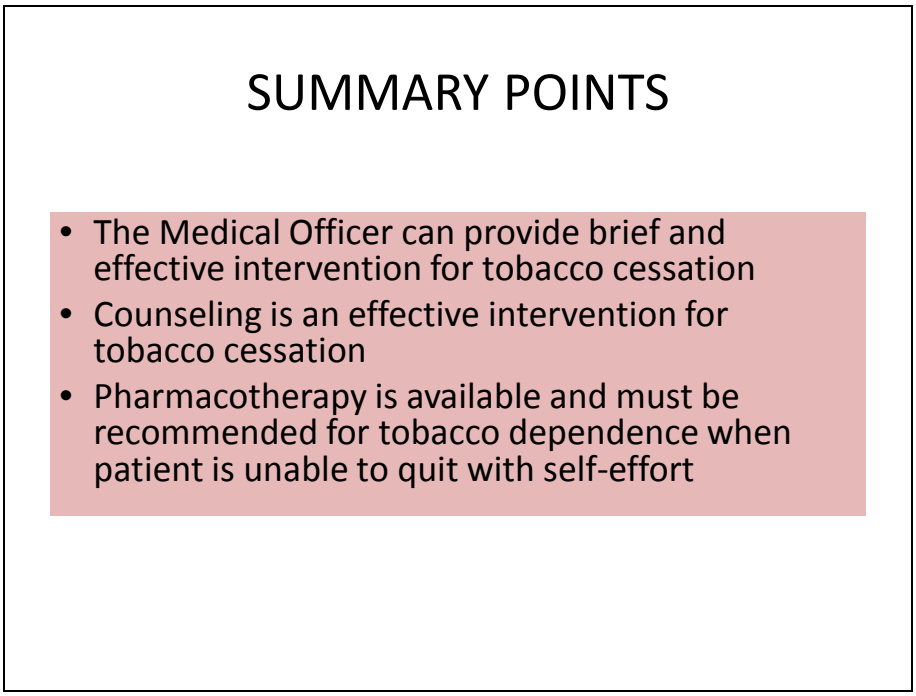

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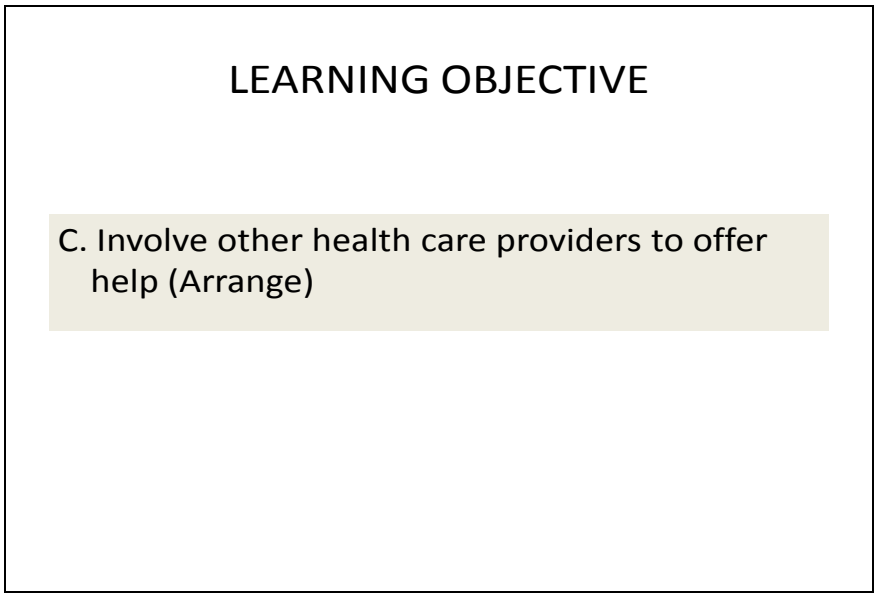
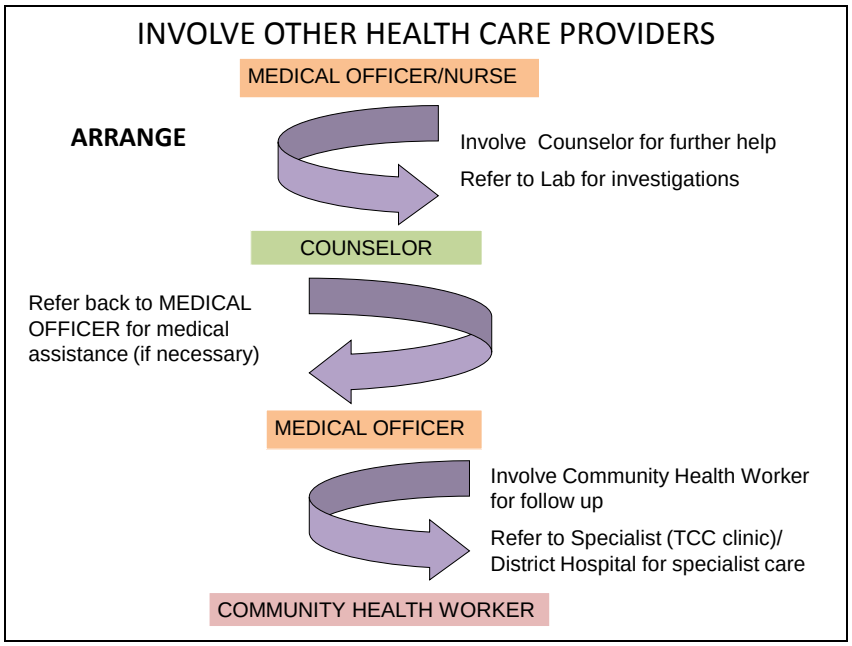


INSTRUCTION

Discuss using brainstorming the steps taken by the Medical Officer to refer the patient to other health care providers at the health centre. Before referring the patient to the Counselor, discuss how the Counselor will help the patient to address current tobacco use and help to make lifestyle changes. The flow chart illustrates how the physician can link the patient to the Counselor for behavioural change and the Community Health Worker for home visits and follow-up.

Slide 29

LINKAGES TO OTHER HEALTH CARE PROVIDERS

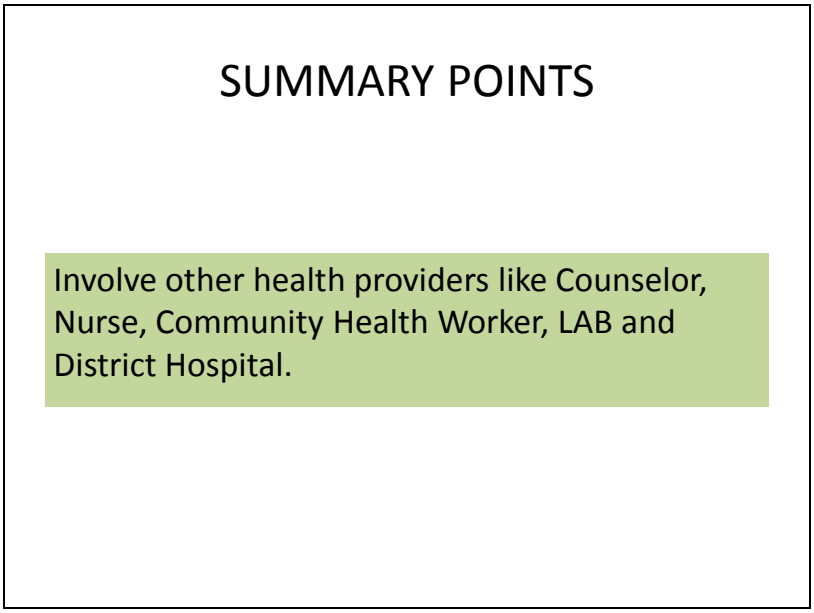


The Medical Officer will link the patient having problems due to tobacco use to the other health care providers at the Health Centre. The patient will be referred to the Counselor who will screen for nicotine dependence (using Fagerstrom Nicotine Dependence Questionnaire) and motivate patient for lifestyle and behavioural change.

Referral will be done to a specialist in the District Hospital when physical and mental health problems are serious e.g. patient has cancer or stroke.

Patients will be given follow - up dates by the Counselor/ and or Medical Officer. When the patient is irregular for follow – up, the Community Health Worker will be asked to make home visits.

Slide 30



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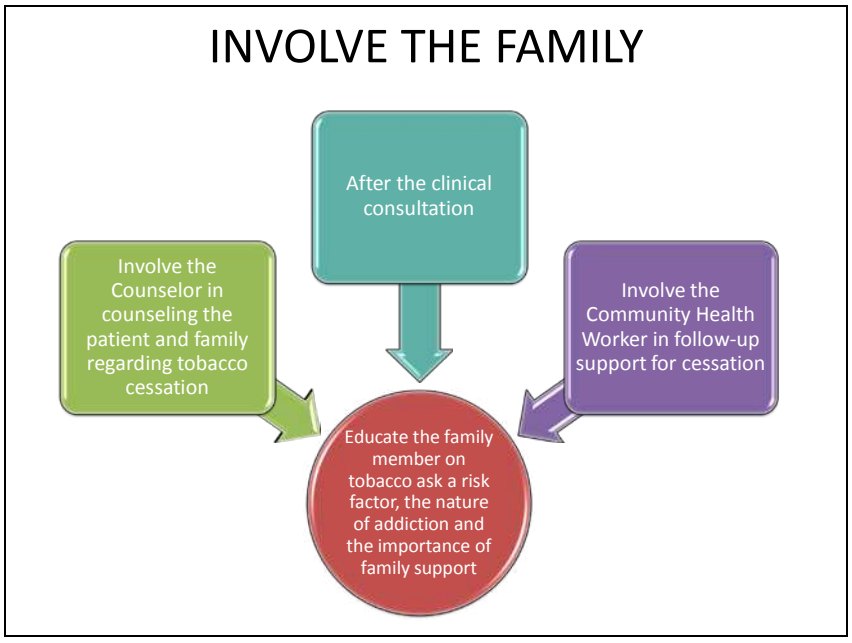
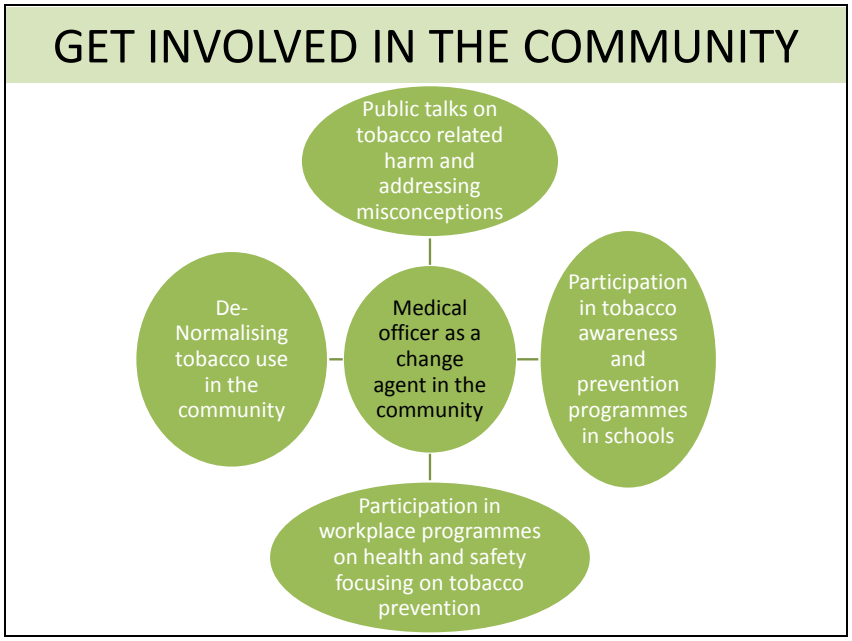


Family members often accompany the patient to the clinic and the Medical Officer can briefly talk to the family either during or after the consultation. Family members share many of the beliefs and misconceptions about tobacco use, including that it is not really harmful. Others who are aware of the harm are often critical of the tobacco user. One common reaction is, “I have told him so often to stop. He simply does not listen. He does it to annoy me’. Explaining about addiction and how to support the person in their quit attempt is useful. The counselor can be very helpful in resolving family stress, which may be contributing to the person’s use of tobacco.

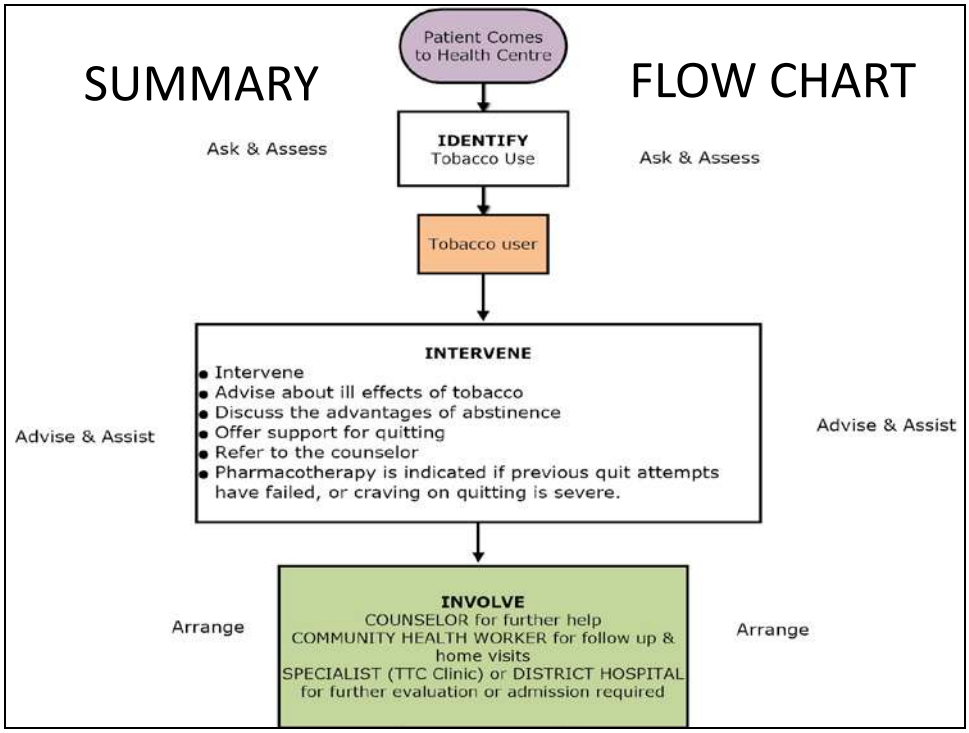
In the absence of a counselor, the nurse may take up the responsibility of educating and involving the family.

Slide 32



We know that tobacco is not only a health problem, it is also a social and economic problem. Tobacco use has become ‘normalised’ in many societies. As a doctor, getting involved in providing awareness in the community on the harm from using tobacco, particularly among youth, can arrest or at least postpone their tobacco use. Doctors can also emphasize the importance of quitting and inform tobacco users where such help is available. Participating in debates and discussions, being informed of governmental laws and policies and influencing them and making health a social agenda are also important actions beyond the clinic.

Slide 33



Slide 34

WRAP UP

B

- *What do you take back at the end of the session?*

WRAP UP the session by getting participants to share about the challenges in the field and facilitate discussion on how can be overcome.

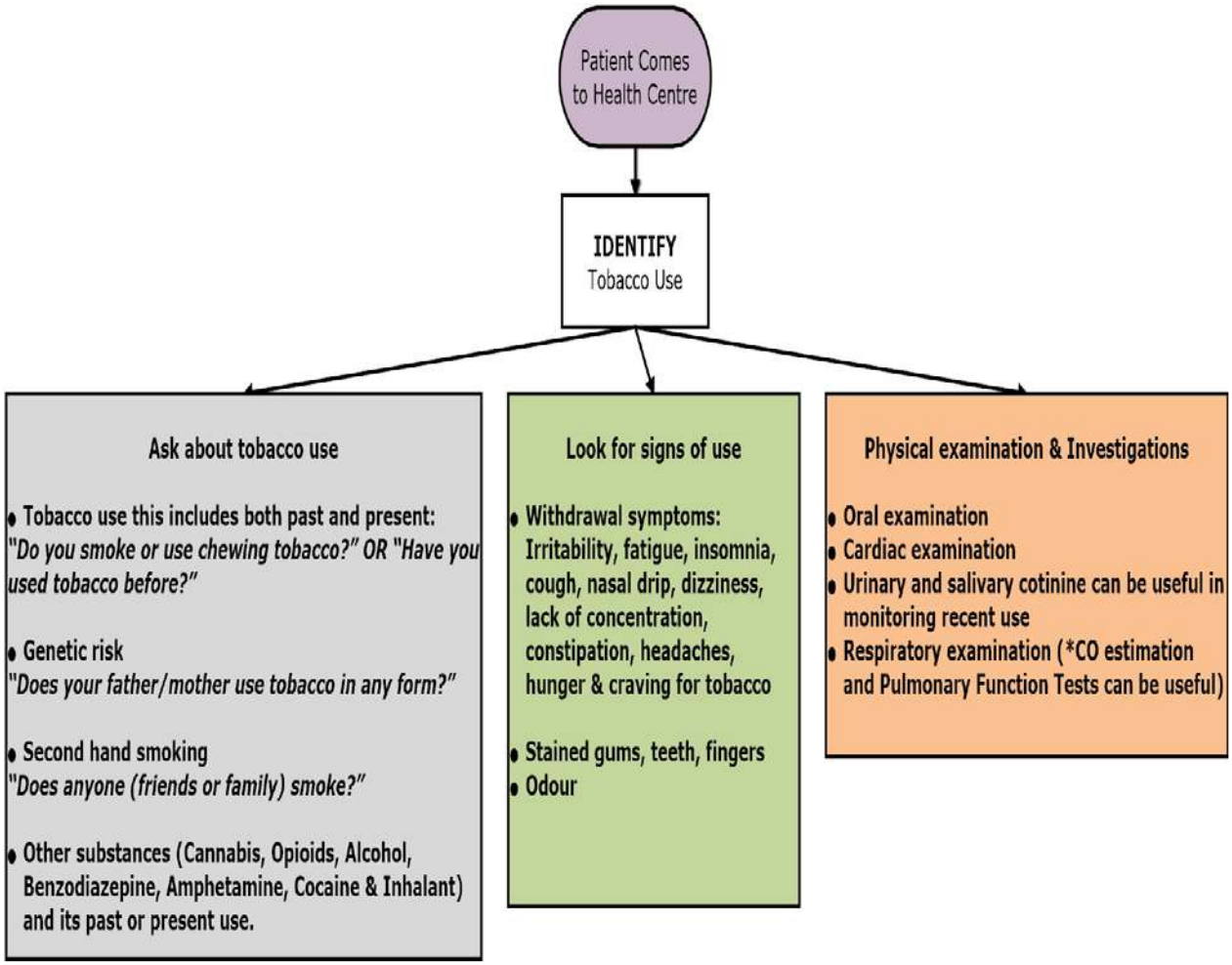
HAND OUTS

3.1 Identify

3.2 Intervene

3.3 Involve

3.1 STEP 1: IDENTIFY



*CO estimation test is used to test the level of Carbon monoxide in the body

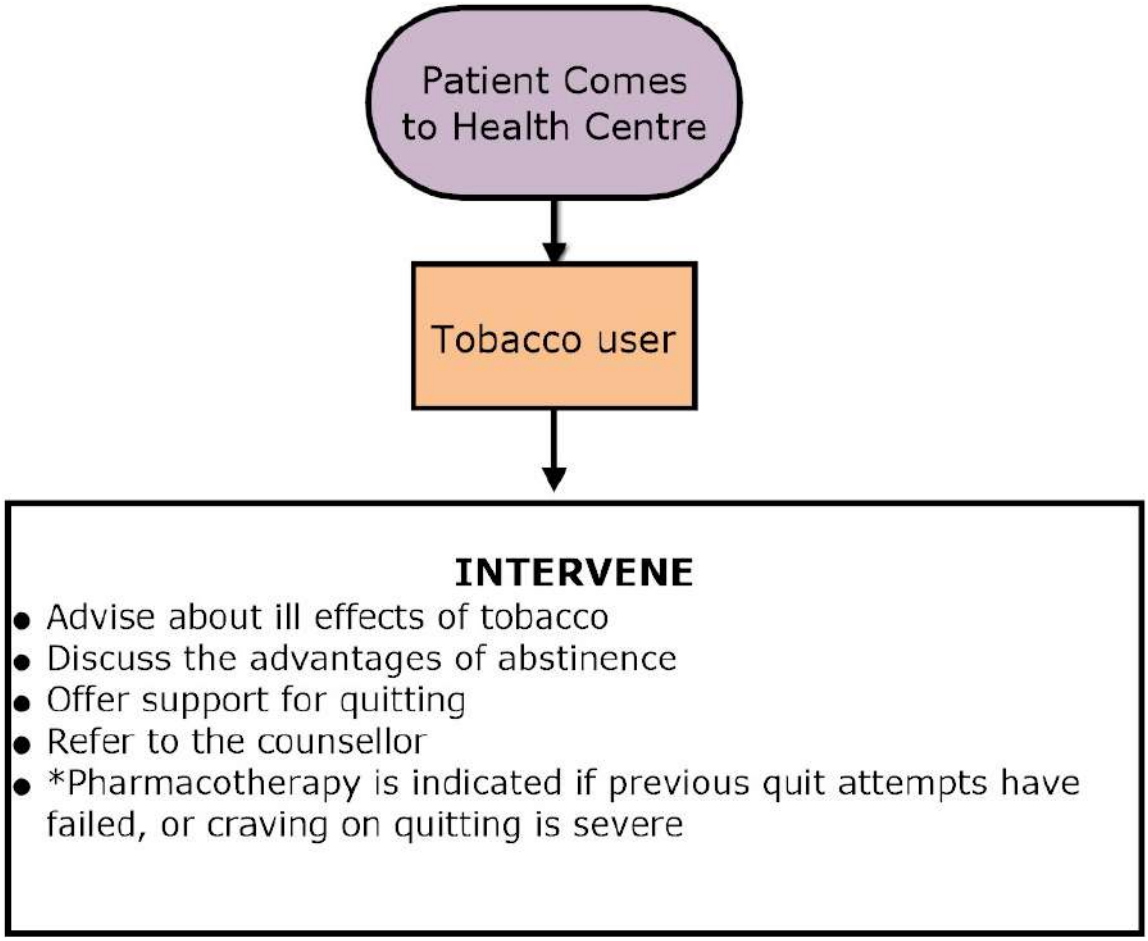
Interpretation:

0-6 ppm = Normal

7 to 10 ppm = Risky

10 and more ppm = Danger

3.2 STEP 2: INTERVENE



*Pharmacotherapy

There are many pharmacological agents which can support the process of quitting and act on the brain to reduce craving and withdrawal symptoms. Medication can be divided into 2 kinds: 1. Nicotine replacement therapy (NRT) – nicotine chewing gums& 2. Non nicotine replacement therapy - Bupropion, Varenicline, Nortryptiline

3.3 STEP 3: INVOLVE OTHER HEALTH CARE PROVIDERS

1. Counselor for promoting behavioural change:
   - Assessing tobacco use (Fagerstrom Nicotine Dependence Questionnaire)
   - Providing brief counselling: educating health consequences, using balance sheet for motivating and discussing relapse prevention strategies.
2. Community Health worker for follow up (patients who miss follow up dates) and home visits (to monitor progress)
3. Specialist (TCC Clinic)/District Hospital for specialist care
4. Lab for investigations

Alcohol use as a risk factor for NCDs

Session 3

Objectives of the session

By the end of this session, the participants will understand the following:

- Health problems associated with the use of alcohol and alcohol use as a risk factor for NCDs
- Types of alcohol available and commonly encountered alcohol related problems in clinical practice
- Harms to others from alcohol use
- Harm from other drug use
- Identification of alcohol use among patients
- Intervention for alcohol use disorders
- Involvement of other care providers in preventing and managing alcohol use disorders in the clinic and community

Organization of the session

- *Facilitator's reading material:* The facilitator should read the material before the session. Sources for specific information are quoted and included as references in the footnotes.

- *Handouts:* Copies of handouts will be made before the session and distributed either before or after the session. List of handouts are included at the end of each session.

- *Power point presentation:* A DVD containing the power point presentations accompanies the training manual. The slides for each session are reproduced in the manual to aid the facilitators.

- ***Activities****:*

  Activities during the training session may include:

  - **Brainstorming** or whole group interaction, indicated by the letter '**B**' and the symbol 
  - **Group activity** or discussion in small groups, indicated by the letter **GA** and the symbol 
  - **Individual Activity**, indicated by letter **IA** the symbol 
  - **Role Play** is indicated by the letter **RP** and symbol 

INTRODUCTION

It is estimated that there are more than 70 million alcohol users in India and nearly 30% of Indian men and 5% of Indian women are regular users of alcohol (National Household Survey for Drug Abuse 2004)[43]. According to the Global Status Report on Alcohol and Health[44] (2014), alcohol consumption is related to more than 200 types of diseases. This includes many non-communicable diseases (NCDs) like cancers, liver disease, diabetes, cardiovascular diseases and cirrhosis of the liver. Alcohol consumption has also been associated with infectious diseases like tuberculosis. There is a close association between alcohol use and mental health problems. In India, alcohol and tobacco use is associated with higher mortality among men[45] and alcohol related problems accounts for over every fifth of hospital admissions. Although alcohol use is a serious problem in India, most people do not receive any treatment for alcohol use disorders.[46]Alcohol use is relatively high in north-eastern and southern states of India and Goa as compared to other parts of country[47,48]. Easy availability of alcohol through increasing number of sales outlets in both urban and rural areas, earlier age of first drink and greater extent of women drinking are recent trends have contributed to an increase in harmful effects of alcohol and habitual users. Methanol commonly found in adulterated drinks is a major cause for mass tragedies in India. Among the

[43] United Nations Office on Drugs and Crime. Regional Office for SE Asia. National Survey on the extent and patterns of drug abuse. http://unodc.org/pdf/india/publications/national_Survey/09_thenationalsurvey-objectivemethodology.pdf

[44]The World Health Report WHO (2004). http://who.int/healthinfo/global_burden_disease/GBD_report_2004update_full.pdf

[45]Bonu S, Rani M, Peters DH, Jha P, Nguyen SN. Does use of tobacco or alcohol contribute to impoverishment from hospitalization costs in India? Health Policy Plan 2005 Jan;20(1):41-9

[46]Benegal V. India Alcohol and Public health Addiction 2005; 100: 1051-1056

[47]Gururaj G, Murthy P, Girish N & Benegal V. Alcohol related harm: Implications for public health and policy in India, Publication No. 73, NIMHANS, Bangalore, India 2011.

[48]Benegal V, Gururaj G, Murthy P et al. Patterns and consequences of alcohol misuse in India. Project Report 2011-2012.

poor communities, alcohol use has led to increasing resources spent for drinking and for managing alcohol related problems[49]. Alcohol not only causes problems for the individual, but also results in a variety of harm for the households[50].

Alcohol use in urban and rural areas: Residing in villages and brewing alcohol is significantly linked to alcohol use[51]. In a rural sample of Vellore, one third used alcohol during the previous year, one fifth drank regularly and one sixth were hazardous alcohol users[52]. NFHS-3 revealed that for either sex, proportions consuming alcohol were greater amongst those from rural than urban areas. Among females the ratio between urban to rural was 1:5 (0.6%: 3.0%)[53]. Similarly, high rates of alcohol use have been observed in urban slums of India in several studies.

Risk factors and alcohol use: According to NIAAA[54], high consumption of alcohol leads to inappropriate food intake and low physical activity and many alcohol users use tobacco, aggravating harm from combined use. Nutrition related disorders at both ends of the spectrum (both under nutrition and obesity) are also common with alcohol consumption. Poor mental health conditions and stress increases the chance of harmful use of alcohol and can come in the way of seeking help.

*NCDs and other health conditions and alcohol us*e:

- Significantly higher proportion of alcohol users (32.5% of the 3,258 alcohol users) reported health problem compared to non-users (14.5% of the 3,745)[55].
- The major disease and injury conditions related to alcohol use are cancers of the mouth, oropharynx, oesaphageal and liver cancer; neuropsychiatric disorders such as epilepsy, depression, alcohol dependence and harmful use, diabetes mellitus, ischemic heart disease, haemorrhagic stroke, and cirrhosis of the liver. Injury conditions include motor vehicle accidents, drowning, falls, poisonings, self- inflicted injuries, homicide[56].
- Alcohol use is linked to specific types of cancer in the Indian region, particularly when it is combined with various forms of tobacco consumption. These are the commonest risk factors for non-communicable diseases, according to studies carried out in Haryana[57].
- Studies conducted on stroke in India have established long-term alcohol use in 25% of cases among hospitalized stroke subjects.

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[49]Bonu et al ibid

[50]Murthy P et al. Household harm from alcohol consumption. WHO Project Report unpublished 2011.

[51]John A[1], Barman A, Bal D, Chandy G, Samuel J, Thokchom M, Joy N, Vijaykumar P, Thapa S, Singh V, Raghava V, Seshadri T, Jacob KS, Balraj V.Hazardous alcohol use in rural southern India: nature, prevalence and risk factors.

[52]Anand K, Shah B, Yadav K, Singh R, Mather P, Paul E, et al. Are the urban poor vulnerable to non communicable diseases? A survey of risk factors for non-communicable diseases in urban slums of Faridabad.The National Medical Journal of India 2007; 20(3):115-20.

[53]NFHS 3. Indian Institute of Population Sciences and Macro International, 2007.

[54] Alcohol Alert, NIAAA January 2007. http://pubs.niaaa.nih.gov/publications/AA71/AA71.html

[55]Gururaj G, Girish N, Benegal V. Alcohol control series 1: Burden and socio-economic impact of alcohol - The Bangalore Study. New Delhi: World Health Organisation, Regional Office for South East Asia, 2006.

[56]Room R, Babor T, Rehm J. Alcohol and public health.The Lancet, 2005; 365(9458):519-30

[57] Krishnan A, Shah B, Lal V, Shukla DK, Paul E, Kapoor SK. Prevalence of risk factors for non-communicable disease in a rural area of Faridabad District of Haryana. Ind J Public Health, 2008; Vol.52 No.3: 117-124.

- A relationship between alcohol use, risky sexual behaviour and increased risk of HIVAIDS and other sexually transmitted diseases in the Indian region has been established.[58]
- Linkages of alcohol to neuropsychiatric conditions such as delirium tremens, alcoholic hallucinosis, as well as with several psychiatric illnesses including mood disordersis well known.

Health care providers should pay attention to alcohol use as a risk factor contributing to NCDs. With the growing problem of pharmaceutical drug abuse, health providers also need to provide proper instructions regarding the abuse and dependence potential of pharmaceutical drugs if used inappropriately[59].

This session on alcohol use will help the Medical Officers understand the harm from alcohol as well as linkages of alcohol as a risk factor to other risk factors. The link with non-communicable diseases is highlighted. The first objective is to improve identification of alcohol use as a risk factor among persons seeking help at the Health Centre, provide feedback regarding alcohol use and harm, intervene to manage problems related to alcohol use and involve other health care providers to work effectively as a team to address risk factors for NCDs.

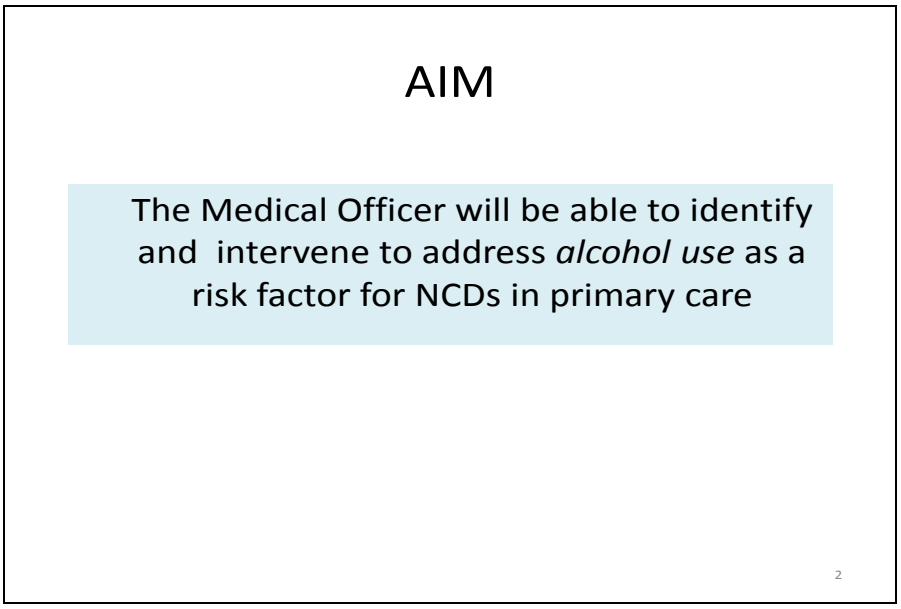
Persons may present in primary care with a diagnosed NCD complicated by alcohol use. They may be at risk for NCD because of alcohol use. They may have harmful or dependent use of alcohol which that has already caused problems or has the potential to cause problems. They may also present with intoxication, withdrawal or delirium. The Medical Officer should be in a position to recognize these different scenarios of presentation and offer intervention.

Total duration: 2 hours and 45 minutes approximately

[58] Chandra, Carey MP, Carey KP, et al. HIV risk behaviour among psychiatric inpatients: Results from a hospital-wide screening study in southern India. International Journal of STD and AIDS 2003; 14, 532-538.

[59] Nattala P, Murthy P, Thennarasu K, Cottler L. Non medical use of sedatives in urban Bengaluru. Indian J Psychiatry, August 2014.

Slide 2



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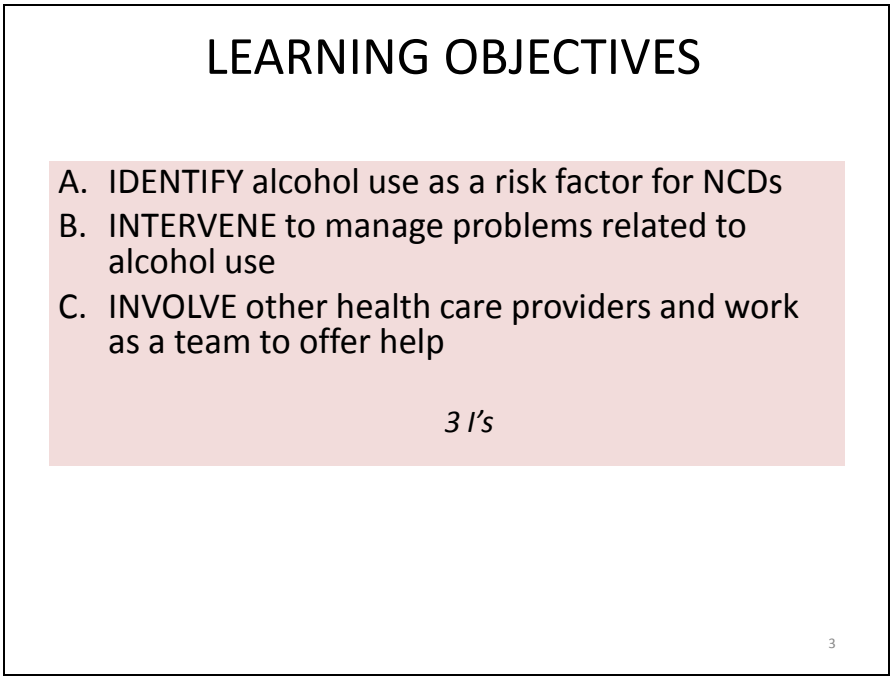
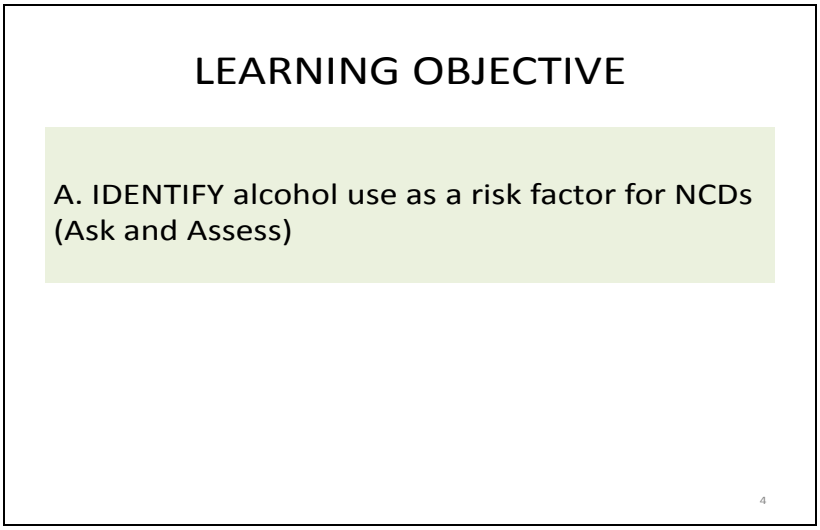


3 I'S APPROACH discusses the role of the Medical Officer who will *identify* alcohol use as a risk factor, offer *intervention* (medical) to manage problems related to its harm and *involve* other health care providers to offer help.

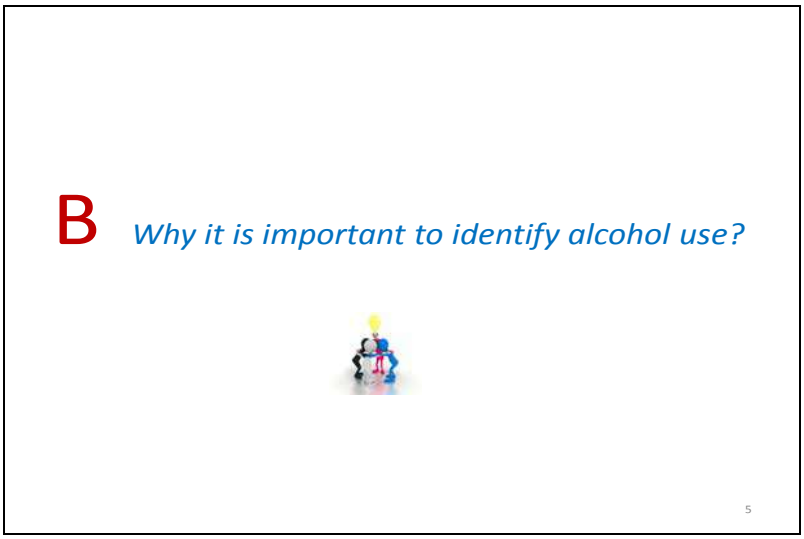
Slide 4



INSTRUCTION

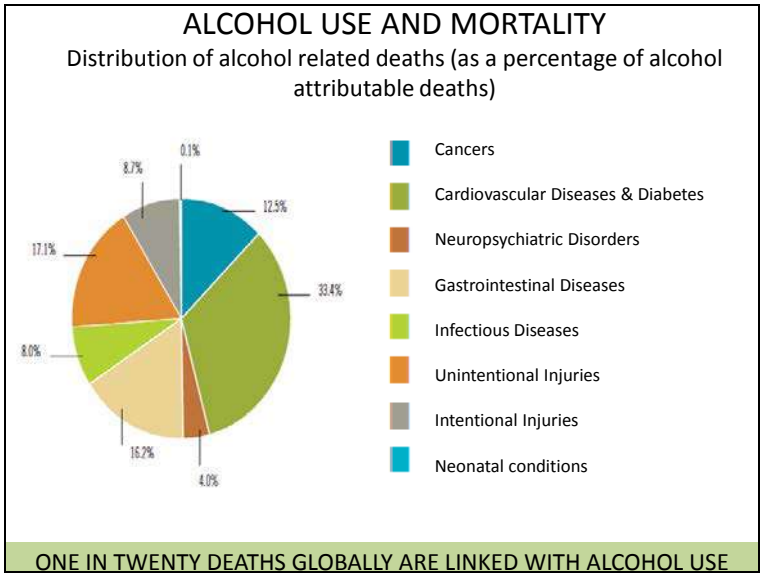
Discuss using brainstorming about the importance of alcohol use as a risk factor and its effect on health and NCDs and the importance of asking about alcohol use to patients coming to the Health Centre. Diagrams and flowcharts have been used to illustrate the linkages.

Slide 5



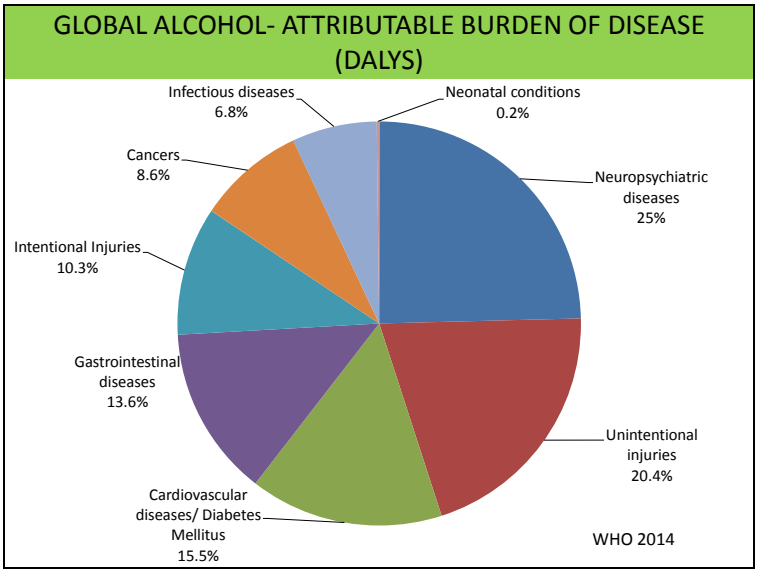
Generate discussion and write them on the board.

Slide 6



Alcohol use and mortality: In 2012, one in twenty of all global deaths were attributable to alcohol. Alcohol consumption causes death early in life, highest in the population aged 40-49 years. Alcohol use also ranks as the leading cause of death and disability among persons aged 15-49 years globally. [60] The highest numbers of deaths are due to cardiovascular disease, followed by injuries and gastrointestinal causes (cirrhosis and cancer).

Slide 7



Alcohol attributable burden of disease: Burden of disease is estimated as Disability Adjusted Life Years or DALY. The WHO estimates that the major contributors to the alcohol attributable burden of diseases are neuropsychiatric disorders, unintentional injuries, cardiovascular diseases and diabetes mellitus.

[60] World Health Organization. Global status report on alcohol and health 2014. http://apps.who.int/iris/bitstream/10665/112736/1/9789240692763_eng.pdf

Slide 8

ACTIVITY (GROUP WORK)

Duration: 30 minutes

Divide participants into small groups. Ask the group to list the various forms of alcohol commonly available in the country. Also ask them to list the alcohol related problems they commonly encounter in clinical practice. Give chart paper and pens to make presentations (15 minutes). Each group can nominate a representative to make the presentation. Generate discussion during the presentation.

Slide 9

STRUCTURE OF ALCOHOL INDUSTRY IN INDIA

TYPE OF INDUSTRY	MARKET SHARE	PRICING	GEOGRAPHICAL CONSUMPTION	TARGET AUDIENCE
IMFL	36%	Affordable and competitive	Mostly south India	Above 35
COUNTRY LIQUOR	48%	Cheap prices, that is the driving factor	All over/ large scale in tribal belt	Above 35
BEER	13%	Expensive	Urban cities	18-40 years
ILLICIT LIQUOR	NA	Extremely cheap/no duty levy	Small towns and villages	NA
IMPORTED LIQUOR	3%	Luxury	Metropolitan cities	Women/35 and above

Public Health Foundation of India. Alcohol Marketing and Regulatory Policy Environment in India A Report. November 2013

PHFI[61]

[61] Public Health Foundation of India. Alcohol marketing and regulatory policy environment in India. A report. November 2013.

Consumption of alcohol in India has increased significantly due to many factors, including urbanization, a large youth population who are targeted by the alcohol industry, changing social attitudes to drinking, greater disposable incomes and easy availability of alcohol. At the same time, poverty and distress are also common factors associated with the increased use of alcohol.

Slide 10

INSTRUCTION

Play a short video on alcohol awareness and have a brief discussion on what the community needs to know about alcohol as a risk factor for NCDs.

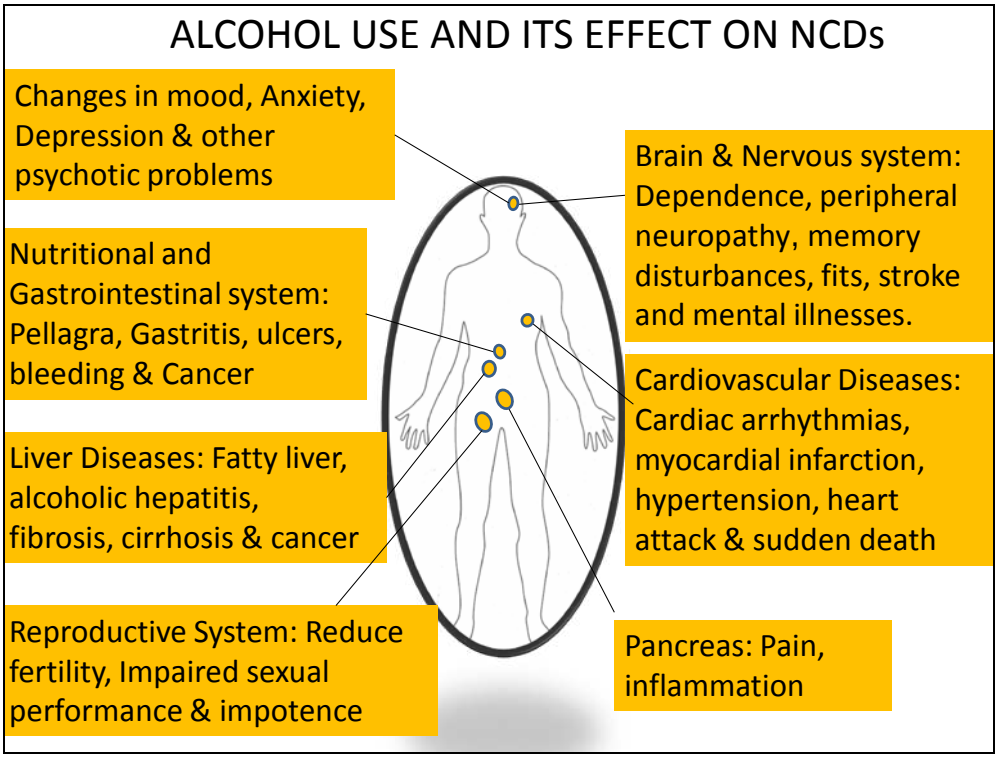
WHY IT IS IMPORTANT TO IDENTIFY ALCOHOL USE?

- Alcohol use is a risk factor for communicable diseases like tuberculosis, HIV, Hepatitis B and Hepatitis C
- Alcohol use creates problems in family life, work and social life

Play video clip

No alcohol ad campaign.mp4
(Right click and open hyperlink)

Slide 11



Alcohol is a central nervous system depressant. Unlike other foods, alcohol does not require digestion. When a person drinks, alcohol is absorbed directly into the blood stream through the walls of the stomach and the intestine. Once alcohol enters the bloodstream it circulates throughout the body. Alcohol is metabolized in the liver and is changed to carbon dioxide, water and a few calories of energy. As there are no nutrients, these are called 'empty calories'. Alcohol can have immediate as well as long term effects. Research has found a strong link between alcohol use, death as well as disability from non-communicable diseases, and these findings support the World Health Organization's call to implement evidence-based strategies to reduce harm from alcohol. Alcohol is also a risk factor for communicable diseases like tuberculosis, HIV, Hepatitis B and Hepatitis C. Besides health related issues, the impact of alcohol use often creates problems in family life, work and social life[62].

[62]Nattala P, Murthy P, Nagarajaiah. Relapse prevention in alcohol dependence: A family-based approach. National Institute of Mental Health and Neuro Sciences, Bangalore, 2013: Publication No 87.

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Apart from causing harm to the user, from both NCDs as well as communicable diseases, alcohol is well-known to be associated with several types of harm to others. Examples of harm to others includes injury to others, either intentional or unintentional (traffic accident, workplace accident, injury to partner or child), neglect of family responsibilities, loss of property through damage, pawning etc and endangerment of colleagues at the workplace. Studies from India have demonstrated the effects of alcohol at the workplace in terms of increase in accidents (inside and outside the workplace), absenteeism and productivity[63,64].

[63]Murthy P (Ed)Community based drug rehabilitation and workplace prevention. United Nations Drugs Control Programme, International Labour Organization, Ministry of Social Justice and Empowerment, Govt of India. 2002. http://unodc.org/india/en/Partnerships_808_Report.html

[64]Murthy P, Sankaran L. Workplace well-being. Integrating psychosocial issues with health.National Institute of Mental Health and Neuro Sciences and the Printers Bangalore Pvt Limited, 2009. ISBN 81-8642400-8

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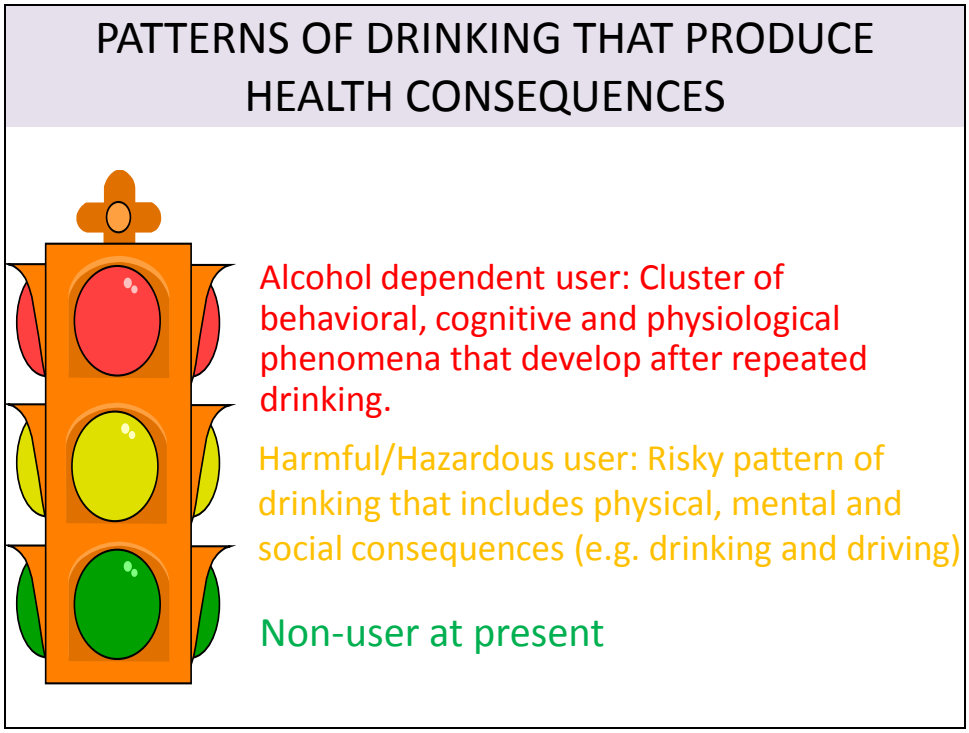

The risky patterns of drinking[65] are elaborated below:

1. HARMFUL USE refers to the health damage that is physical or mental due to drinking. It is defined as a pattern of alcohol use that is causing health damage, either physical (e.g. liver damage) or mental (e.g. depression)

2. HAZARDOUS USE is a risky pattern of drinking that includes physical, mental and social consequences to the drinker or others (e.g. drinking and driving or fights with neighbours). Hazardous consumption includes binge drinking (drinking four or more drinks in one sitting or on one occasion) and pathological drinking (inability to stop drinking once started).

3. DEPENDENCE refers to the cluster of behavioural, cognitive and physiological phenomena that develops after repeated drinking. The characteristics of dependence are mentioned later.

[65]The ICD-10 Classification of Mental and Behavioural Disorders. Geneva: WHO.

Harm from other drugs

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There is a growing problem of drug abuse in India today, both from the misuse of illicit as well as illicit drugs, particularly pharmaceuticals [66] . Cannabis, opioids, benzodiazepine and non benzodiazepine sedatives and solvents are common drugs of abuse in the country. Drug and alcohol abuse is associated with both communicable and non-communicable diseases. The problem is growing among children[67], women[68] and the elderly[69].

[66] Murthy P, Manjunatha N, Subodh BN, Chand PK, Benegal V. Substance use and addiction research in India. Indian J Psychiatry, 2010; 52:189-199.
[67] National Commission for Protection of Child Rights. Assessment of patterns, profile and correlates of substance use among children in India. Tikoo VK, Dhawan A, Pattanayak RD, Chopra A (Eds), NCPCR and Govt of India 2013. http://www.ncpcr.gov.in/view_file.php?fid=17
[68] United Nations Office on Drugs and Crime. Women and drug abuse in India: substance, women and high-risk assessment study. Murthy P. Principal Author. http://www.unodc.org/documents/southasia/reports/UNODC_Book_Women_and_Drug_Use_in_India_2008.pdf
[69] Nadkarni A, Murthy P, Crome IB, Rao RT. Alcohol use and alcohol use disorders among older adults in India: a literature review. Ageing and Mental Health 2013. http://www.tandfonline.com/doi/abs/10.1080/13607863.2013.793653.

Alcohol Dependence

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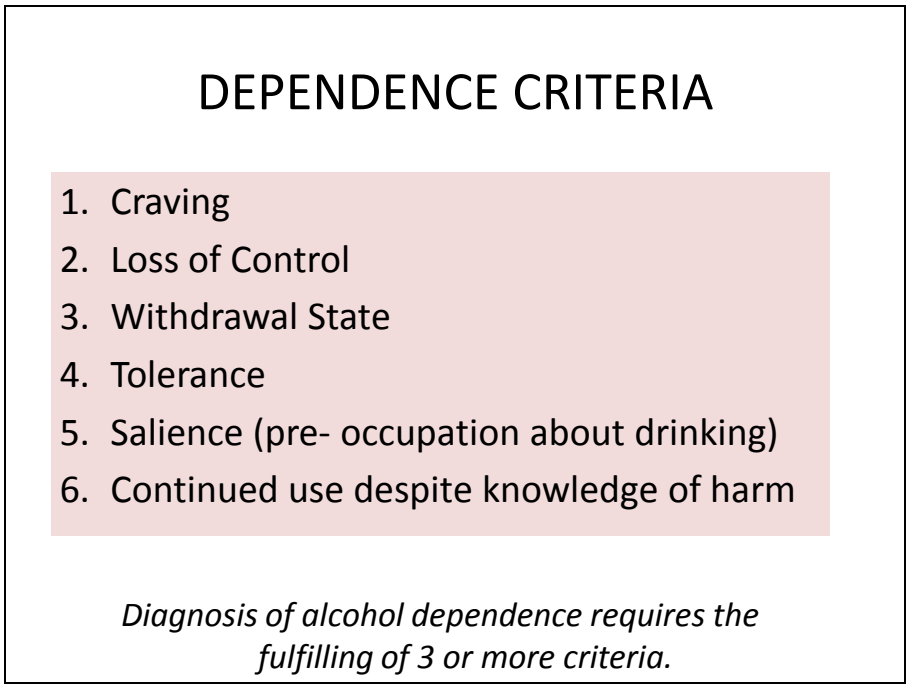

- CRAVING: a strong desire or sense of compulsion to take the substance. It can be triggered by situations or objects associated with drinking:

Example: "I have tried to stop so many times but every time I meet my drinking friends I have the urge to drink and start drinking again"

- LOSS OF CONTROL: difficulties in substance-taking behaviour in terms of its onset, termination or levels of use:

Example: "Every time I start drinking, I plan to stop with a quarter, but I end up drinking 2 – 3 quarters..."

- WITHDRAWAL STATE: When substance use has ceased or quantity has reduced, the user has negative experiences:

Example: "When I stop drinking, I don't get sleep and my head aches. My hands start shaking in the morning….."

- TOLERANCE: Increased doses of psychoactive substances are required in order to achieve effects originally produced by lower doses:

Example: "I started with 1 glass of beer but now it does not give me a kick. Now, I need to drink more than 3 glasses to get a kick.…."

- SALIENCE: Progressive neglect of alternative pleasures/ interests because of the substance despite clear evidence of harmful consequences:

Example: A person not regular at work (absenteeism), not attending social gatherings and avoiding family responsibilities.

- Knowing that alcohol use will harm the body through excessive drinking and cause other psycho social complications but still not able to stop drinking:

Example: liver impairment impaired, cognitive functioning.

As per the International Classification of Diseases 10th Revision (ICD 10) a person fulfilling 3 or more of the above dependence criteria is diagnosed as having alcohol dependence

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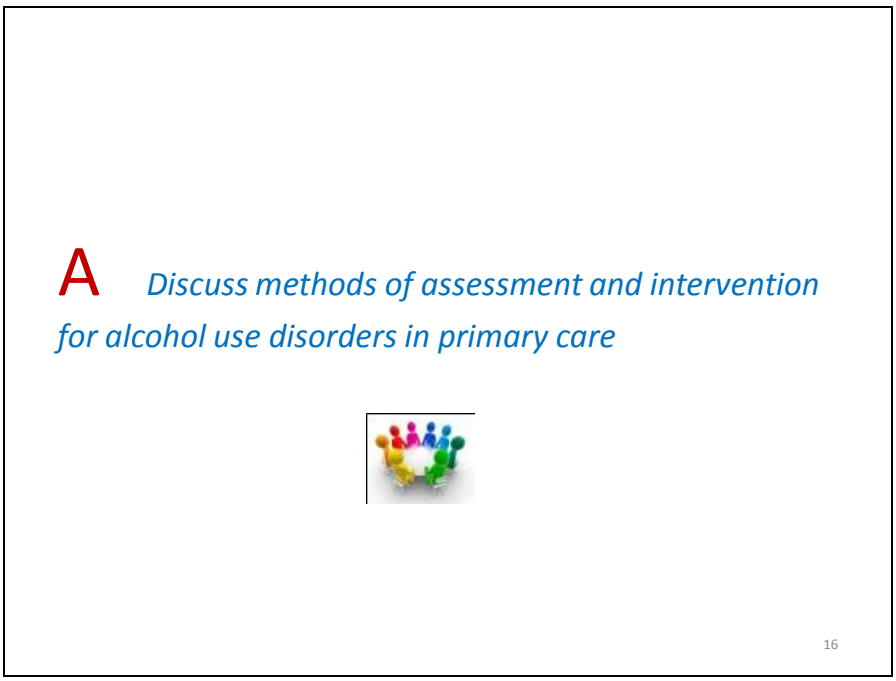

ACTIVITY (GROUP WORK)

Duration: 30 minutes

Divide participants into small groups. The groups will discuss methods of assessment and intervention for alcohol use disorders in primary care. Give chart paper and pens to make presentations (15 minutes). Each group can nominate a representative to make the presentation. Generate discussion during the presentation.

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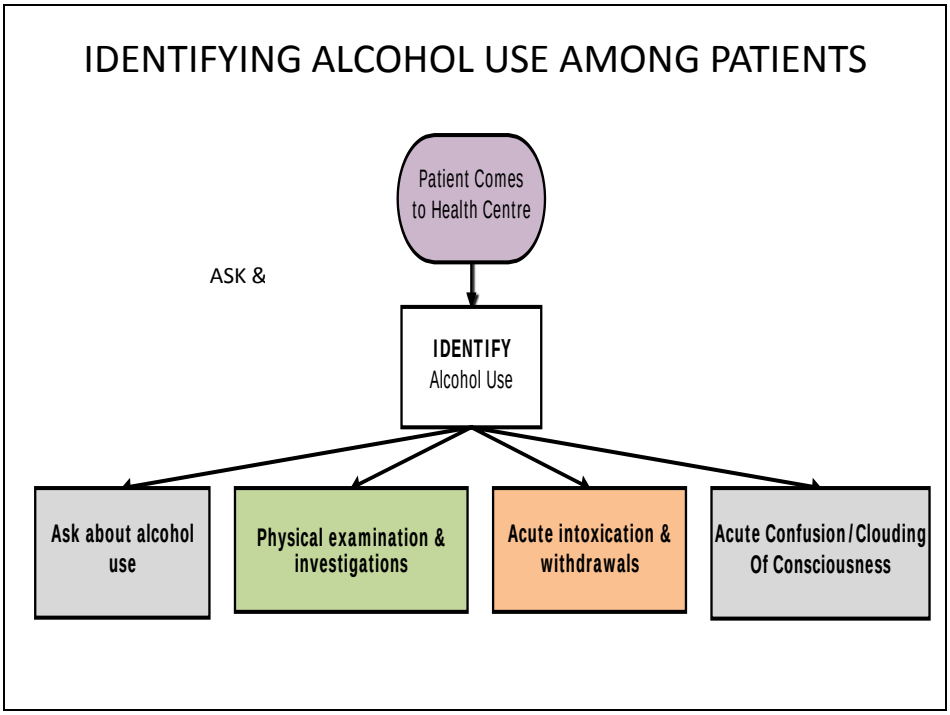

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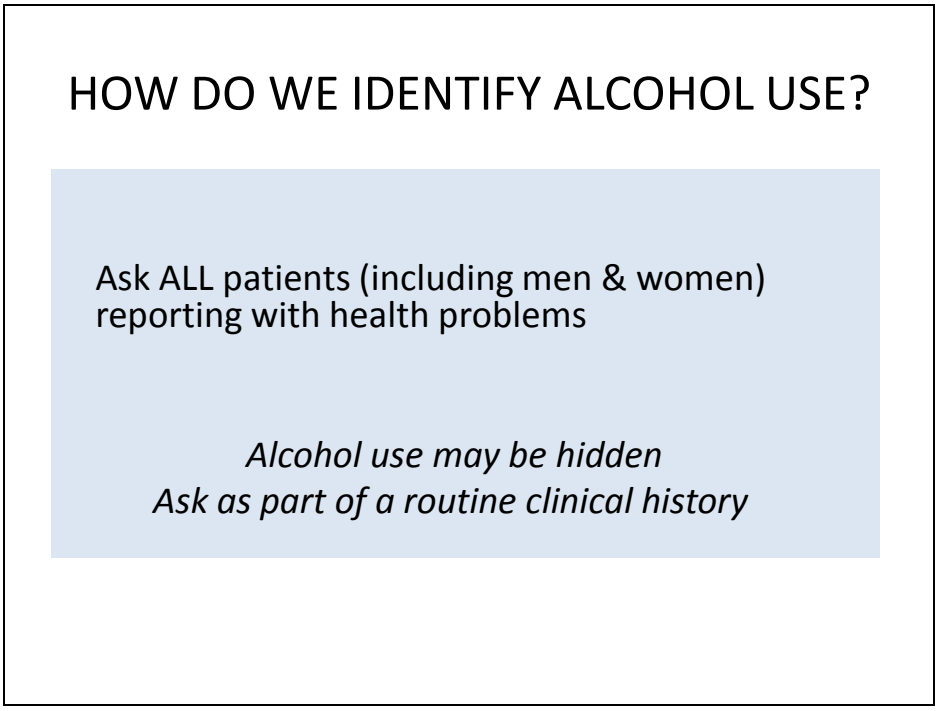

Alcohol use may not be a presenting problem and may be hidden. Therefore, it is essential to ask about alcohol use to ALL patients (including men, women and adolescents) who report with health problems. At the same time, it would be useful to ask regarding the use of other mind-altering substances (cannabis, opioids, inhalants, sedatives, stimulants etc)

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USE AUDIT – C TO ASK

Did you use alcohol (past and present)?
'Do you drink?' OR 'Have you used alcohol before?'

If *yes*:
1. How often do you have a drink containing alcohol?
2. How many standard drinks containing alcohol do you have on a typical day when drinking?
3. How often do you have six or more drinks on one occasion?

If *yes* to the above questions, ask further.

Contd.

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WHAT TO ASK?

- Effects on family, work and social life
- Reasons for use and maintenance
- Tolerance, craving and withdrawal symptoms
- Use of other substances (Tobacco, Cannabis, Opioids, Benzodiazepines and other sedatives, Inhalants, Amphetamine, Cocaine etc)
- Check for physical and mental health problems
- Check for last use
- If NCD is present or patient is at a risk for NCD, assess understanding of link between alcohol, other risk factors and NCD

Taking alcohol use history[70]

When asking about alcohol consumption:

- Ask questions without indicating a preferred answer, and try not to display surprise at any responses given.

- Ask about the level and pattern of consumption of alcohol, as well as any behaviours associated with alcohol use that may risk the person's health and the health of others (i.e., where, when and with whom alcohol consumption typically occurs, what triggers alcohol consumption, activities when intoxicated, financial implications, capacity to care for children, and violence towards others).

- Ask about harms from alcohol, including:

  - ✓ accidents, driving while intoxicated
  - ✓ relationship problems
  - ✓ medical problems such as liver disease / stomach ulcers
  - ✓ legal / financial problems
  - ✓ sex while intoxicated and that is later regretted or risky
  - ✓ alcohol-related violence including domestic violence

- Ask about commencement and development of alcohol use in relation to other life events, for example, by taking a chronological history.

- If there is evidence of hazardous or harmful alcohol use, establish dependence by asking about the development of tolerance, withdrawal symptoms, use in greater amounts or over a greater length of time than was intended, continued alcohol use the problems related to it, difficulty in stopping or cutting down alcohol use, and craving for alcohol use.

- Ask about social networks and the person's alcohol and other drug consumption patterns.

- Ask for other risk factors that occur along with alcohol use (use of tobacco, presence of stress, unhealthy dietary practices, lack of exercise).

[70]World Health Organization. Alcohol use disorders. Evidence based recommendations for management of alcohol use disorders in non-specialised health care settings- mhGAP guidelines. http:// www.who.int/mental_health/mhgap/evidence/alcohol/en/

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PHYSICAL EXAMINATION & INVESTIGATIONS

- General physical examination
  (for signs of longstanding alcohol consumption)
  - Pallor, jaundice, edema, lymphadenopathy
  - Pulse, Blood Pressure
  - Hepatomegaly, ascites
  - Peripheral neuropathy
  - Cerebellar signs
- Investigations if available specifically for recent, excessive alcohol consumption (Serum gamma glutamyl transpeptidase-GGT; Mean Corpuscular Volume (MCV); Serum Aspartate Amino Transferase (AST), Carbohydrate-deficient Transferrin (CDT)

Investigations that should be considered (when possible):

Liver enzymes, haemogram and other investigations as indicated.

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IDENTIFYING ACUTE INTOXICATION & SIMPLE WITHDRAWAL

SYMPTOMS AND SIGNS OF ACUTE INTOXICATION

- Smell of alcohol on the breath
- Slurred speech
- Disinhibited behaviour
- Use breathalyzer if available

WITHDRAWAL SYMPTOMS

- Tremor in hands
- Sweating
- Vomiting
- Increased pulse & blood pressure
- Agitation
- Anxiety
- Insomnia

When examining the person, look for:

1. Presence of intoxication
2. Presence of withdrawal;
3. Evidence of long-term heavy alcohol consumption, such as liver disease (enlarged liver, peripheral signs of liver injury), cerebellar or peripheral nerve damage.
4. Presence of acute confusion or clouding of consciousness with recent history of heavy alcohol consumption

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SYMPTOMS OF ALCOHOL WITHDRAWAL SYNDROME

Symptoms	Time of appearance after cessation of alcohol use
Minor withdrawal symptoms: insomnia, tremulousness, mild anxiety, gastrointestinal upset, headache, diaphoresis, palpitations and anorexia	6 to 12 hours
Alcoholic hallucinations: visual, auditory or tactile hallucinations	12 to 24 hours*
Withdrawal seizures: generalized tonic-clonic seizures	24 to 48 hours**
Alcohol withdrawal delirium (delirium tremens): hallucinations (predominately visual), disorientation, tachycardia, hypertension, low-grade fever, agitation and diaphoresis	48 to 72 hours***

**Symptoms generally resolve within 48 hours.*
***Symptoms reported as early as two hours after cessation.*
****Symptoms peak at five days.*

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ASSESS FOR ACUTE CONFUSION OR CLOUDING OF CONSCIOUSNESS
DIFFERENTIAL DIAGNOSIS
• Wernicke's Encephalopathy – Nystagmus, ataxia, ophtalmoplegia • Head injury – Evidence of lacerations, bleeding around head, ears • Alcohol withdrawal delirium • Exclude other common causes for confusion, such as infections, hypoxia, hypoglycaemia, hepatic encephalopathy and cerebrovascular accident

- If the person presents with acute confusion with recent heavy consumption of alcohol, a differential diagnosis of Wernicke's encephalopathy, alcohol withdrawal delirium, or head injury may be considered.

  Wernicke's encephalopathy is characterized by confusion, ataxia and ophthalmoplegia

  Alcohol withdrawal delirium is characterized by confusion, disorientation, autonomic hyperarousal (sweating, tachycardia), tremulousness, and hallucinations may be present. Seizures may also precede the delirium).

  Head injury must be ruled out in a patient presenting with alcohol consumption and confusion. It is important to look for signs of head injury such as lacerations, bleeding around the head or ears.

- Other common causes of confusion, such as infections, hypoxia, hypoglycaemia, hepatic encephalopathy, and cerebrovascular accidents need to be considered. If any of these are suspected, and needs further investigations for appropriate management, referral to a specialized centre may be considered.

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SUMMARY

- Alcohol use and non-communicable diseases are closely linked.
- Ask about alcohol use and identify patterns of hazardous/harmful and dependent use
- Assess for intoxication, withdrawal and complications
- Physical examination and investigations are essential for complete assessment.

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LEARNING OBJECTIVE

B. INTERVENE to manage problems related to alcohol use

INSTRUCTION

Discuss using brainstorming, steps to manage alcohol use as a risk factor seen in patient at the Health Centre. There will be patients who are non-users, harmful/hazardous users and those having dependence. Flow charts have been used to illustrate the steps for care.

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Activity (Role play)

Total duration: 30 minutes

Sit in pairs and face each other. Nominate one person as the MO and the other as the patient. Use the case given to continue the activity. Before role play, give 5 minutes for reading and clarifying the case study. Ask participants what they learnt from the activity and summarize.

A ROLE PLAY

Babu is 41 years old and works as a coolie. He has a busy day. He starts the day early in the morning and finishes late at night. He needs a drink before starting work. He takes breaks to drink to reduce tension and increase his work performance. Last week, he was found to have high BP during a medical camp. He says he gets irritable at work and gets into fights with his co workers. At home he gets angry easily and shouts at his wife and children for no reason. He comes to the Health Centre with his wife. He has tremors in his hands. He is smelling of alcohol and his speech is slurred.

How do you intervene to help Babu?

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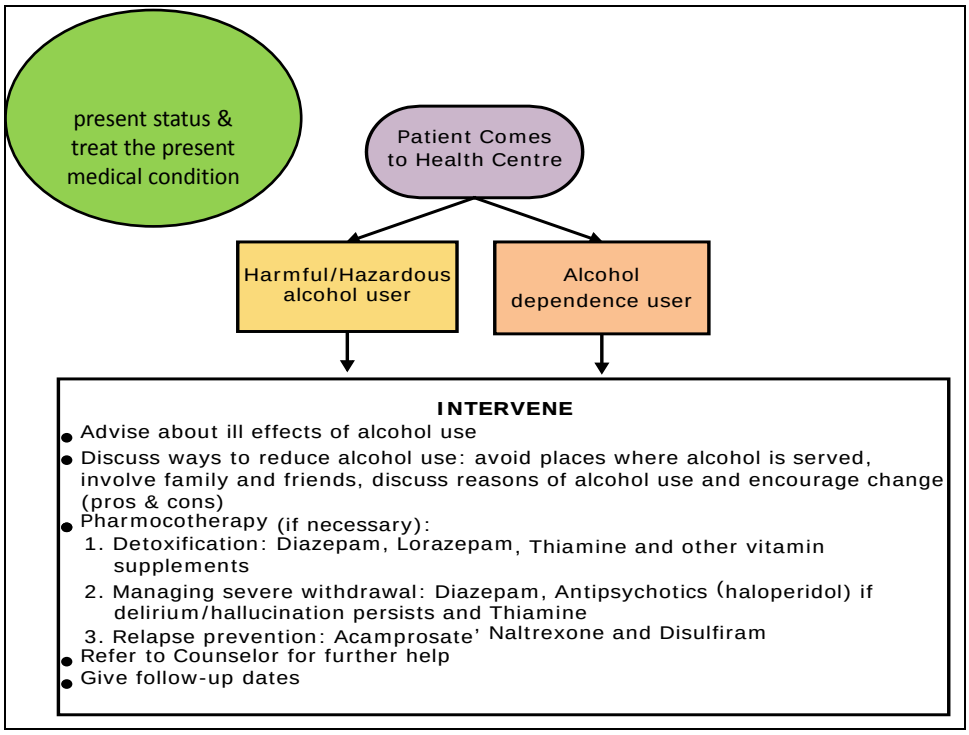

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INTERVENE

- Advise about ill effects of alcohol use
- Discuss ways to reduce harmful or hazardous alcohol use
  - Not having easy access to alcohol
  - Avoiding going to places where alcohol is served
  - Asking support from friends and family
  - Involving the family and having them support the person
  - Discussing reasons for alcohol use (perceived benefits, knowledge of harm with focus on NCDs)
  - Encourage change after a balanced discussion of pros and cons of use
  - Ready to quit (provide assistance)
  - Unwilling to quit – encourage the person to reconsider change and return for a further discussion

INTERVENTION FOR PATIENTS USING ALCOHOL REGULARLY[71]:

- Talking to people about the reasons they use alcohol

- Engage the person in a discussion about their alcohol use in a way that he / she is able to talk about both the perceived benefits of it and the actual and / or potential harms, taking into consideration the things that are most important to that person in life.
  - ✓ Steer the discussion towards a balanced evaluation of the positive and negative effects(pros and cons) of alcohol. Question the perceived benefits and bring up some of the negative aspects which may not have been mentioned by the person.
  - ✓ Personalise the risk of continued pattern of drinking on the person's health, either in terms of the NCD if it has already been diagnosed, or in terms of the risk for future development of NCDs
  - ✓ Avoid arguing with the person

- Encourage the person to decide for themselves if they want to change their pattern of alcohol use, particularly after there has been a balanced discussion of the pros and cons of the current pattern of use

- Advise complete stopping

- If the person expresses a readiness to quit alcohol, discuss examples of ways that the harmful or hazardous use of alcohol can be reduced
  - ✓ not having alcohol at home
  - ✓ not going to pubs or other locations where people use alcohol
  - ✓ asking support from family or friends
  - ✓ asking the person to come back with family or friends and to discuss a way forward together at the health centre

- Assess for medical and psychiatric co-morbidity. Monitor and treat if symptoms persistent, or are distressing.

- Refer to the counsellor to support in following manner
- Self-help group: Consider advising people with alcohol dependence to join a self-help group, e.g. Alcoholics Anonymous. Consider facilitating initial contact, for example by making the appointment and accompanying the person to the first session.

- Address housing and employment needs: Where available, work with local agencies and community resources to provide supported employment for those who need support to return to work or find a job and to enable access to local employment (or educational) opportunities, based on the person's needs and skill level. In a study by the International Labour Organization in India, supported employment for

[71] World Health Organization. mhGAP Intervention Guide for mental, neurological and substance use disorders in non-specialized health settings, 2010. http://whqlibdoc.who.int/publications/2010/9789241548069_eng.pdf

persons with alcohol dependence and proper follow-up showed a significant improvement in all spheres of life.[72]

- ✓ Where available, work with local agencies and community resources to find supported housing or assisted living facilities, as well as independent living facilities, if these are needed. Carefully consider the capacity of the person and the availability of alcohol or other substances in advising and facilitating optimal housing arrangements.

- Supporting families and carers: Discuss with families and carers the impact of alcohol use and dependence on themselves and other family members, including children. Based on feedback from families:
  - ✓ Offer an assessment of their personal, social and mental health needs.
  - ✓ Provide information and education about alcohol use and dependence.
  - ✓ Help to identify sources of stress related to alcohol use; explore methods of coping and promote effective coping behaviours.
  - ✓ Inform them about and help them access support groups (e.g. self-help groups for families and carers) and other social resources.
    In a recent ICMR study[73], providing interventions of women partners of men with alcohol dependence showed significantly greater improvements in their psychological well-being.

- Alcohol and other Substance use inAdolescence
  - ✓ Clarify the confidential nature of the health care discussion, including in what circumstances parents or other adults will be given information.
  - ✓ Identify the most important underlying issues for the adolescent, keeping in mind that adolescents are often not able to articulate their problems well. This might mean asking open ended questions covering the areas covered by the HEADS? acronym (Home, Education / Employment / Eating, Activities, Drugs and alcohol, Sexuality / Safety / Suicide) and allowing sufficient time for the discussion.
  - ✓ Although they usually present with less severe substance abuse problems, young people can present with severe dependence. It is just as important to screen adolescents for alcohol and alcohol problems as adults.
  - ✓ Provide parents and the adolescent with information on the effects of alcohol and other substances on individual health and social functioning.
  - ✓ Encourage a change in the adolescent's environment rather than focusing directly on the adolescent as being the problem, such as by encouraging participation in school or work and activities after school / work that occupy the adolescent's time, and encourage participation in group activities which facilitate the adolescent's skill acquisition and contribution to their communities. It is important that adolescents are involved in activities which interest them.

[72] UNODC. Community Based Drug Rehabilitation and Workplace Prevention. Murthy P (principal author) http://unodc.org/pdf/india/publications/Partnerships_808_Report/section_3.pdf

[73] Murthy P, Chandra P, Benegal V, Chand PK, Pandian VNR,Thennarasu K. Development of a partner focused intervention for alcohol dependence and assessment of impact on couples'outcome. Phase 1: a pilot study. Indian Council for Medical Research, 2014.

- ✓ Encourage parents and / or responsible adults to know where the adolescent is, who they are with, what they are doing, when they will be home, and to expect the adolescent to be accountable for their activities.
- ✓ Encourage parents to set clear expectations (at the same time being prepared to negotiate these expectations with the adolescent), and to discuss with adolescents the consequences of the adolescent's behaviours and non conformity with expectations.
- ✓ Advise parents to limit their own behaviours which may be contributing to their children's substance use, including the purchasing or providing of alcohol or the provision of funds which are being spent on substance use, keeping in mind the potential influence of their own alcohol and alcg use on their children.

- Women – Pregnancy and breastfeeding
  - ✓ Advise women who are pregnant or considering becoming pregnant to avoid alcohol completely.
  - ✓ Advise women that consuming even small amounts of alcohol early in pregnancy can harm the developing foetus, and that larger amounts of alcohol can result in a syndrome of severe developmental problems called Foetal Alcohol Syndrome (FAS).
  - ✓ Advise women who are breastfeeding to avoid alcohol completely.
  - ✓ Advise and support breastfeeding mothers not to use any psychoactive substances.
  - ✓ Given the benefits of exclusive breastfeeding (particularly in the first 6 months), if mothers continue to drink alcohol they should be advised to limit their alcohol consumption, and to minimise the alcohol content of the breast milk, such as by breastfeeding before drinking alcohol and not again until after blood levels fall to zero (allowing approximately 2 hours for each drink consumed, i.e. 4 hours if TWO drinks are consumed), or using expressed breast milk.
  - ✓ Mothers with harmful substance use and young children should be offered what social support services are available, including additional post natal visits, parenting training, and child care during medical visits.

- Encourage the person to meet the Counsellor for a more detailed discussion on understanding the relationship between alcohol use and NCD's and help to quit.

- If the person is still not ready to stop or reduce alcohol use, then ask the person to come back to discuss further with yourself (Medical Officer) or Counsellor.

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INTERVENE FOR INTOXICATION AND WITHDRAWAL

INTOXICATION

Assess airway and breathing.

» Put the person on their side to prevent aspiration in case they vomit.

» Refer to hospital if necessary or observe until effects of alcohol have worn off.

» If methanol poisoning is suspected, refer to hospital for emergency management.

WITHDRAWAL

Look for:

» Past episodes of severe alcohol withdrawal including delirium and seizures

» Other medical or psychiatric problems or benzodiazepine dependence

» Severe withdrawal symptoms already present only a few hours after stopping drinking

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B *What are the medicines for detoxification, severe withdrawals and for relapse prevention?*

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Generate discussion and write them on the board.

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PHARMACOTHERAPY: DETOXIFICATION

- Diazepam for withdrawal – 10 mg qid or 20 mg qid for 3-7 days.
- In patients with hepatic dysfunction, 5-10 mg qid with careful monitoring
- When liver function cannot be assessed, lorazepam may be considered (1mg lorazepam=5 mg diazepam)
- Thiamine 100 mg/day orally for 5 days or longer
- Other vitamin supplements as indicated

Patients should be cautioned about self-medicating beyond the prescribed period because of risk of developing dependence.

PHARMACOTHERAPY[74,75]

For the patient is motivated to stop drinking and when the withdrawal symptoms are not very severe, detoxification can begin on an outpatient basis. Withdrawal symptoms occur when the person stops heavy drinking typically between 6 hours to 8 hours after the last drink. Look for tremors in hands, sweating, vomiting, increased pulse and blood pressure and agitation. ASK about headache, nausea and anxiety. Note that seizures, delirium and confusion can occur in severe cases. Reassure the patient about how detoxification is a simple method.

TABLE 1.The list of drugs prescribed for detoxification is given below:

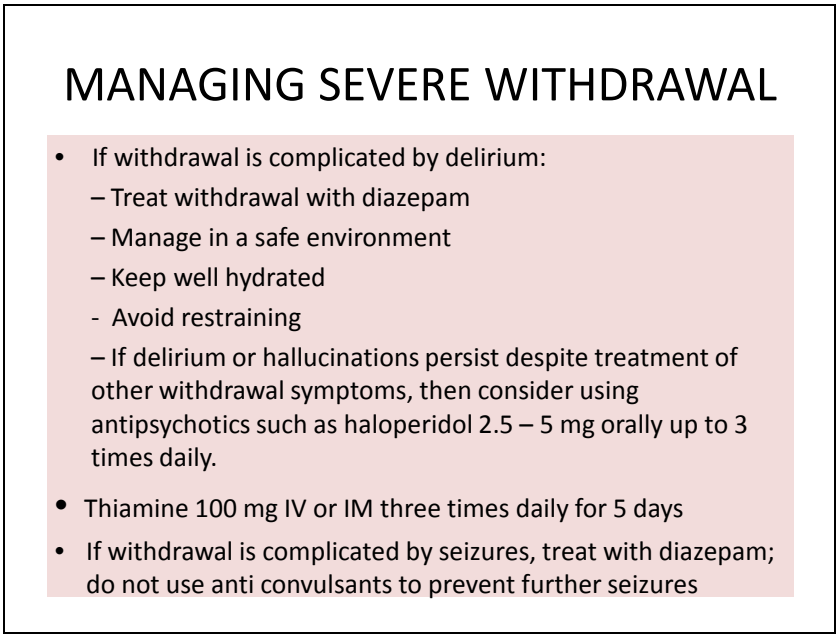
[74] Murthy P& Nikketha S. Psychosocial interventions for persons with substance abuse: Theory and practice. Bangalore: NIMHANS publication 2007, World Health Organization and Ministry of Health and Family Welfare, Govt of India.
[75] National Institute of Mental Health and Neuro Sciences, Bangalore. Addiction: What to know and how to get help. Deaddiction Centre, NIMHANS, 2009, http://nimhans.kar.nic.in/cam/CAM/Helping_persons_with_addiction_booklet.pdf

DETOXIFICATION MANAGEMENT OF WITHDRAWAL SYMPTOMS			
DRUG (TRADE NAME)	DOSAGE & DURATION	SIDE EFFECTS	CONTRAINDICATION
Diazepam (As per the mhGAP recommendations)	10-40 mg/day in a qid dose for 3-7 days and taper. The dose and duration of diazepam should be determined individually according to the severity of the withdrawal syndrome and other medical conditions. In the hospital setting, diazepam can be given more frequently (hourly) and higher daily doses (up to 120 mg daily can be given for the first 3 days based on frequent assessments)	Drowsiness, fatigue and in coordination (most common)	Safe
Chlordiazepoxide	50-120 mg & gradually over 7-10 days	Drowsiness, tiredness, Swelling, skin rash, nausea, vomiting, constipation and irregular menstrual periods	Safe
Lorazepam	4-12 mg & gradually over 7-10 days	Dizzy, drowsy and cause blurred vision	Safe even in liver diseases

Please Note: Roughly for one unit of alcohol (30 ml spirit), 1mg of diazepam or 5 mg of chlordiazepoxide is needed.

- Supplement with vitamins.
- Mh Gap recommendations for alcohol dependence: Oral thiamine 100 mg/day for 5 days or longer. Other vitamins as necessary. For delirium, thiamine 100 mg IV or IM three times daily for 5 days or longer
- Treat patient for other physical problems like dehydration and gastritis is important. Look for co - morbid conditions like depression and anxiety and medicate.

Slide 33



Management of alcohol withdrawal

- Be alert for the person at risk of a withdrawal syndrome, for example, the person with undiagnosed alcohol dependence in the district hospital.
- When there is evidence of a withdrawal syndrome developing (or before withdrawal symptoms develop in the case of planned withdrawal), administer diazepam at an initial dose of up to 40 mg daily (i.e., 10 mg four times daily or 20 mg twice daily) for 3 – 7 days. In people with impaired hepatic metabolism (e.g. liver failure, elderly) use a single low dose initially (5 – 10 mg) and determine the duration of action of this dose before prescribing further doses.
- Administer thiamine100 mg / day orally for 5 days (or longer if required) to prevent the development of thiamine-deficiency syndromes such as Wernicke's encephalopathy. Consider other vitamin supplementation when indicated.
- Ensure adequate fluid intake and electrolyte requirements are met. Correct potassium and magnesium levels that are typically low.
- Ensure carer support.
- Provide as quiet and non-stimulating an environment as possible, which is well lit in the day time and lit enough at night to prevent falls if the person gets up in the night.
- When the person has severe alcohol dependence (previous history of severe alcohol withdrawal, seizures or delirium) or concurrent serious medical or psychiatric disorders or is lacking adequate support, **CONSULT A SPECIALIST,** if available.
- Consider and treat other medical problems (e.g. Wernicke's encephalopathy, hepatic encephalopathy, gastrointestinal bleeding, head injury with or without subdural haematoma). Benzodiazepines should not be used in people with hepatic encephalopathy or respiratory depression.

WHERE to withdraw from alcohol?

1. Have there been past episodes of severe withdrawal symptoms, seizures or delirium?
2. Are there other significant medical or psychiatric problems?
3. Do significant withdrawal features develop within 6 hours of the last drink?
4. Has outpatient withdrawal failed?
5. Is the person homeless or without any social support?

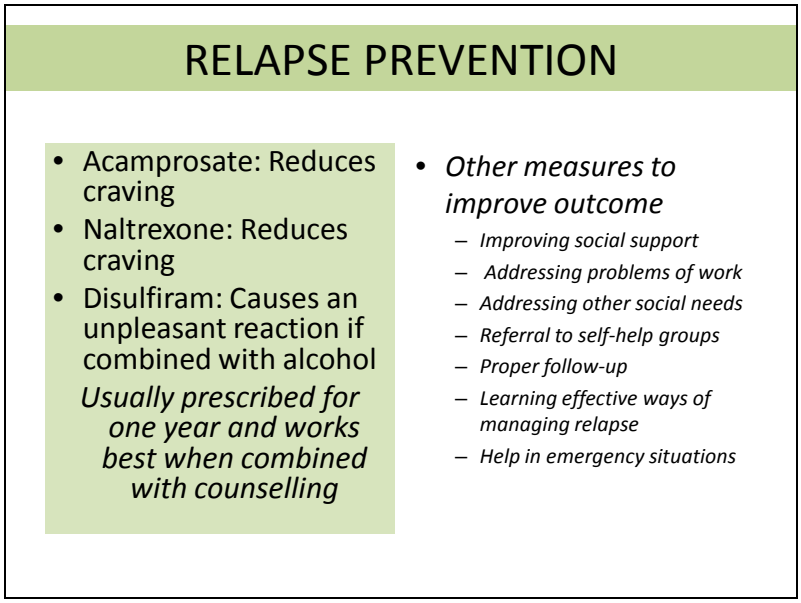
   If YES to any of the above then **inpatient** withdrawal treatment is preferable.

Alcohol-withdrawal delirium

- Treat the person in a low stimulus and safe environment where they are unlikely to do themselves harm.
- Treat underlying alcohol withdrawal with diazepam.
- Administer thiamine 100 mg i.v. or i.m. 3 times daily for 5 days.
- Use antipsychotic medication, if necessary, for the duration of psychotic symptoms only (e.g. haloperidol 2.5 – 5 mg orally tds).
- Maintain hydration.
- Avoid restraining the person.

Always consider other causes of delirium and hallucinations (e.g. head injury, hypoglycaemia, infection (most commonly pneumonia), hypoxia, hepatic encephalopathy or cerebrovascular accidents).

Slide 34



Relapse-prevention medications after withdrawal from alcohol: Several medications are useful in the treatment of alcohol dependence and increase the likelihood of the person maintaining abstinence from alcohol. The principal medications are acamprosate, naltrexone and disulfiram. The decision to use of any of these medications should be made taking into consideration preferences of the person and an assessment of benefit versus risk (e.g. is there an excessive risk if the medication is administered by non-medically trained health workers or if the person has liver

disease or is using other drugs). All three medications should be avoided, if possible, in pregnant women.

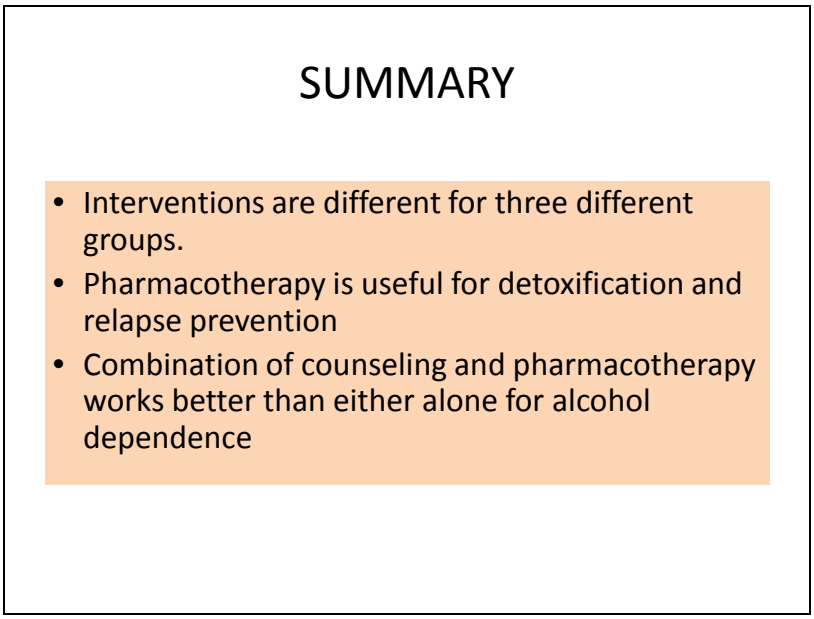
TABLE 2. DRUGS FOR RELAPSE PREVENTION (mh GAP RECOMMENDATIONS)

Acamprosate (333 mg tablets)	Suppresses the urge to drink Can be started immediately after withdrawal symptoms subside Dose: 2 tablets thrice daily in persons above 60kgs 2 tablets twice daily in persons below 60 kgs Duration of treatment – one year	20% of patients may experience side effects like diarrhoea, nausea, vomiting, abdominal pain, pruritis, occasional maculopapular rash and rarely bullous skin lesions	Relatively safe except in persons with renal insufficiency
Naltrexone (50 mg)	Suppresses the urge to drink. Can be started after withdrawal symptoms subside Dose: 50 mg/day. Can be maintained at 50-100 mg/day for one year.	20% of patients may experience side effects like nausea, vomiting, abdominal pain, anxiety, sleep disturbance, headache, reduced energy, joint and muscle pain.	Patient must be warned not to use any opioid drugs while on naltrexone. With higher doses, liver function tests recommended as liver toxicity can occur
Disulfiram (250 mg)	Causes an unpleasant and potentially dangerous reaction if combined with alcohol. The patient must be advised of the mechanism of action and that one in 15,000 patients can have a fatal reaction (much rarer than alcohol related complications) Dose: 250 mg/day for one year	Adverse reactions include nausea, vomiting, drowsiness, fatigue, decreased libido, rarely psychotic reaction, allergic dermatitis, peripheral neuritis or hepatic cell damage. Contraindicated in persons with coronary heart disease, cardiac failure, history of cerebrovascular accident, severe hypertension, psychosis, severe personality disorder or suicidal risk	Should be offered to motivated patients and where the drug can be monitored by a family member or a treatment professional.

- There is evidence about how patients take notice of the Medical Officer's advice about alcohol and other drugs including tobacco and its impact on health.

- Accurate, well-timed information helps people to think about their use and just giving advice could be enough to get them to make lifestyle changes. Physical examination, feedback, reassurance and psycho education to patient and family should be conducted for all patients.
- Before referral discuss the importance of meeting the Counselor to address current issues.
- The Medical Officer should educate the patient (in brief) about the ill effects of alcohol use and its effects on health and treat the present medical condition.

Slide 35



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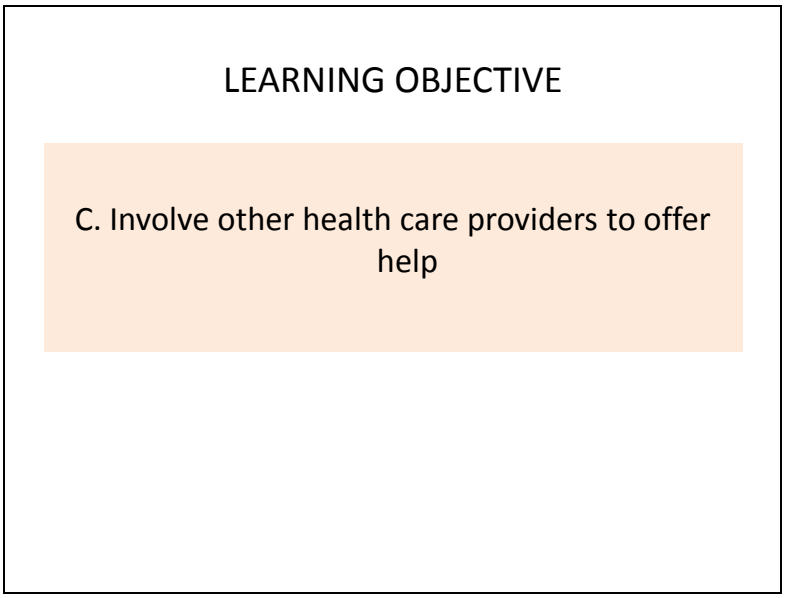
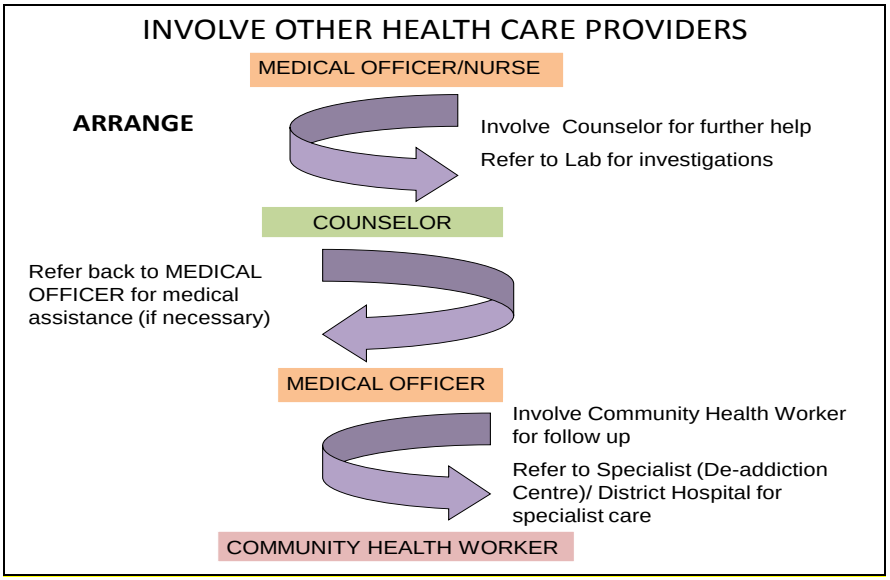


INSTRUCTION

Discuss using brainstorming the steps taken by the Medical Officer to refer the patient to other health care providers at the health centre. Before referring the patient to the Counselor, discuss how the Counselor will help the patient to address current alcohol use and help to make lifestyle changes. The steps of linking the patient to the Counselor for behavioural change and the Community Health Worker for home visits is illustrated in the flow chart.

Slide 37



The Medical Officer will link the patient having problems due to alcohol use to other health care providers at the Health Centre. The patient can be referred to the Counselor who will screen for levels of alcohol related problems (using AUDIT C) and motivate the patient for lifestyle and behavioural change.

Referral would be done to a specialist in the District Hospital when physical and mental health problems are serious e.g. when patient requires in - patient detoxification or when there is relapse during detoxification or when patient is not willing for out - patient detoxification.

Patients should be given follow - up dates by the Counselor/ and or Medical Officer. When the patient is irregular for follow – up, the Community Health Worker would make home visits.

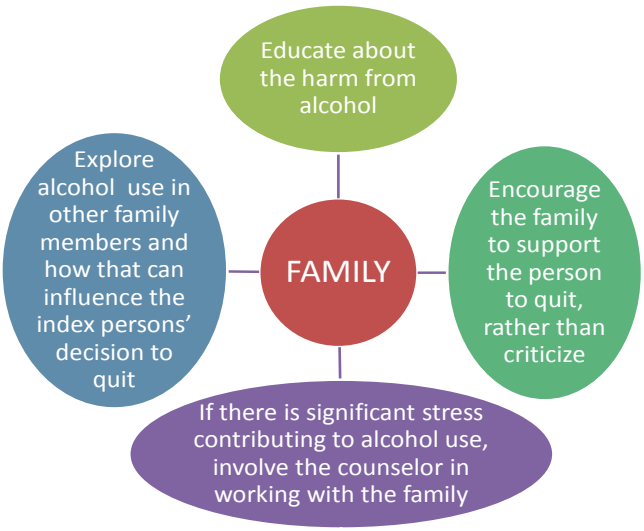
Slide 38

SUMMARY

- Involve other health care providers like Counselors, Community Health Workers and specialists and District Hospital

Slide 39

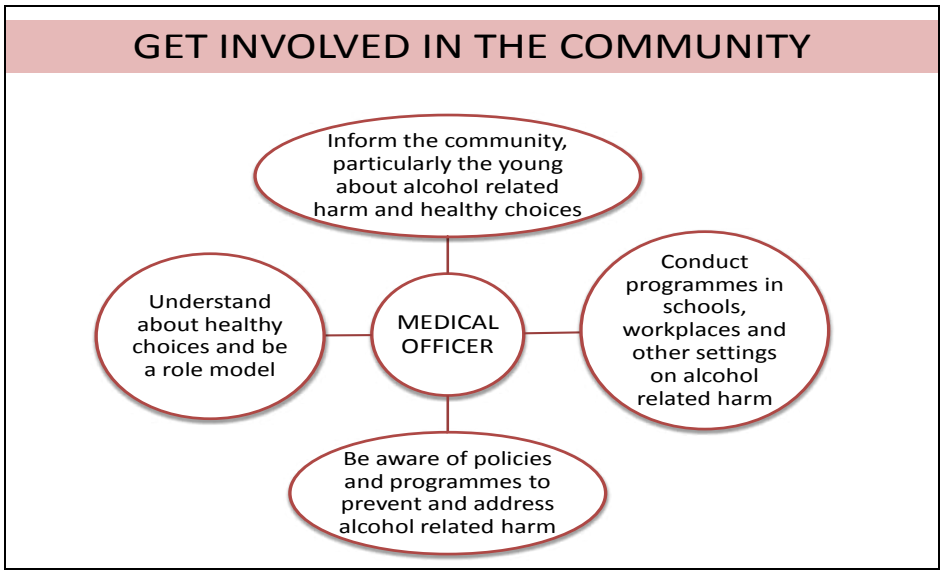
INVOLVE THE FAMILY



Family members are often critical of a person's drinking and this often worsens, rather than improves the drinking. It is more useful to understand why a person's drinks and find other ways of managing this situation. If a person is addicted, family members need to support recovery from such addiction. The Medical Officer's advice will help this process. Sometimes, other family members also have a drinking

habit, and just advising the index patient to reduce or stop drinking may not help. Encouraging multiple family members to change their drinking habits comes with significant health benefits and also improves the family well-being.

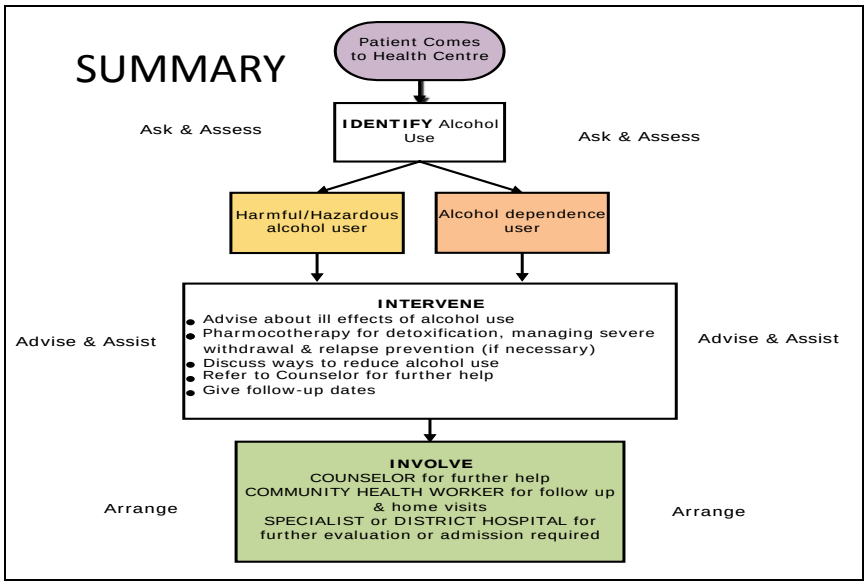
Slide 40



Getting involved in the community

The Medical Officer can be an important opinion maker in the community. Talking about alcohol related harm in public, writing about it in newspapers and magazines, encouraging people to adopt alcohol free lifestyles and being a role model can also influence community attitudes. The medical officer who uses alcohol must also be personally aware of the harm it can cause, and if he/she develops dependence, get professional help to overcome the problem.

Slide 41



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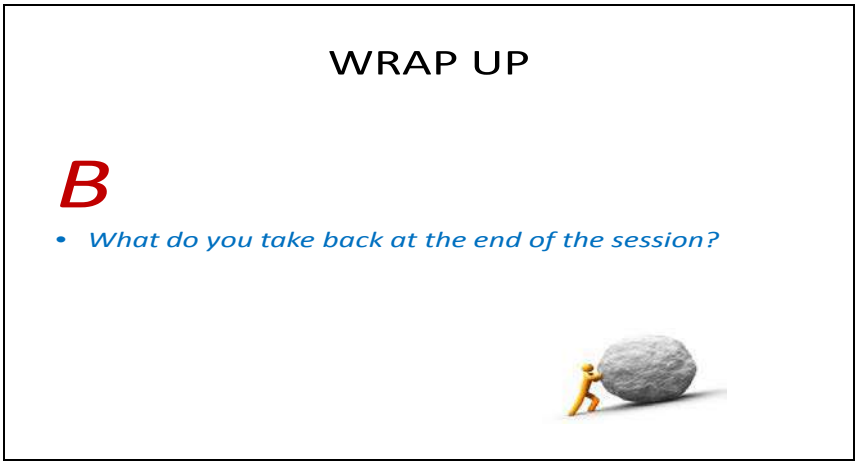
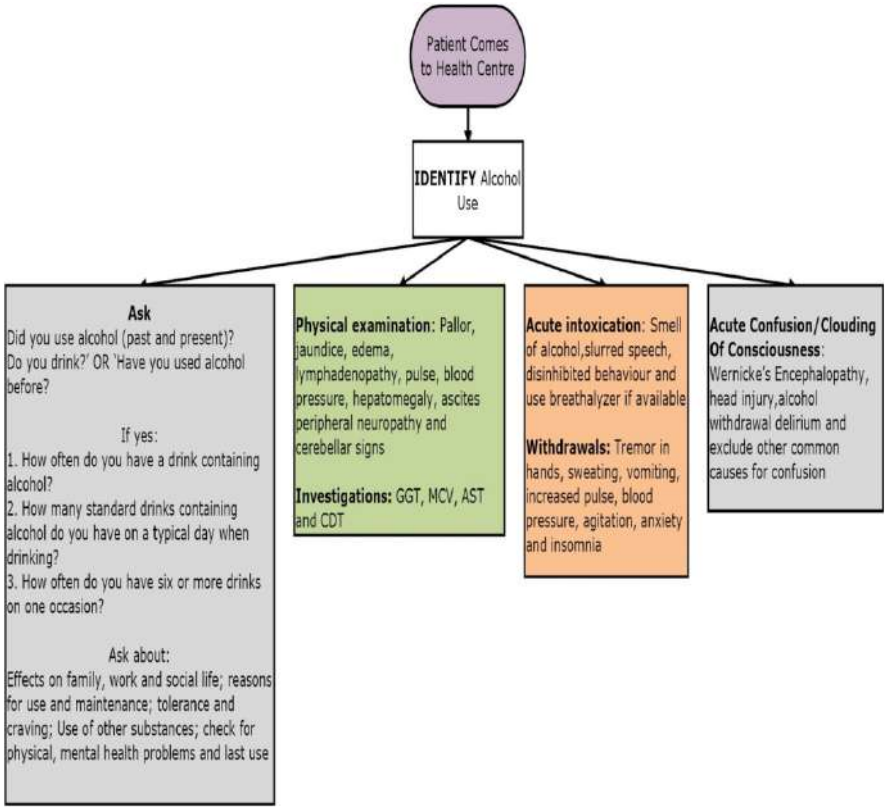


WRAP UP the session by getting participants to share about the challenges in the field and facilitate discussion on how can be overcome.

HANDOUTS

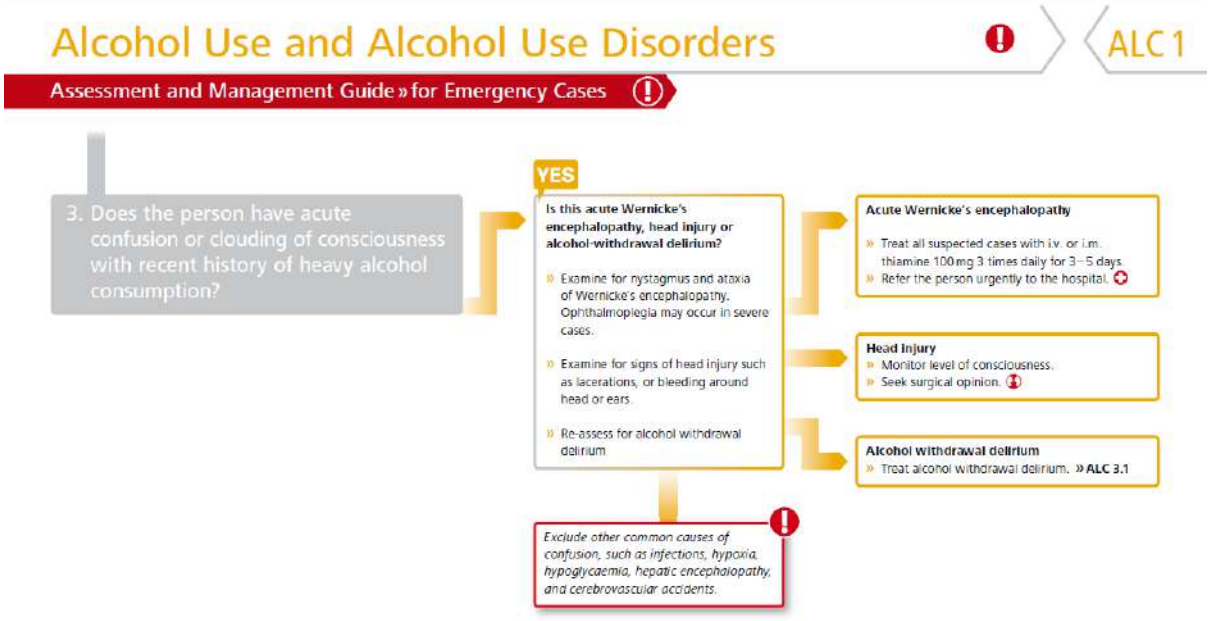
3.1 Identify
3.2 Intervene
3.3 Involve

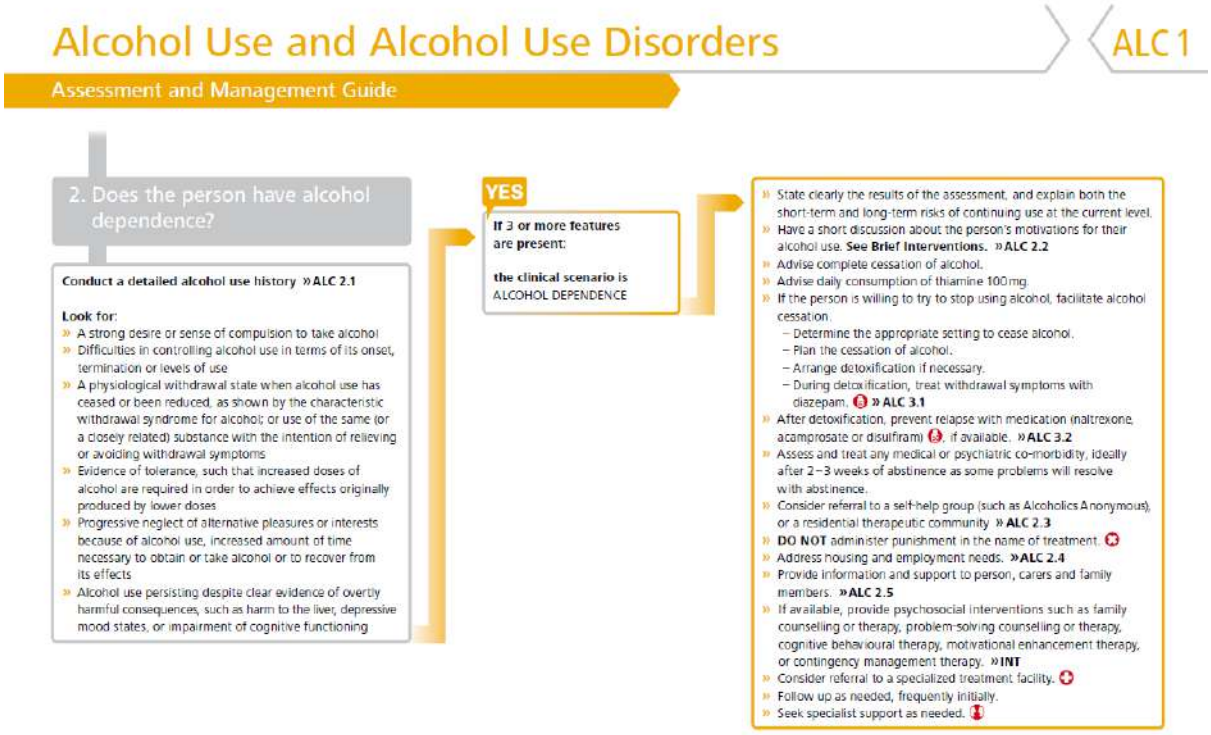
3.1. STEP 1: IDENTIFY



3.2 STEP 2: INTERVENE

mH GAP: Alcohol Use and Alcohol Use Disorders-Assessment and Management Guide





Alcohol Use and Alcohol Use Disorders

ALC 2

Intervention Details

» Where available, work with local agencies and community resources to find supported housing or assisted living facilities, as well as independent living facilities, if these are needed. Carefully consider the capacity of the person and the availability of alcohol or other substances in advising and facilitating optimal housing arrangements.

2.5 Supporting families and carers

Discuss with families and carers the impact of alcohol use and dependence on themselves and other family members, including children. Based on feedback from families:

» Offer an assessment of their personal, social and mental health needs.

» Provide information and education about alcohol use and dependence.

» Help to identify sources of stress related to alcohol use; explore methods of coping and promote effective coping behaviours.

» Inform them about and help them access support groups (e.g. self-help groups for families and carers) and other social resources.

2.6 Substance use in adolescence

» Clarify the confidential nature of the health care discussion, including in what circumstances parents or other adults will be given information.

» Identify the most important underlying issues for the adolescent, keeping in mind that adolescents are often not able to articulate their problems well. This might mean asking open ended questions covering the areas covered by the HEAD acronym (Home, Education/Employment/Eating, Activities, Drugs and alcohol, Sexuality/Safety/Suicide) and allowing sufficient time for the discussion.

» Although they usually present with less severe substance abuse problems, young people can present with severe dependence. It is just as important to screen adolescents for drug and alcohol problems as adults.

» Provide parents and the adolescent with information on the effects of alcohol and other substances on individual health and social functioning.

» Encourage a change in the adolescent's environment rather than focusing directly on the adolescent as being the problem, such as by encouraging participation in school or work and activities after school/work that occupy the adolescent's time, and encourage participation in group activities which facilitate the adolescent's skill acquisition and contribution to their communities. It is important that adolescents are involved in activities which interest them.

» Encourage parents and/or responsible adults to know where the adolescent is, who they are with, what they are doing, when they will be home, and to expect the adolescent to be accountable for their activities.

» Encourage parents to set clear expectations (at the same time being prepared to negotiate these expectations with the adolescent), and to discuss with adolescents the consequences of the adolescent's behaviours and non conformity with expectations.

» Advise parents to limit their own behaviours which may be contributing to their children's substance use, including the purchasing or providing of alcohol or the provision of funds which are being spent on substance use, keeping in mind the potential influence of their own alcohol and drug use on their children.

2.7 Women – Pregnancy and breastfeeding

» Advise women who are pregnant or considering becoming pregnant to avoid alcohol completely.

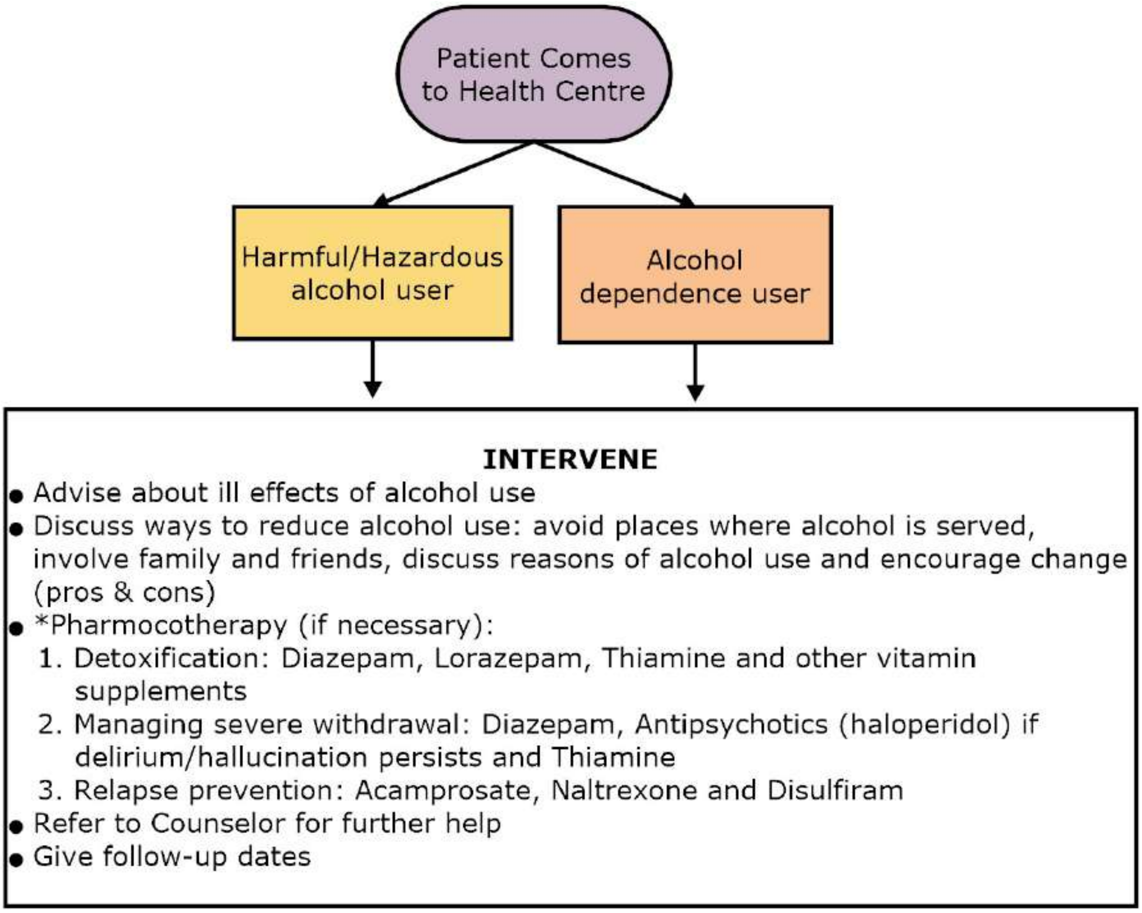
» Advise women that consuming even small amounts of alcohol early in pregnancy can harm the developing foetus, and that larger amounts of alcohol can result in a syndrome of severe developmental problems called Foetal Alcohol Syndrome (FAS).

» Advise women who are breastfeeding to avoid alcohol completely.

» Given the benefits of exclusive breastfeeding (particularly in the first 6 months), if mothers continue to drink alcohol they should be advised to limit their alcohol consumption, and to minimise the alcohol content of the breast milk, such as by breastfeeding before drinking alcohol and not again until after blood levels fall to zero (allowing approximately 2 hours for each drink consumed, i.e. 4 hours if TWO drinks are consumed), or using expressed breast milk.

» Mothers with harmful substance use and young children should be offered what social support services are available, including additional post natal visits, parenting training, and child care during medical visits.

Simple steps for managing alcohol use disorders in primary care



*Pharmacotherapy

Table 1: The list of drugs prescribed for detoxification is given below:

DETOXIFICATION MANAGEMENT OF WITHDRAWAL SYMPTOMS			
DRUG (TRADE NAME)	DOSAGE & DURATION	SIDE EFFECTS	CONTRAINDICATION
Diazepam (As per the mhGAP recommendations)	10-40 mg/day in a qid dose for 3-7 days and taper. The dose and duration of diazepam should be determined individually according to the severity of the withdrawal syndrome and other medical conditions. In the hospital setting, diazepam can be given more frequently (hourly) and higher daily doses (up to 120 mg daily can be given for the first 3 days based on frequent assessments)	Drowsiness, fatigue and in coordination (most common)	Safe
Chlordiazepoxide	50-120 mg & gradually over 7-10 days	Drowsiness, tiredness, Swelling, skin rash, nausea, vomiting, constipation and irregular menstrual periods	Safe
Lorazepam	4-12 mg & gradually over 7-10 days	Dizzy, drowsy and cause blurred vision	Safe even in liver diseases

Please Note: Roughly for one unit of alcohol (30 ml spirit), 1mg of diazepam or 5 mg of chlordiazepoxide is needed.

- Supplement with vitamins.
- mhGAP recommendations for alcohol dependence: Oral thiamine 100 mg/day for 5 days or longer. Other vitamins as necessary. For delirium, thiamine 100 mg IV or IM three times daily for 5 days or longer
- Treat patient for other physical problems like dehydration and gastritis is important. Look for co - morbid conditions like depression and anxiety and medicate.

Table 2. Drugs for relapse prevention (mh gap recommendations)

Acamprosate (333 mg tablets)	Suppresses the urge to drink Can be started immediately after withdrawal symptoms subside Dose: 2 tablets thrice daily in persons above 60kgs 2 tablets twice daily in persons below 60 kgs Duration of treatment – one year	20% of patients may experience side effects like diarrhoea, nausea, vomiting, abdominal pain, pruritis, occasional maculopapular rash and rarely bullous skin lesions	Relatively safe except in persons with renal Insufficiency
Naltrexone (50 mg)	Suppresses the urge to drink. Can be started after withdrawal symptoms subside Dose: 50 mg/day. Can be maintained at 50-100 mg/day for one year.	20% of patients may experience side effects like nausea, vomiting, abdominal pain, anxiety, sleep disturbance, headache, reduced energy, joint and muscle pain.	Patient must be warned not to use any opioid drugs while on naltrexone. With higher doses, liver function tests recommended as liver toxicity can occur
Disulfiram (250 mg)	Causes an unpleasant and potentially dangerous reaction if combined with alcohol. The patient must be advised of the mechanism of action and that one in 15,000 patients can have a fatal reaction (much rarer than alcohol related complications) Dose: 250 mg/day for one year	Adverse reactions include nausea, vomiting, drowsiness, fatigue, decreased libido, rarely psychotic reaction, allergic dermatitis, peripheral neuritis or hepatic cell damage. Contraindicated in persons with coronary heart disease, cardiac failure, history of cerebrovascular accident, severe hypertension, psychosis, severe personality disorder or suicidal risk	Should be offered to motivated patients and where the drug can be monitored by a family member or a treatment professional.

3.3 STEP 3: INVOLVE OTHER HEALTH CARE PROVIDERS

- Counselor for promoting behavioural change:
    - Assessing alcohol use (AUDIT-C)
    - Providing brief counselling: educating health consequences, using balance sheet for motivating and discussing relapse prevention strategies.
- Community Health worker for follow up (patients who miss follow up dates) and home visits (to monitor progress)
- Specialist (De-addiction centre)/District Hospital for specialist care
- Lab for investigations

Unhealthy diet as a risk factor for NCDs

Session 4

Objectives of the session

By the end of this session, the participants will understand the following:

- The double burden of dietary diseases
- Unhealthy diet as a risk factor for NCDs
- Constituents of a healthy diet
- Identification of unhealthy dietary practices among patients
- Intervention for unhealthy diet and promotion of healthy diet
- Involvement of other care providers in promoting healthy diets in the clinic and community

Organization of the session

- *Facilitator's reading material:* The facilitator should read the material before the session. Sources for specific information are quoted and included as references in the footnotes.

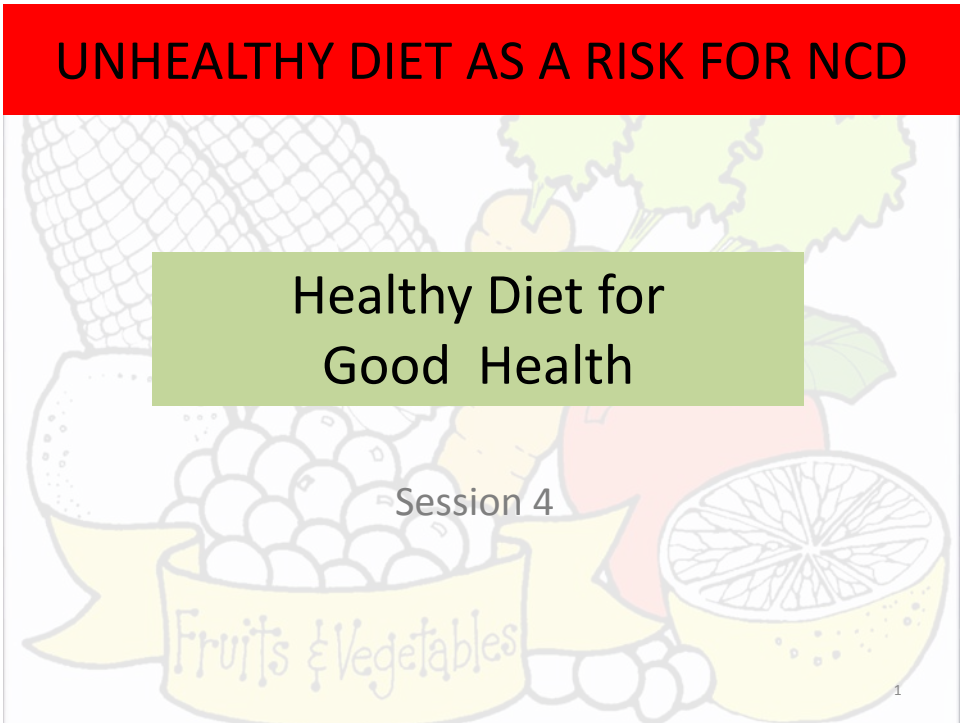
- *Handouts:* Copies of handouts will be made before the session and distributed either before or after the session. List of handouts are included at the end of each session.

- *Power point presentation:* A DVD containing the power point presentations accompanies the training manual. The slides for each session are reproduced in the manual to aid the facilitators.

- ***Activities**:*

  Activities during the training session may include:

  - **Brainstorming** or whole group interaction, indicated by the letter '**B**' and the symbol 
  - **Group activity** or discussion in small groups, indicated by the letter **GA** and the symbol 
  - **Individual Activity**, indicated by letter **IA** the symbol 
  - **Role Play** is indicated by the letter **RP** and symbol 



INTRODUCTION

India faces the dual problem of under nutrition and over nutrition and both these states contribute to a host of preventable health conditions, especially non communicable diseases.

Under nutrition

The relationship between under nutrition and health has long been known in low and middle income countries. Under nutrition and consumption of low-nutrition foods poses a great problem, particularly in lower income groups. Children exposed to under nutrition in utero or early in life carry greater risks for NCDs as adults (the Barker hypothesis). It is also known that due to the maternal effect of malnutrition, genetic programming during gestation can alter vulnerability to cardiovascular disease and diabetes later in life (epigenetic changes).

The World Economic Forum now rates NCDs in the top five threats to global economic development worldwide. The extensive medical and socio-economic effects of NCDs are both causes and consequences of poverty. Poverty and poor living conditions restrict healthy lifestyle choices and increase the propensity for risk factor exposure and overall NCD development.[76]

A growing number of developing countries must shoulder a "double burden" of malnutrition: the persistence of under-nutrition, especially among children, along with a rapid rise in overweight, obesity and diet-related chronic disease. In developing countries undergoing rapid economic

[76]FAO. 2006. http://ftp.fao.org/docrep/fao/009/a0442e/a0442e.zip

transition, under-nutrition, over-nutrition, infectious and chronic diseases coexist over long periods of time."[77]

In a NCD risk factors survey in India[78], prevalence of being overweight was higher among females compared with males across all the age groups and was higher in urban compared with rural population. Those with lower levels of education had a lower prevalence of being overweight. Persons whose occupation was agriculture or manual work also had lower prevalence of overweight. Inadequate amount of fruits and vegetables (less than five servings of fruits and vegetables per day) was reported in all the seven states studied.

Diet and health conditions including NCDs:

The effect of unhealthy diet both on premature death and disease is now recognized as a serious problem in developing countries. According to the WHO[79] , dietary factors contribute to about 30% of all cancers in industrialized countries and upto 30% in developing countries. Over- nutrition is becoming a problem especially in urban areas and more women have diabetes or hypertension and obesity compared to men with these conditions. One fourth of the adult population and one fifth of school going children are overweight in India. Unhealthy diet is one of the leading causes of non-communicable diseases such as heart diseases, hypertension, cancer and diabetes.

- Obesity associated with heart attack, stroke, diabetes and cancer.
- Hypercholesterolemia is linked with atherosclerosis, premature heart disease and diabetes.
- Increased salt intake is related to hypertension, cancer, atherosclerosis and diabetes
- Inadequate dietary fibre is related to micro-nutrient deficiencies and colon cancer risk

Healthy diet reduces the risk of heart diseases, as well as type 2 diabetes[80]. It is estimated that 30% of disease can be controlled with proper diet. Healthy diet also leads to a better quality of life and health, less psycho social problems and high productivity.

This session on diet will help the Medical Officers to understand the linkages of diet as a risk factor to other risk factors and non-communicable diseases. The first objective is about identifying diet as a risk factor. This is followed by interventions to manage problems related to poor diet and involvement of other health care providers through referrals.

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[77] FAO *ibid*

[78]National Institute of Medical Statistics, Indian Council of Medical Research (ICMR) IDSP Non-Communicable Disease Risk Factors Survey, Phase-I States of India, 2007-08.National Institute of Medical Statistics and Division of Non-Communicable Diseases, Indian Council of Medical Research, New Delhi, India, 2009.

[79] National Institute of Nutrition (NIN), Hyderabad. Dietary guidelines for Indians (2nded), 2010. http://ninindia.org/DietaryguidelinesforIndians-Finaldraft.pdf

[80]Sudha V, Radhika G, Mohan V.Current dietary trends in the management of diabetes. *Indian Journal of Medical Research, 2004; 120,* 4-8. http://medind.nic.in/iby/t04/i7/ibyt04i7p4.pdf

Slide 2

AIM

The Medical Officer will be able to address unhealthy diet as a risk factor for NCDs and offer help in primary care.

Slide 3

LEARNING OBJECTIVES

A. Identify unhealthy diet as a risk factor for NCDs
B. Intervene to manage problems related to unhealthy diet
C. Involve other health care providers to offer help and support

3 I's

Slide 4

LEARNING OBJECTIVE

A. Identify unhealthy diet as a risk factor for NCDs

INSTRUCTION

Discuss using brainstorming about the importance of unhealthy diet as a risk for health and the importance of asking patients coming to the health centre.

Slide 5

A Why it is important to identify unhealthy diet?

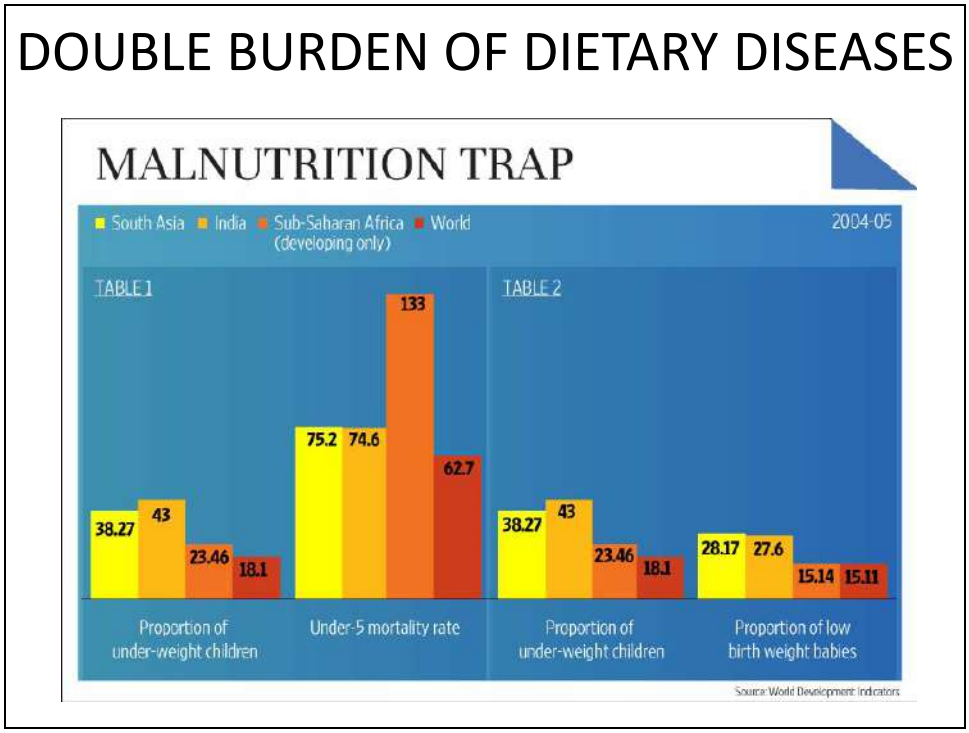
5

ACTIVITY (GROUP WORK)

Duration: 30 minutes

Divide participants into small groups. The groups will discuss why it is important to identify unhealthy diet as a risk factor for NCDs. Give chart paper and pens to make presentations (15 minutes). Each group can nominate a representative to make the presentation. Generate discussion during the presentation.

Slide 6



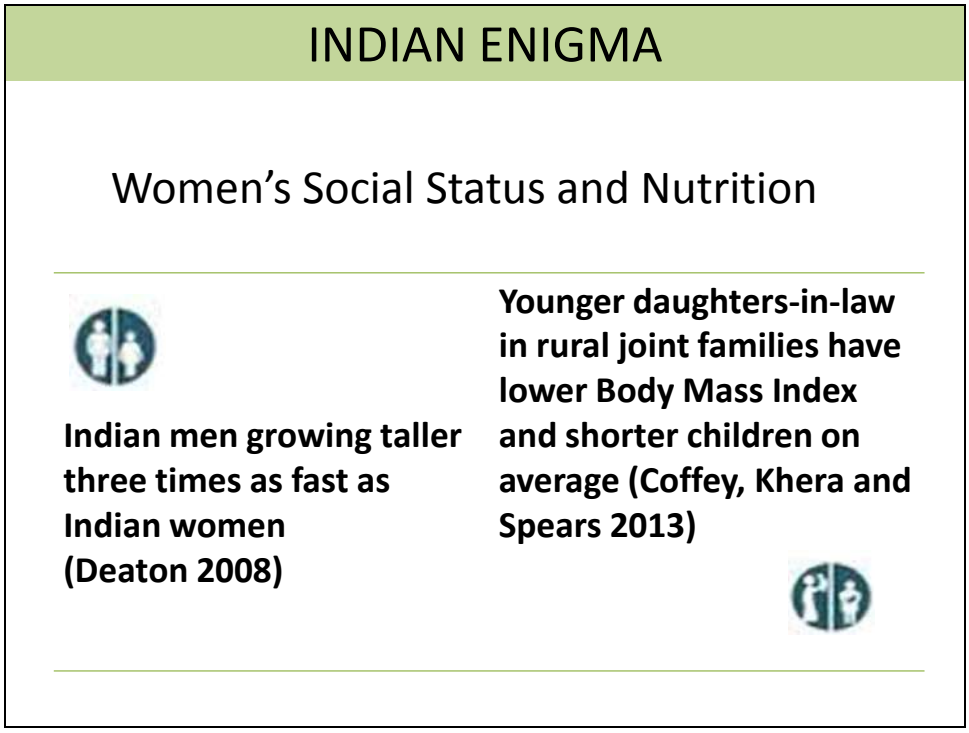
Currently, India is undergoing a rapid socio-economic, demographic, and nutritional health transition. Although India has not yet overcome the problems of poverty, under nutrition and communicable diseases, it is increasingly facing additional challenges related to the affluence that results from industrialization, urbanization and economic betterment.[81] Over the last five decades, there have been steady but slow reductions in the rates of births, deaths, infant mortality and under-five mortality. India still has high infant, perinatal and neonatal mortality. Nearly one-third of Indian children have low birth-weight. While under-nutrition is a problem among children from lower socio-economic groups, over-nutrition has been observed among children in upper socio-economic groups.

[81] Ramachandran P. The double burden of malnutrition in India. In Assessment of the double burden of malnutrition in six case study countries, 2005.

However, over the last three decades, there has been a progressive decline in under-nutrition and some increase in over nutrition in both urban and rural areas. Over the same period, there has also been a decline in the consumption of pulses, which are a major source of protein in Indian diets.

The double burden of malnutrition in India is partly attributable to soaring costs and the inability of poor people to purchase them in adequate quantities, in spite of higher expenditure on pulses. Although India's milk output has increased massively, there has not been any improvement in the per capita consumption of milk. Consumption of vegetables and fruits also continues to be very low. In rural areas, there has not been any significant increase in the per capita consumption of fats and oils and of sugar and jaggery. However in urban areas – even among slum dwellers – there has been an increase in oil consumption and some increase in sugar consumption[82].

Slide 7



Gender, diet and NCD risk

Gender inequality has a bearing on diet throughout the developmental span of an individual. Studies from India have shown how gender discrimination results in greater dietary impoverishment for girls[83]. At the same time, gender has also been shown to have a relationship with unhealthy dietary habits, lower levels of exercise and greater proneness to obesity and diabetes among women.[84]

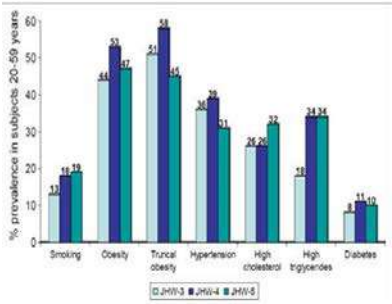
[82] Ramachandran P.*ibid*
[83]Barooah VK. Gender bias among children in India in their diet and immunization against disease. Social Science and Medicine 2004; 58 (4):1719-1731.
[84]The Guardian.Diabetes in India rising with women at a particular disadvantage.Available at the guardian.com, Friday, 24 May 2013.

Slide 8 and 9

THE GLOBAL PROBLEM OF OBESITY

- 1.4 billion adults overweight and more than half a billion obese (2008)
- 2.8 million people each year die as a result of being overweight or obese.
- Obesity has nearly doubled between 1980 and 2008.
- Globally, 44% of diabetes, 23% of ischaemic heart disease and 7–41% of certain cancers are attributable to being overweight and obesity.
- Once associated with high-income countries, obesity is now also prevalent in low- and middle-income countries

GROWING PROBLEM OF OBESITY IN INDIA



Age and sex adjusted prevalence of cardiovascular risk factors among middle socio-economic status subjects aged 20-59 years in the present Jaipur Heart Watch (JHW-5) study conducted in years 2009-10 as compared to previous studies in 2002-3 (JHW-3) and 2004-5 (JHW-4) in Jaipur. Persistently high prevalence of multiple cardiovascular risk factors is observed. Significant increase is observed for high cholesterol and high triglycerides (Mantel Haenzel X2 for trend $p<0.05$) while other trends are insignificant.

Slide 10

DISEASE RISK FROM EXTRA WEIGHT

There is a rapid change in traditional diet to energy rich, nutrient poor foods that are high in fat, sugar and salt and NCDs stem from such diets. Nutrition-related practices and conditions that lead to NCDs are increased weight (obesity), increased fat/ cholesterol intake, salt, processed/ preserved/instant foods and inadequate dietary fibre.

Slide 11

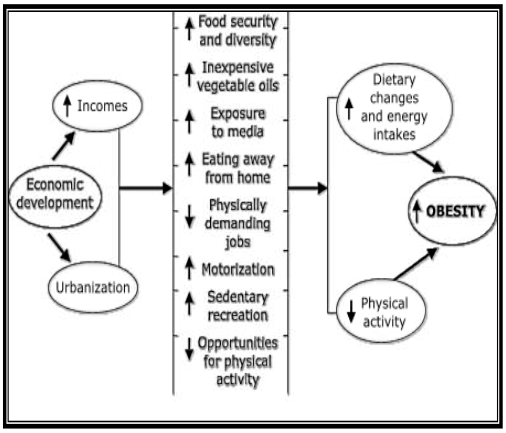
B Why is obesity growing so rapidly in India?

11

ACTIVITY. Brainstorming

Slide 12 and 13

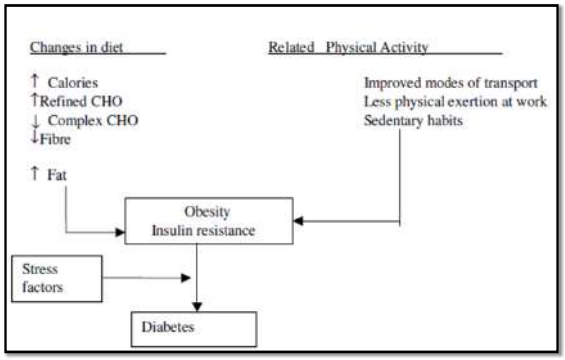
NUTRITION TRANSITION AND THE DEVELOPMENT OF OBESITY IN DEVELOPING COUNTRIES



Martorell and Stein, 2001 (2), and Popkin, 1994 (3).

STUDIES FROM INDIA

Factors associated with the prevalence of diabetes and IGT in urban areas



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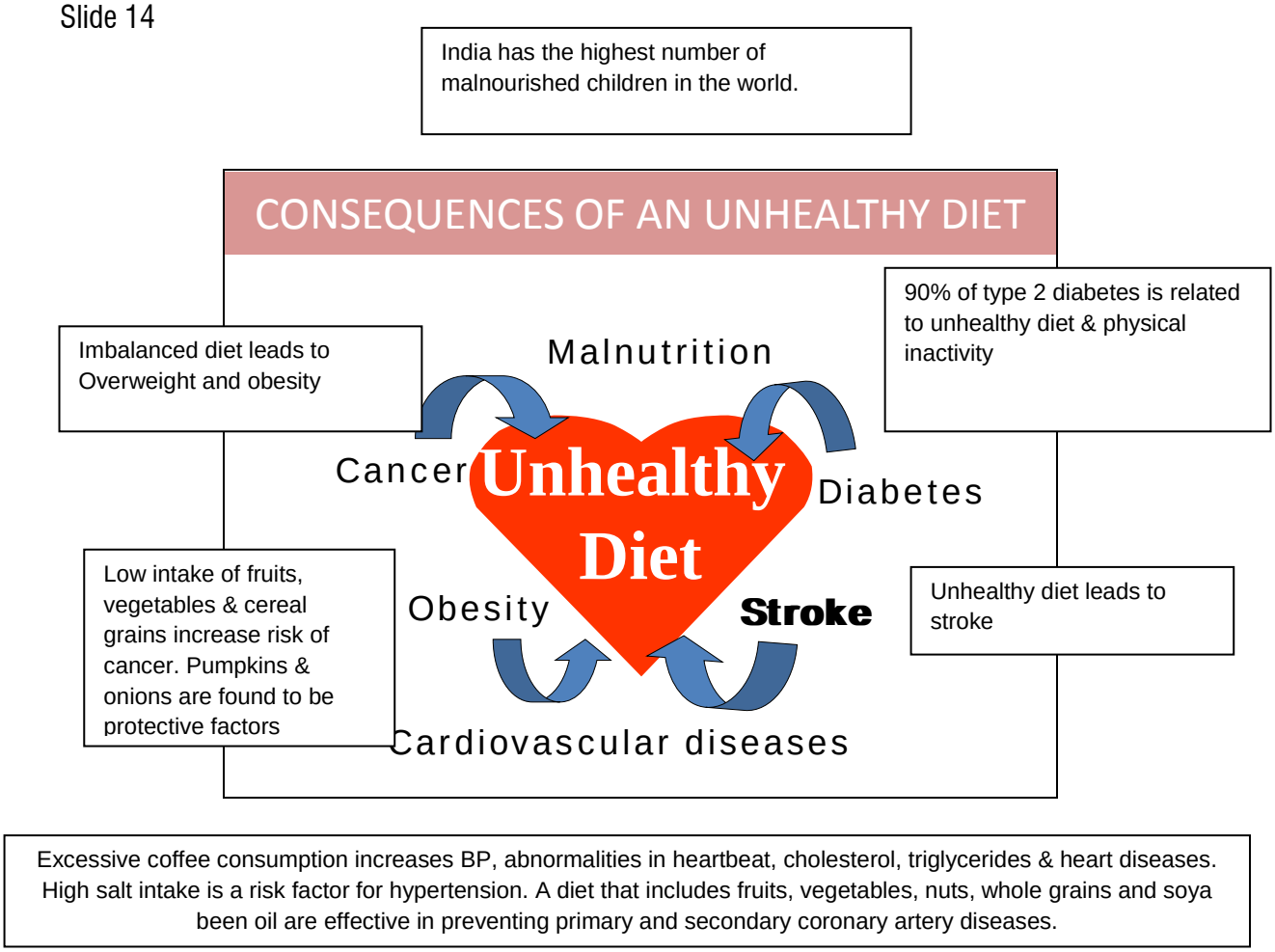


An unhealthy diet (fruits, vegetables, legume and whole grain) is a risk factor for NCDs[85]. Research shows that unhealthy diet increases the risk of cancer[86], hypertension, diabetes[87], cardiovascular diseases [88], stroke [89], obesity [90] and malnutrition. The diagram below illustrates the health consequences of an unhealthy diet based on various studies.

[85] Tokunaga M, Takahashi T, Singh RB, et al. Diet, Nutrients and Noncommunicable Diseases. The Open Nutraceuticals Journal, 2012, 5, 146-159. http://benthamscience.com/open/tonutraj/articles/V005/146TONUTRAJ.pdf

[86]Sankaranarayanan R, Varghese C, Duffy SW, Padmakumary G, Da NE,Nair MK.InternationalJournal of Cancer. 1994 Sep 1;58 (5):644-9. http://ncbi.nlm.nih.gov/pubmed/8077047

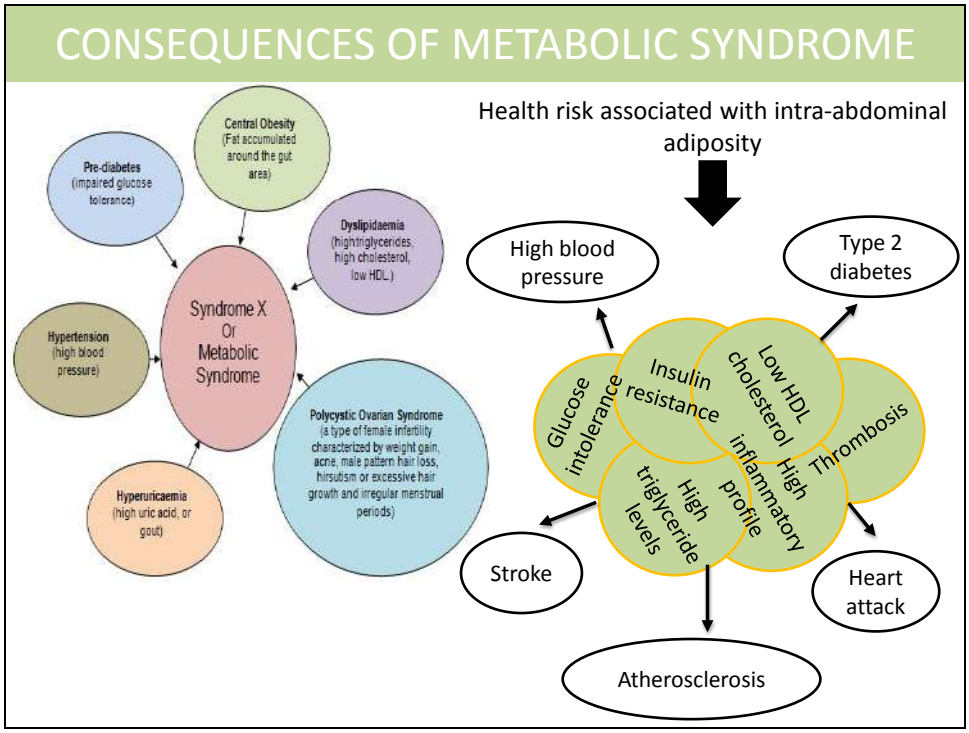
[87]World Health Organization. Unhealthy diet and physical inactivity. NHM fact sheet, 2009. http://who.int/nmh/publications/fact_sheet_diet_en.pdf

[88]National Institute of Nutrition (NIN), Hyderabad. Dietary guidelines for Indians (2nded.), 2010. http://ninindia.org/DietaryguidelinesforIndians-Finaldraft.pdf

[89]Fisher, M., Lees., K., & Spence, D.J. (2006). Nutrition and Stroke prevention.*American Heart Association, 37,* 2430-2435. doi: 10.1161/01.STR.0000236633.40160.ee

[90]Chopra SM, Misra A, Gulati S, Gupta R. Overweight, obesity and related non-communicable diseases in Asian Indian girls and women. Eur J Clin Nutr. 2013 Jul;67(7):688-96.

Slide 15



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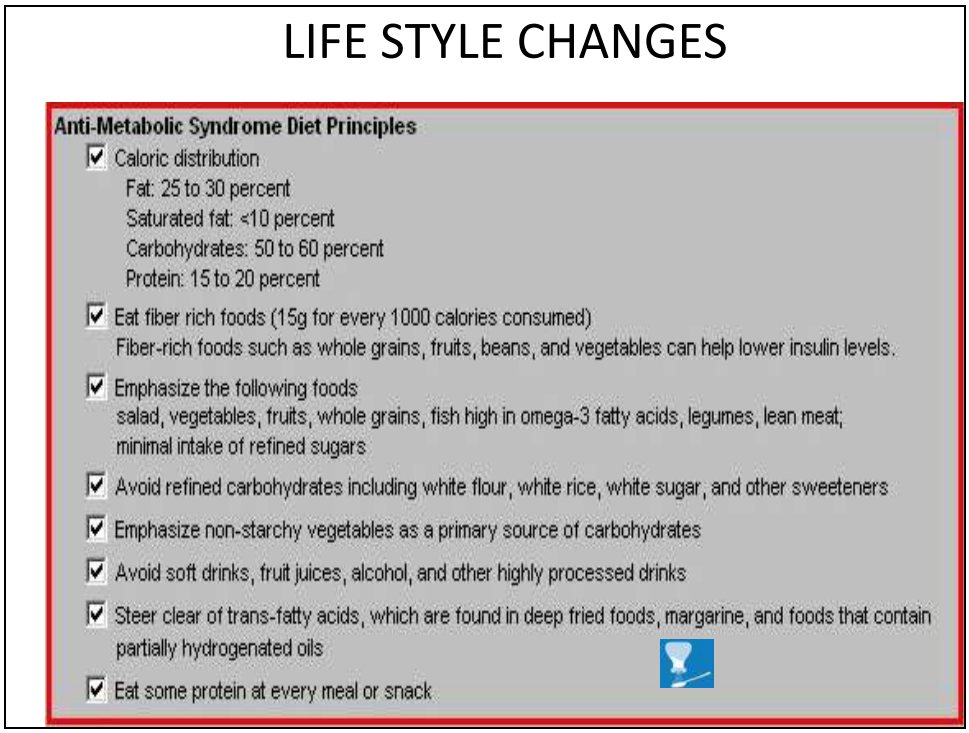


Slide 17

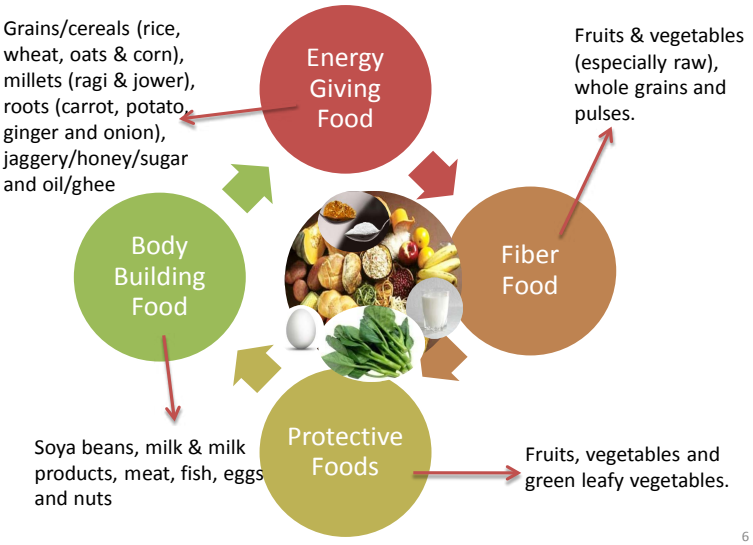
DIETARY SODIUM

- Sodium contained in natural diets (cereals, pulses, vegetables, millets, animal and sea foods): 300-400mg/day
- Indian usual diet salt consumption ranges from 5-30 g across states
- The recommended salt intake is 5 gms /day. Do not add more salt to food
- 40% of Indian families consume about 10 g of salt daily
- Increased salt intake is associated with hypertension, atrophic gastritis, cancer
- High sodium intake is associated with greater calcium excretion leading to reduced bone density
- Sodium: Potassium ratios are important for control of blood pressure

NIN 2010

Slide 18

HEALTHY DIET



6

What is a healthy diet?

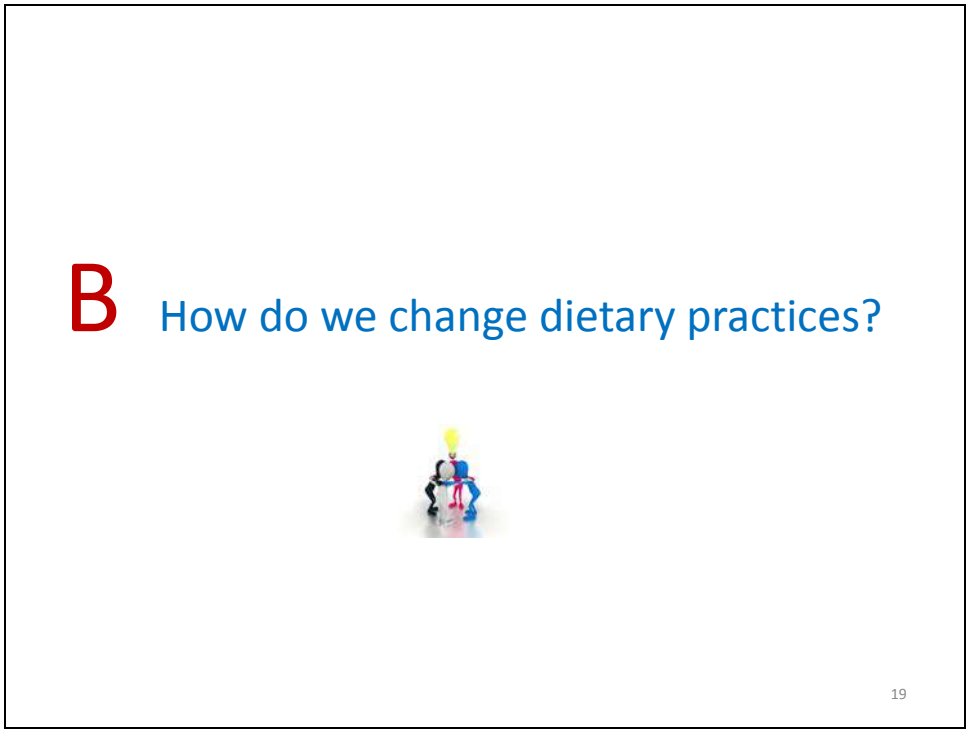
According to NIN, healthy diet is one which provides all the nutrients and non-nutrients (dietary fibre, antioxidants and components produced by plants) in required amounts and proper proportions.

Healthy diet can easily be achieved through the blend of the four basic food groups:

1. *Energy giving food* includes examples such as grains/cereals (rice, wheat, oats and corn), millets (ragi and jower), roots (carrot, potato, ginger and onion), jaggery/honey/sugar and oil/ghee.
2. *Body building food* includes pulses, soya beans, milk and milk products, meat, fish, eggs and nuts.
3. *Protective food* includes fruits, vegetables and green leafy vegetables.
4. *Fibre food* includes fruits & vegetables (especially raw), whole grains and pulses.

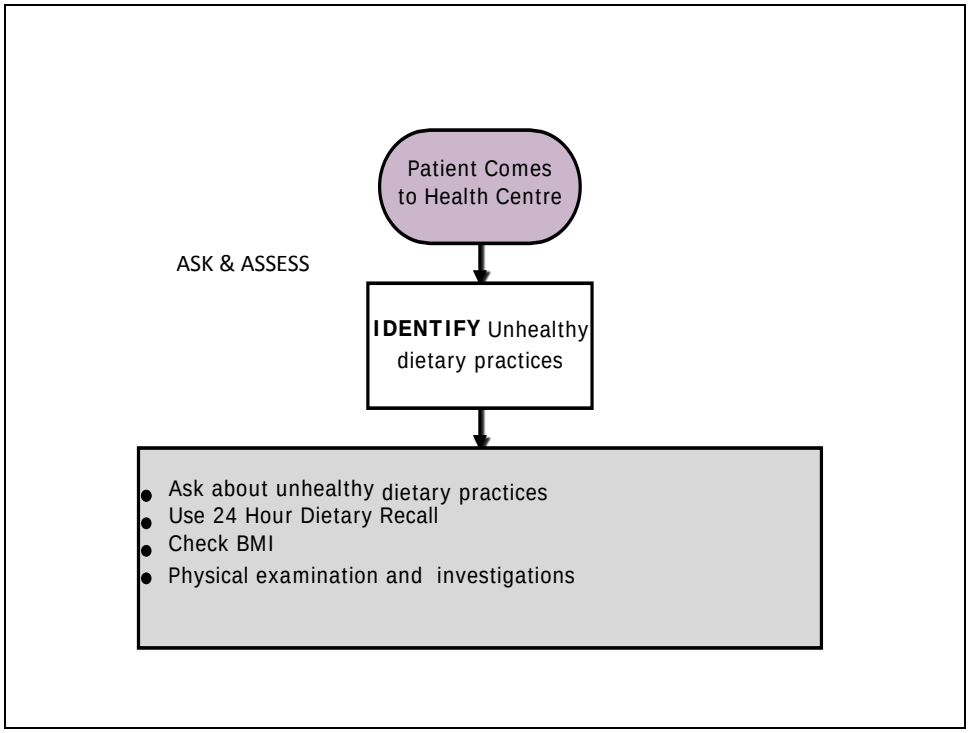
   The choice of what a person eats is based on convenience, habit, trends and income.

Slide 19



ACTIVITY. Generate discussion and write the points on the board.

Slide 20



Slide 21

IDENTIFYING

ASK?

- Unhealthy diet may not be a presenting problem and may not be identified unless asked. Ask about unhealthy diet to those who report health problems.

LOOK FOR
Over weight
Underweight
Obesity

- Ask about unhealthy dietary practices- high intake of salt, oily food, low intake of vegetables and fruits and excess intake of fast foods.

For example: *"Do you use more salt in food?" OR "Do you include vegetables and fruits in your daily meal?"*

Slide 22

24 HOUR DIETARY RECALL

A dietary recall is a retrospective method of dietary assessment where an individual is interviewed about their food and beverage consumption during a defined period of time, typically the previous day or the preceding 24 hours.

Time	Food/beverages consumed	Amount

Slide 23

BODY-MASS INDEX

- Body Mass Index=
  $$\frac{\text{Wt in Kgs}}{\text{Height in M}^2}$$

BMI classification for Indians:
Less than 18.4 - Underweight
18.5 - 22.9 - Normal
23 - 24.9 - Overweight
More than 25 – Obese

BMI classification	
Underweight	< 18.5
Normal range	18.5 - 24.9
Overweight	⩾ 25.0
Preobese	25.0 - 29.9
Obese	⩾ 30.0
Obese class I	30.0 - 34.9
Obese class II	35.0 - 39.9
Obese class III	⩾ 40.0

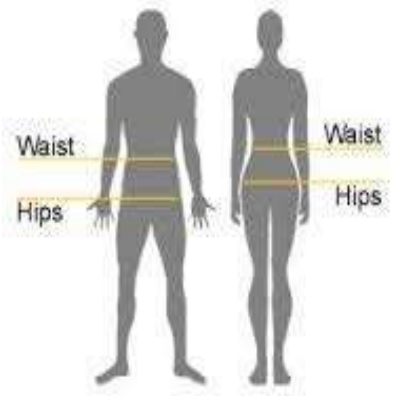
WHO

Consensus guidelines of Ministry of Health and Family Welfare, DFI, AIIMS Govt of India, ICMR, NIN

Slide 24

CENTRAL OBESITY

- Waist circumference
- Waist-hip ratio
- Waist-height ratio



Central obesity defined as either WC>=90 cm men and WC>= 80 cm for women (ICMR)

Slide 25

PHYSICAL EXAMINATION / INVESTIGATIONS

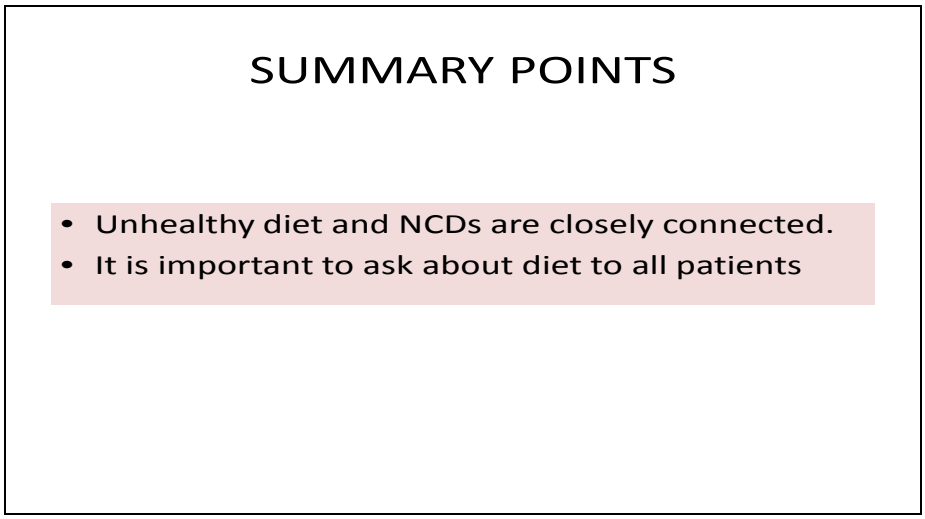
Screening via investigations for nutrition related conditions

- Hypertension
- Dyslipidemia and
- Diabetes Mellitus

The Medical Officer will refer the patient for assessment of risk factors for weight problems (BMI) and ask about nutrition-related practices.

Screening via investigations for nutrition related conditions such as hypertension, dyslipidemia and diabetes mellitus will be done.

Slide 26



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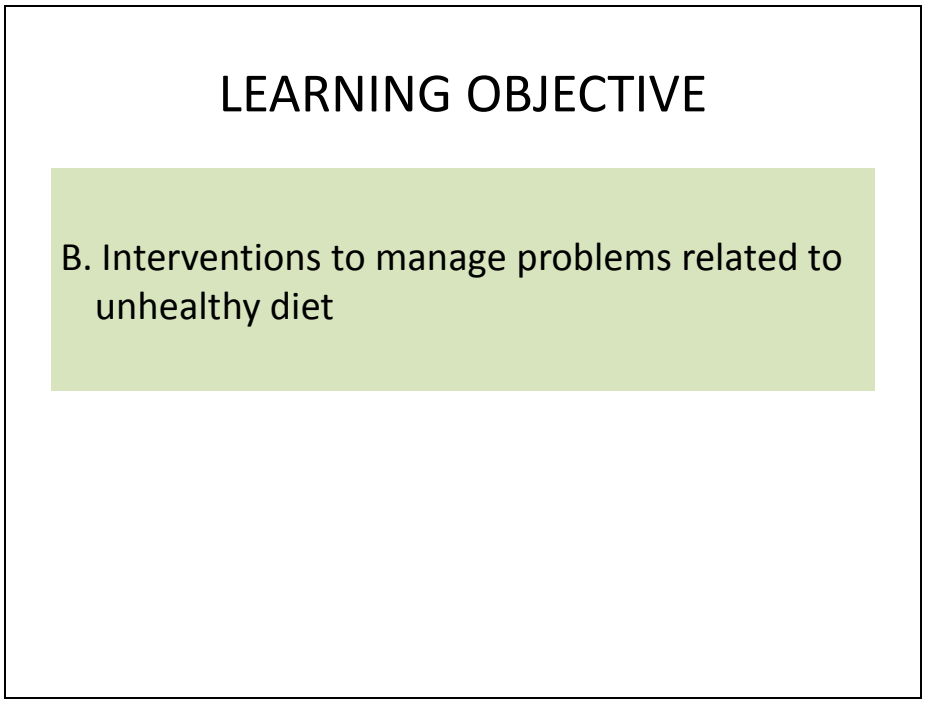
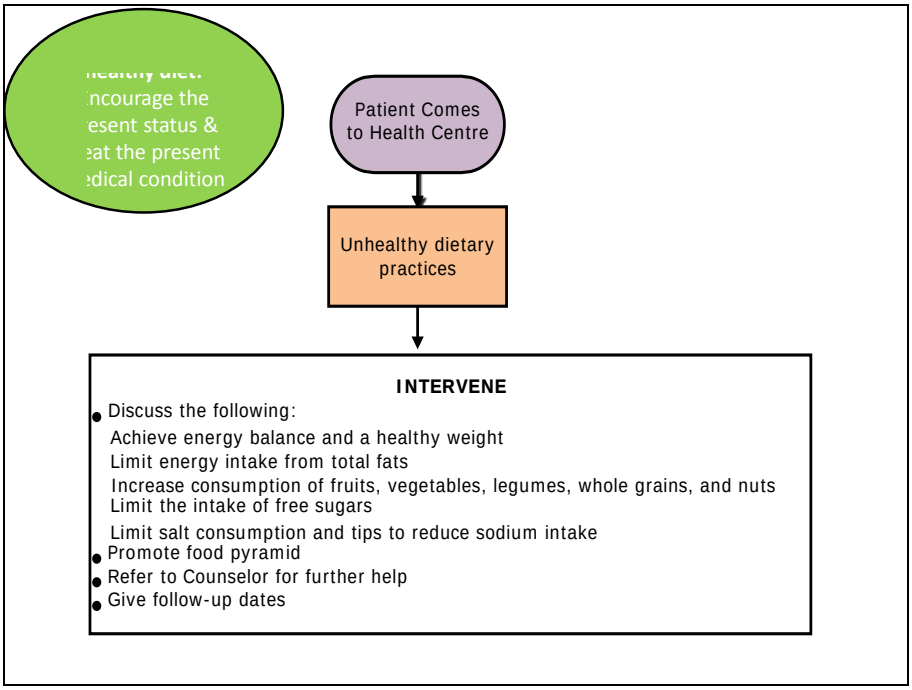


INSTRUCTION

Discuss using brainstorming the steps to address unhealthy diet as a risk factor when patients come to the Health Centre. Flow charts have been to illustrate the steps to offer care.

Slide 28



Slide 29

WHO GLOBAL STRATEGY ON DIET, PHYSICAL ACTIVITY AND HEALTH

Recommendations

- Individuals should achieve energy balance and a healthy weight;
- Limit energy intake from total fats and shift fat consumption away from saturated fats to unsaturated fats and towards the elimination of trans-fatty acids;
- Increase consumption of fruits, vegetables, legumes, whole grains, and nuts;
- Limit the intake of free sugars;
- Limit salt consumption from all sources and ensure that salt is iodized.(Do not add more salt to food at table)

Slide 30

RECOMMENDED FOODS

National Institute of Nutrition Guidelines

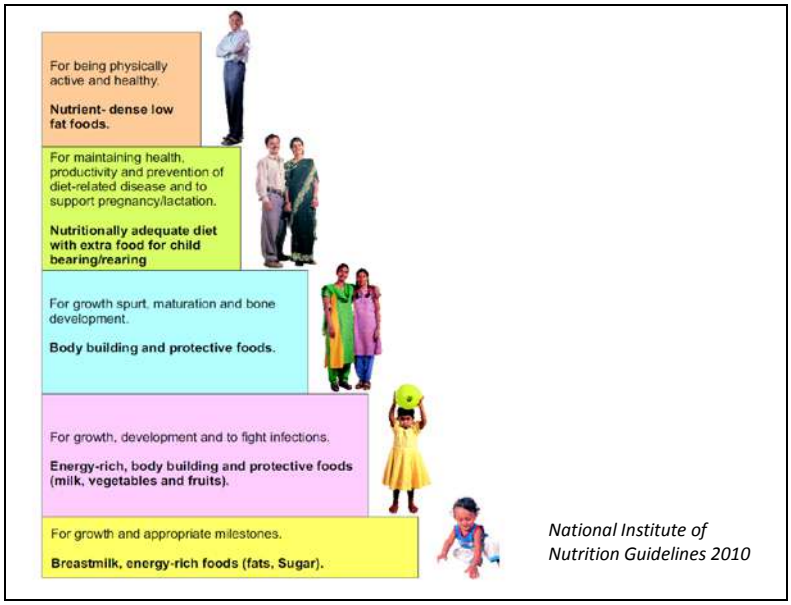
Slide 31

FOOD CONSUMPTION PER DAY

	Intake		RDA*
	CU	Per Caput	Per Caput
Cereals/millets	396	345	400
Pulses	28	24	35
Milk	82	71	131
Vegetables	49	43	52
Oils	14	12	17

** These values are obtained by multiplying the RDA values per CU by 0.87*
Source: National Nutrition Monitoring Bureau, 2006.

Slide 32



The quantity of food needs to meet the nutrient requirements of a person and this varies with age.

- Toddlers, children & pregnant women need more energy foods
- Pregnant women, adults and elderly need more fibre foods
- Children, adolescents, pregnant women, adults and the elderly needs more protective food
- Adolescents, pregnant women, toddlers (milk) & adults need more body building food

Slide 33

DIETARY SALT RESTRICTION

WHO: the daily consumption of salt should not exceed 5 grams or one teaspoon.

Slide 34

TIPS TO REDUCE SODIUM INTAKE

- Reduce salt in usual cooking
- Avoid sprinkling extra salt onto food while eating
- Reduce salt in dough, chutneys
- Reduce salt in salads
- Be aware that many sweet condiments also contain salt

Avoid

- Processed food
- Restaurant foods with lots of sauce (pizza, pasta, noodles)
- Papads and pickles
- Salted nuts
- Chips, fries, samosas and other fried foods

DIETARY RECOMMENDATIONS FOR SPECIFIC DISEASE CONDITIONS[91]

There are specific dietary recommendations for people with hypertension, heart diseases, diabetes and other NCDs. The two guidelines below are evidence based and are safe to recommend.

DIETARY APPROACHES TO STOP HYPERTENSION (DASH, NIH, 2006)

- Low in saturated fat, cholesterol, and total fat
- Intake of fruits, vegetables
- Fat-free or low-fat milk and milk products
- Reduce salt

NUTRITIONAL GUIDELINES FOR THE PREVENTION OF HEART DISEASES AND DM (FNRI-DOST). (Developed in response to the growing number of Filipinos with DM and heart diseases)

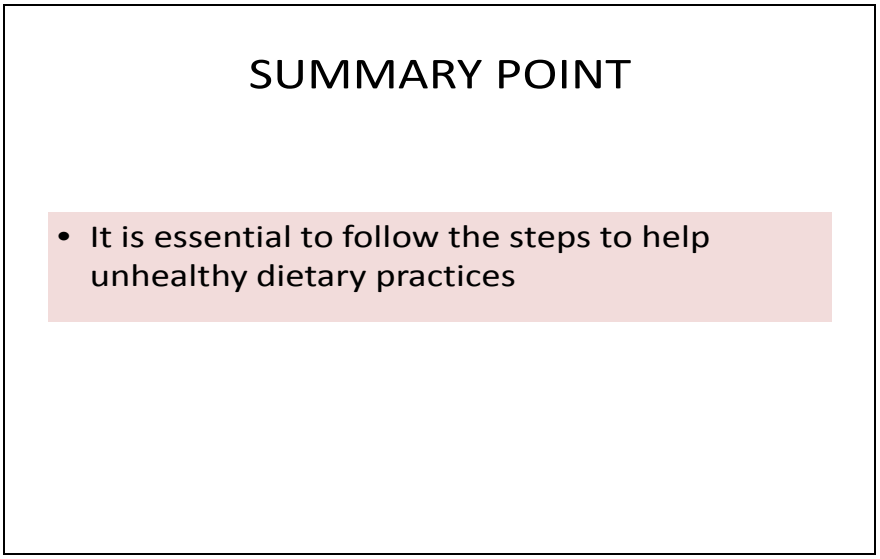
- Eat foods low in fat and cholesterol
- Increase intake of fibre rich foods in the daily diet
- Limit intake of salty foods
- Regulate alcohol intake
- Use healthy oil such as sunflower or safflower oil for cooking (avoid oils high in trans fats and saturated fats like coconut oil and palm oil)

[91] World Health Organization. A training manual for health workers on healthy lifestyle: an approach to the prevention and control of noncommunicable diseases. WPRO, Phillipines 2009. http://wpro.who.int/philippines/publications/trainers_guide_healthy_lifestyle/en/

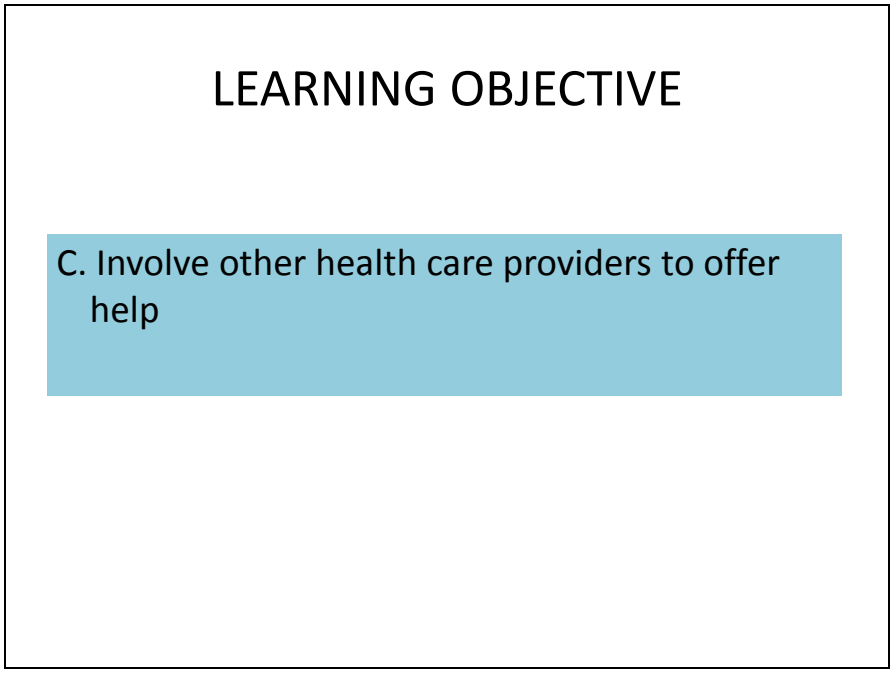
Tips to reduce weight

1. Don’t skip breakfast
2. Eat regular meals
3. Eat plenty of fruits and vegetables
4. Get more active
5. Drink plenty of water
6. Eat high-fibre foods
7. Be aware of the kind of food you are eating (avoiding fatty, salty and sweetened foods)
8. Use a smaller plate
9. Don't keep junk food easily available
10. Avoid alcohol

Slide 35



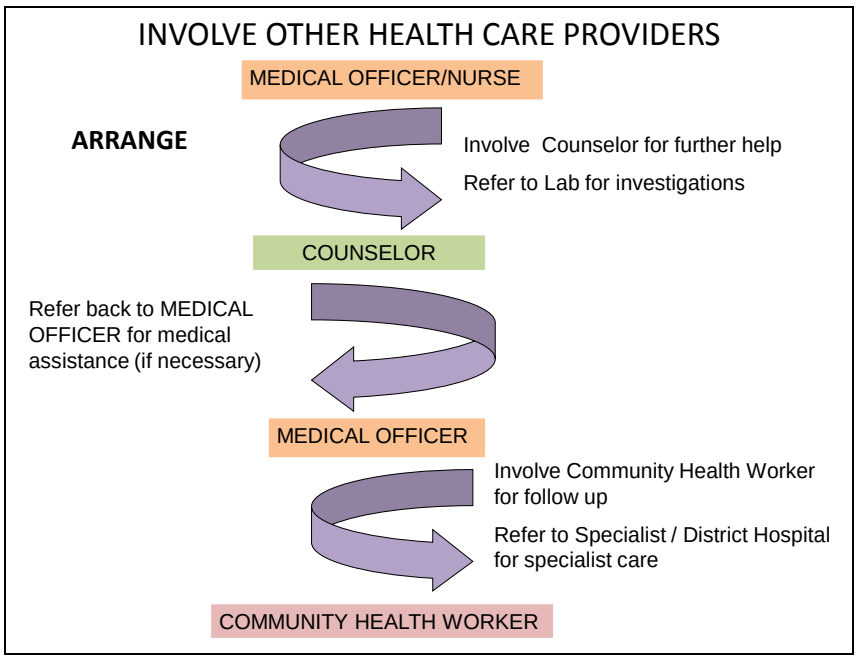
Slide 36



INSTRUCTION

Discuss using brainstorming the steps taken by the Medical Officer to refer the patient to other health care providers at the health centre. Flow charts have been to illustrate the steps.

Slide 37

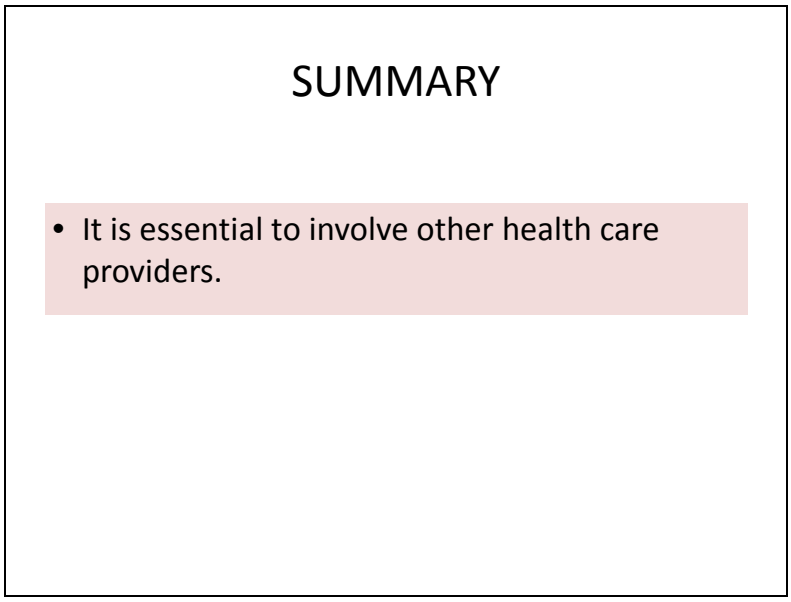


The Medical Officer will link the patient by referring him/ her to the Counselor to manage diet as a risk factor. It is important to reiterate the importance of meeting the Counselor in order to make

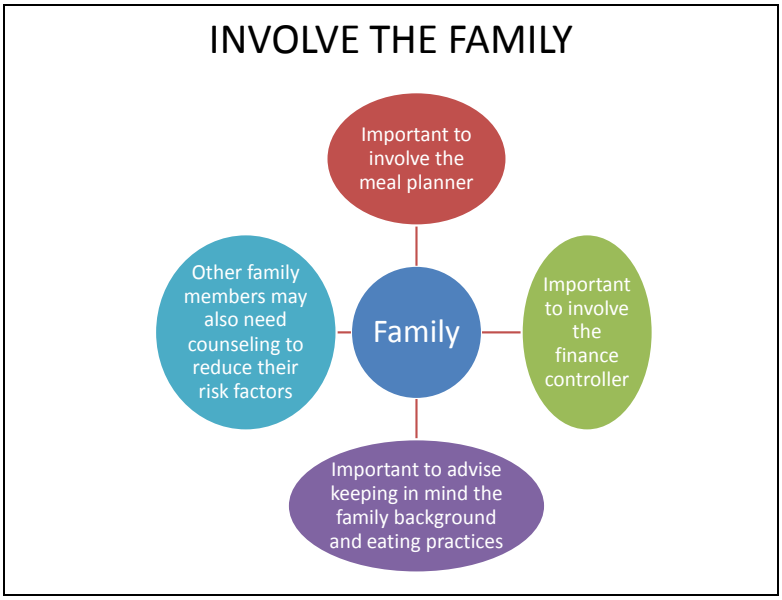
lifestyle changes to address the current health condition. The Medical Officer should routinely advise about dietary changes to different patient groups. Encouraging the patient and family members to create healthy eating practices keeping in mind local cultural practices and affordable food options is necessary. This can be done before or after the patient is referred by the Medical Officer to the Counselor.

Inform patients to come on follow- up dates given by the Counselor/ Medical Officer (when the patient is not regular for follow - up the Community Health Worker will be asked to make home visits).

Slide 38



Slide 39

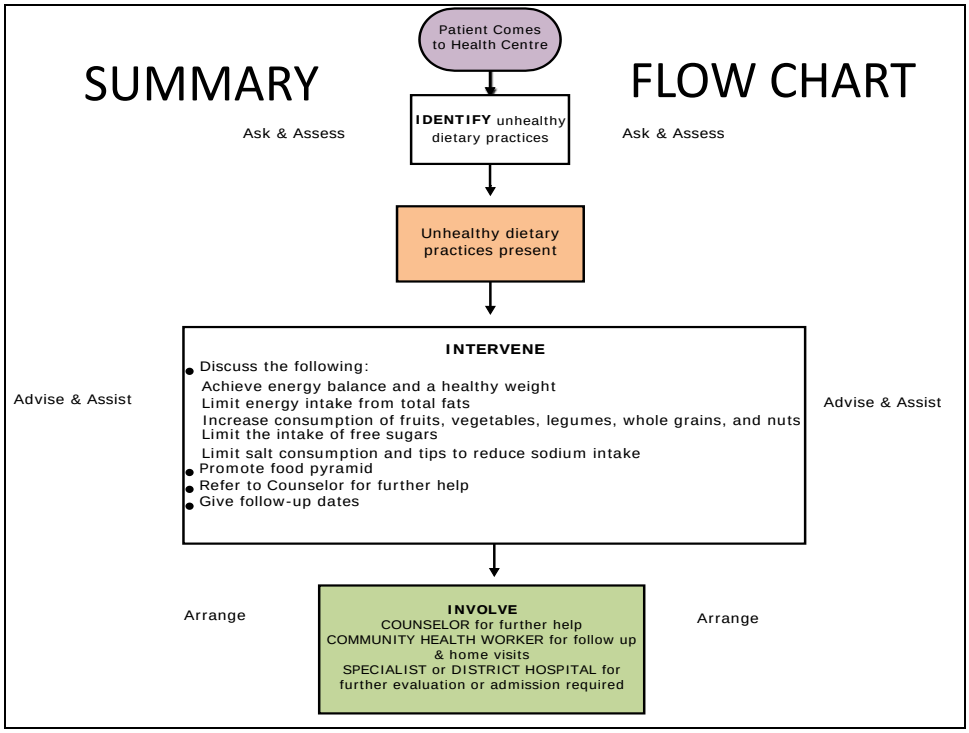


Among people who live at home with their family members, while giving advice regarding dietary changes, it may be useful to involve the family member who is the main person cooking for the household (often a spouse) so that appropriate action is taken to follow the dietary advice. Family members often need to be provided information on unhealthy and healthy food and how to follow a balanced diet. The nurse or counselor can provide such information. The Community Health Worker who visits families would be in a good position to advise them on how to cook hygienically, preserve nutrient content while cooking, reduce oil during cooking etc. Brief advice on diet from the Medical Officer is taken seriously by family members.

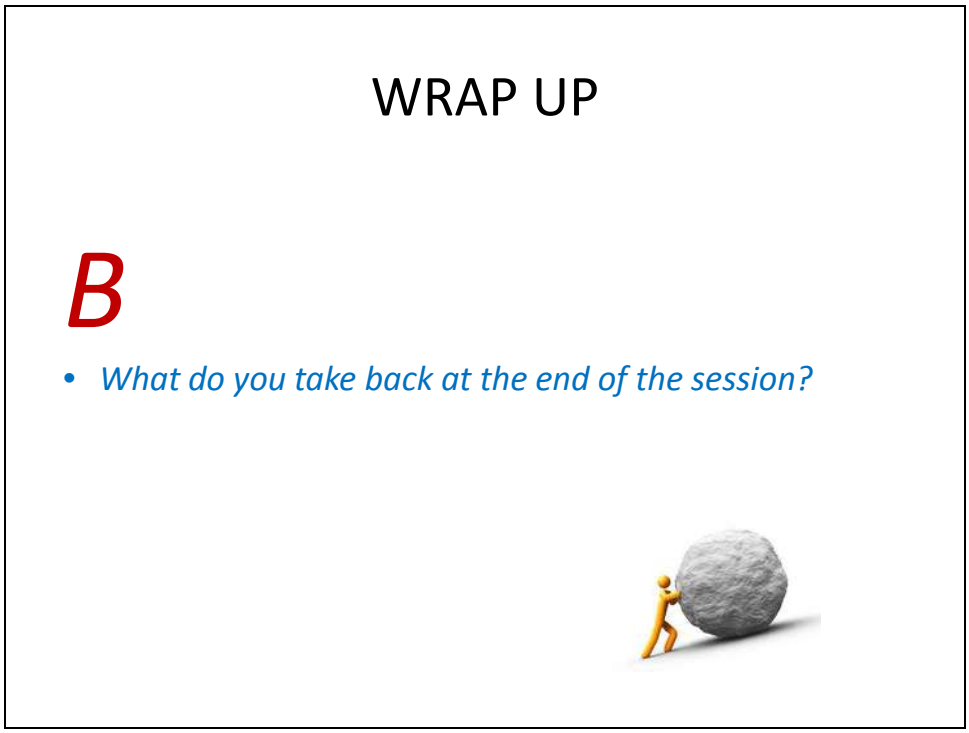
Slide 40

It is important that the Medical Officer steps out of the clinic and takes health related issues to the community. Health care providers need to improve community awareness on issues related to healthy and unhealthy diets, particularly from the point of NCD prevention. Since dietary needs change across the developmental continuum (infants to elderly), the advice for healthy diets differs for different populations. It is useful for people to know about how to choose foods which are quality tested/labeled, to ensure that street food is hygienically prepared and served and to be aware of healthy cooking and safe preservation of food. It is useful for the Medical Officer to be aware of the social and cultural influences that may influence diet habits as well as the country's policies and programmes that support healthy diets.

Slide 41



Slide 42



WRAP UP the session by getting participants to share about the challenges in the field and facilitate discussion on how can be overcome.

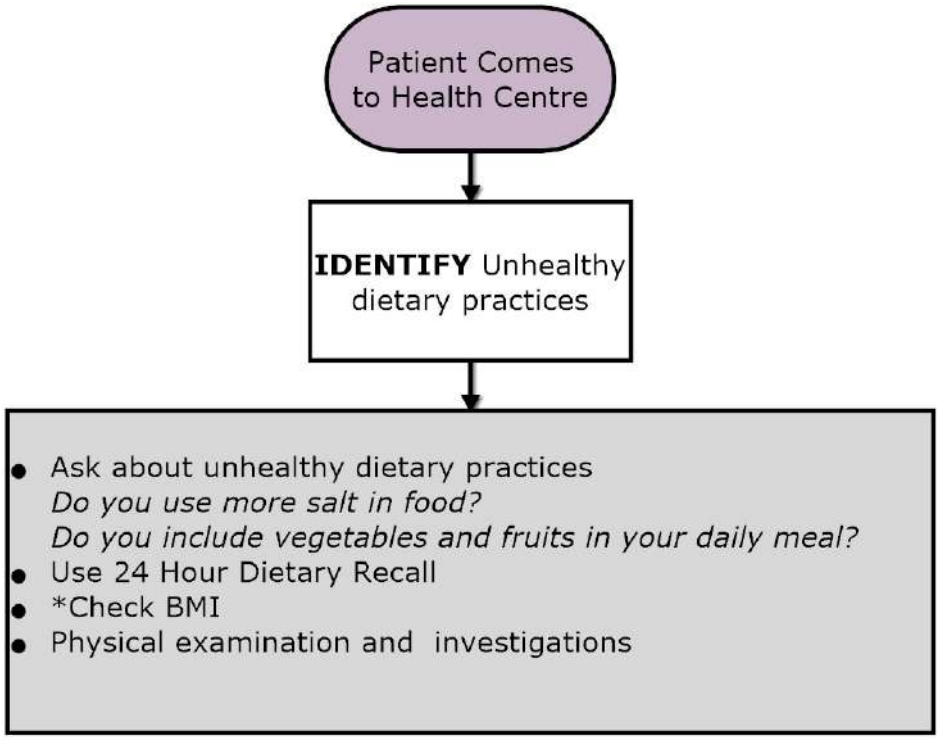
HANDOUTS

4.1 Identify

4.2 Intervene

4.3 Involve

4.1 STEP 1: IDENTIFY

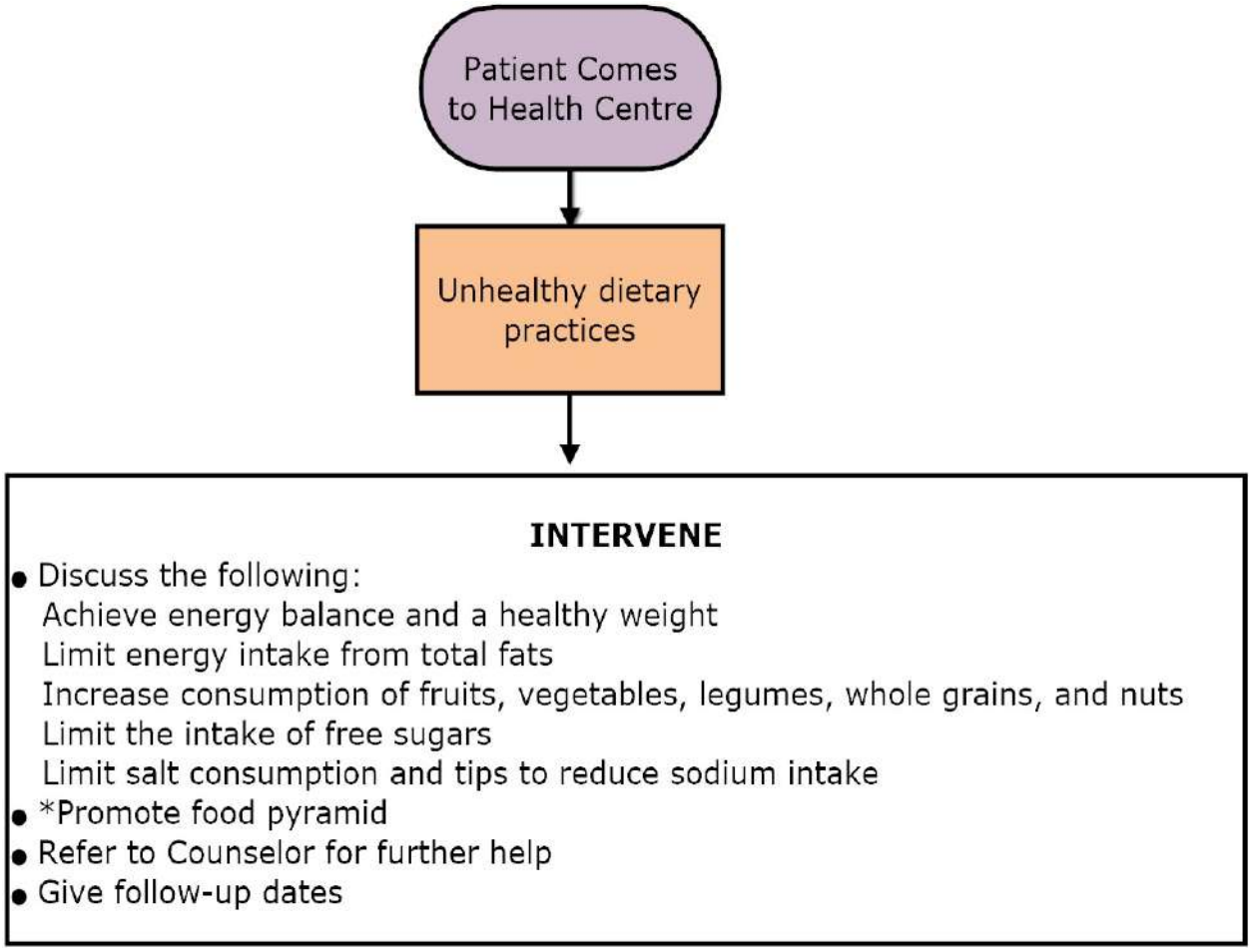


*BMI = $\frac{\text{Wt in kgs}}{\text{Height in M2}}$

BMI classification for Indians:
Less than 18.4 - Underweight
18.5 - 22.9 - Normal
23 - 24.9 - Overweight
More than 25 – Obese

BMI classification	
Underweight	< 18.5
Normal range	18.5 - 24.9
Overweight	⩾ 25.0
Preobese	25.0 - 29.9
Obese	⩾ 30.0
Obese class I	30.0 - 34.9
Obese class II	35.0 - 39.9
Obese class III	⩾ 40.0

4.2 STEP 2: INTERVENE



* Food pyramid

4.3 STEP 3: INVOLVE OTHER HEALTH CARE PROVIDERS

- Counselor for promoting behavioural change:
    - Assessing unhealthy dietary practises (24 hour recall method and unhealthy dietary checklist)
    - Providing brief counselling: educating health consequences, using balance sheet for motivating and discussing tips for healthy diet.
- Community Health Worker for follow up (patients who miss follow up dates) and home visits (to monitor progress)
- Specialist (Dietician)/District Hospital for specialist care
- Lab for investigations

Physical Inactivity as a risk for NCDs

Session 5

Objectives of the session

By the end of this session, the participants will understand the following:

- Health problems associated with physical inactivity and physical inactivity as a risk factor for NCDs
- The importance of regular and adequate physical activity
- Reasons for physical inactivity and barriers for physical activity
- Identification of physical inactivity among patients
- Intervention for physical inactivity and prescription of physical activity
- Involvement of other care providers in promoting physical activity among patients in the clinic and in the community

Organization of the session

- *Facilitator's reading material:* The facilitator should read the material before the session. Sources for specific information are quoted and included as references in the footnotes.

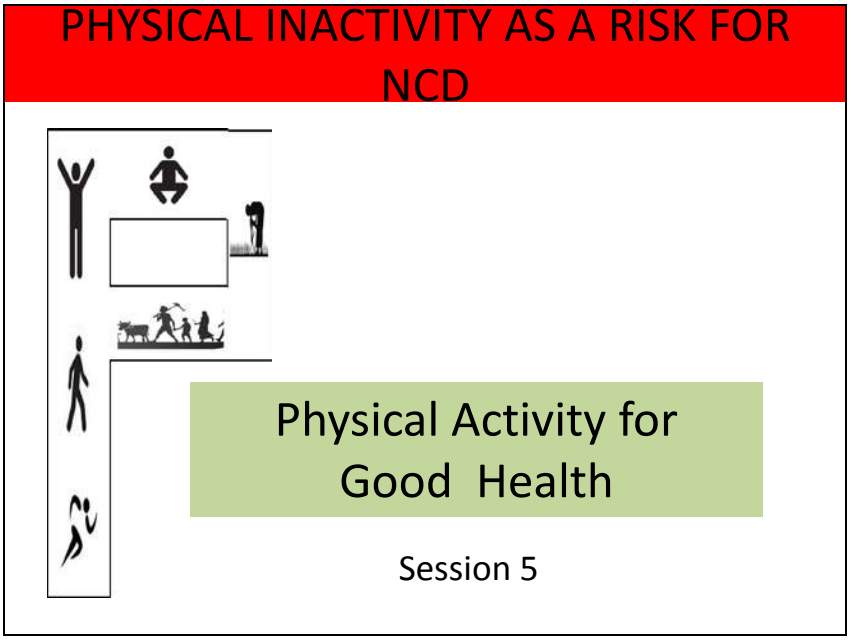
- *Handouts:* Copies of handouts will be made before the session and distributed either before or after the session. List of handouts are included at the end of each session.

- *Power point presentation:* A DVD containing the power point presentations accompanies the training manual. The slides for each session are reproduced in the manual to aid the facilitators.

- ***Activities****:*

  Activities during the training session may include:

  - **Brainstorming** or whole group interaction, indicated by the letter '**B**' and the symbol 
  - **Group activity** or discussion in small groups, indicated by the letter **GA** and the symbol 
  - **Individual Activity**, indicated by letter **IA** the symbol 
  - **Role Play** is indicated by the letter **RP** and symbol 



INTRODUCTION

Physical activity and regular exercise are important for the body and without them the body is at risk for developing illnesses. The WHO[92]estimates that 31% of individuals over the age of 15 years are physically inactive globally.[93] It is estimated that if physical inactivity was reduced by 10%, 1.3 million lives could be saved each year[94], independent of the increased risk from being overweight, having raised blood glucose and raised blood pressure.

Physical inactivity is considered the fourth leading risk factor for global mortality. In developing countries, there is a shift from agriculture to urban and industrial sectors. There is an increase in physical strain and work pressure contributing to fatigue and tiredness. Lack of facilities for recreation and exercise contributes to the problem. Lack of physical activity is identified as a major modifiable risk factor for non-communicable chronic diseases (NCDs). It is a contributing factor for lower back and neck pain, obesity, coronary heart disease, stroke, cancer, type 2 diabetes, hypertension, arthritis, osteoarthritis and osteoporosis.

This session on physical activity will help the Medical Officers to understand the linkages of physical activity as a risk factor to other risk factors and to non-communicable diseases. The first objective is to identify physical activity as a risk factor, followed by interventions to manage problems related to poor physical activity and involvement of other health care providers in addressing risk factors.

Total duration: 2 hours 45 minutes approximately

[92] World Health Organization and Department of Health , Philippines. A Training Manual for Health Workers on Healthy Lifestyle: An Approach for the prevention and control of NCDs. Trainer's Guide, 2009. http://wpro.who.int/philippines/publications/trainersguide.pdf

[93]Hallal PC, Andersen LB, Bull FC, Guthold R, Haskell W, Ekelund U. Global physical activity levels: surveillance progress, pitfalls, and prospects. Lancet 2012;380 (9838):247-57.

[94] Lee et al ibid

Slide 2

AIM

The Medical Officer will be able to address physical inactivity as a risk factor for NCDs and offer help in primary care.

Slide 3

LEARNING OBJECTIVES

A. IDENTIFY physical inactivity as a risk factor for NCDs (Ask and Assess)
B. INTERVENE to manage problems related to physical inactivity (Advise and Assist)
C. INVOLVE other health care providers to offer help (Arrange)

3 I's

Slide 4

LEARNING OBJECTIVE

A. Identify physical inactivity as a risk factor for NCDs (Ask and Assess)

INSTRUCTION

Discuss using brainstorming about the importance of physical inactivity as a risk for health and the importance of asking patients coming to the health centre about their engagement in physical activity. Diagrams and flowchart illustrate the linkages to the health care providers.

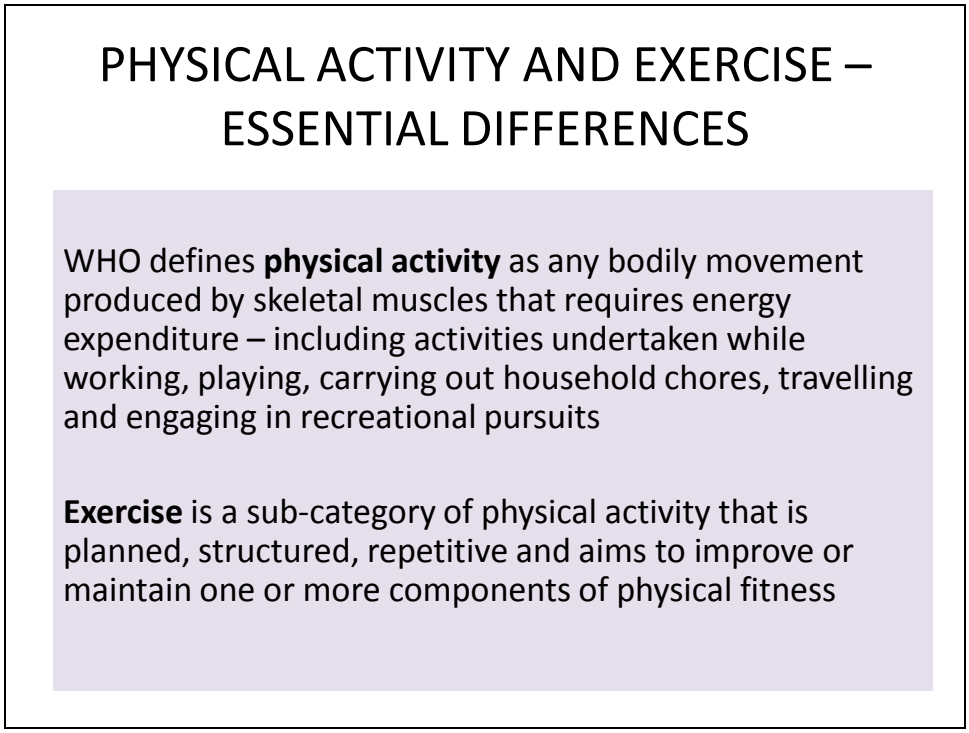
Slide 5

B *How is physical activity different from exercise?*

5

Generate discussion and write them on the board.

Slide 6



Physical activity and Exercise – Essential differences[95]

WHO defines physical activity as any bodily movement produced by skeletal muscles that requires energy expenditure – including activities undertaken while working, playing, carrying out household chores, travelling, and engaging in recreational pursuits.

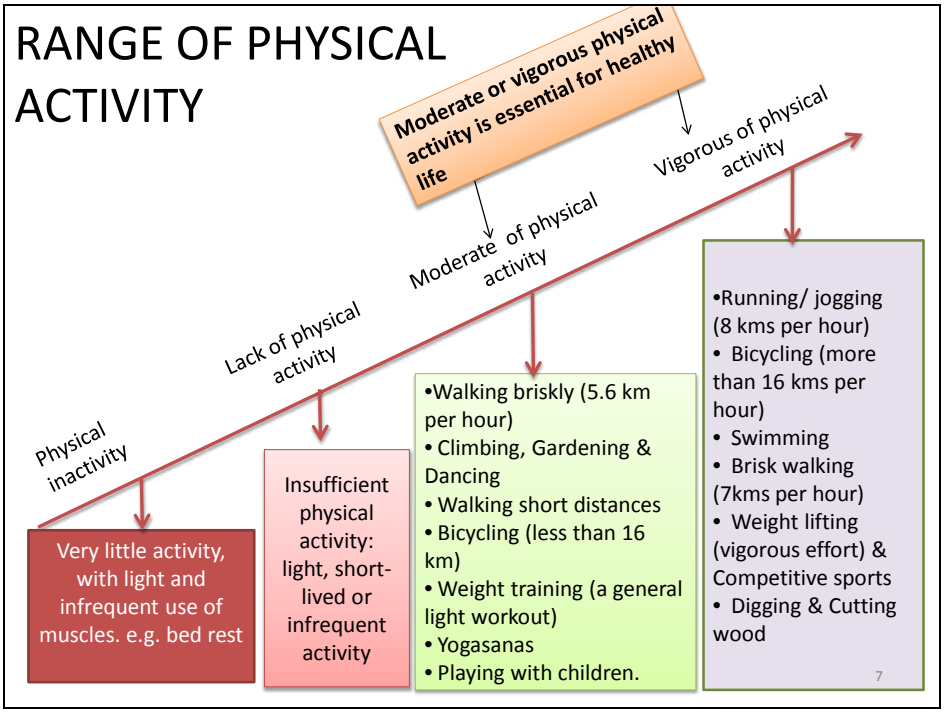
The term "physical activity" should not be confused with "exercise", which is a subcategory of physical activity that is planned, structured, repetitive, and aims to improve or maintain one or more components of physical fitness. Both moderate and vigorous intensity physical activity brings health benefits.

Regular and adequate physical activity:

- Improves muscular and cardiorespiratory fitness
- Improves bone and functional health
- Reduces the risk of hypertension, coronary heart disease, stroke, diabetes, breast and colon cancer and depression
- Reduces the risk of falls as well as hip or vertebral fractures; and
- Is fundamental to energy balance and weight control.

[95] World Health Organization. Fact Sheet on Physical Activity. http://who.int/mediacentre/factsheets/fs385/en/. February 2014.

Slide 7



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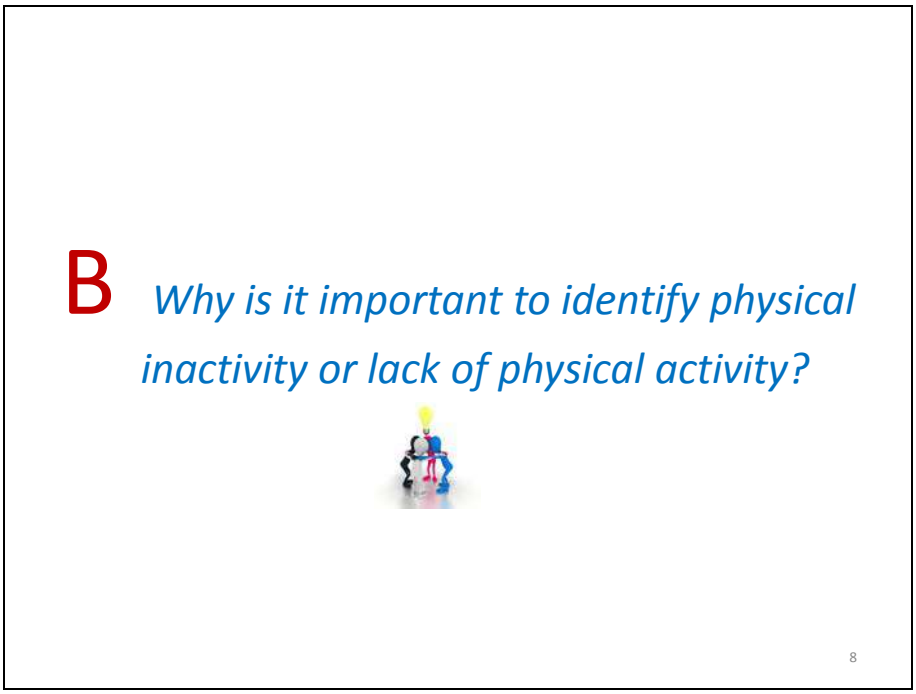


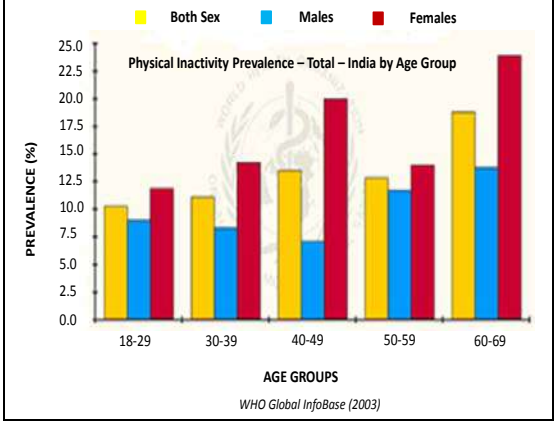
Generate discussion and write them on the board.

Slide 9 and 10

PHYSICAL INACTIVITY

- Physical inactivity has been deemed the *'biggest public health problem* of the 21st century' and has been shown to kill more people than smoking, diabetes and obesity combined
- According to the WHO, 1 in 3 persons (31%) aged 15 years or above all over the world is physically inactive

PHYSICAL INACTIVITY IN INDIA

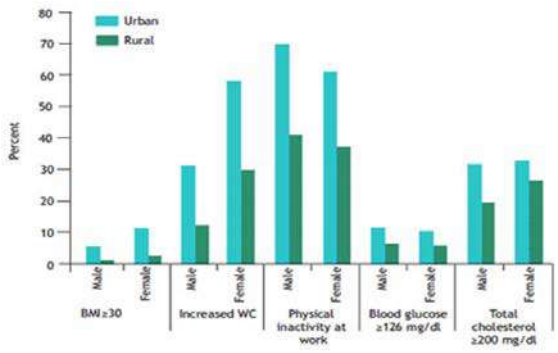


WHO Global InfoBase (2003)

Physical inactivity is estimated to be directly responsible for 6% of the disease burden from coronary heart disease, 7% of type 2 diabetes and 10% of each of breast and colon cancers[96]. Physical inactivity has been deemed the 'biggest public health problem of the 21st century'[97] and has been shown to kill more people than smoking, diabetes and obesity combined.

Slide 11 and 12

NCD RISK FACTORS ARE MORE PREVALENT IN URBAN AREAS



WC = Waist Circumference: BMI = body mass index: increased WC (Men>90cm; Women >80cm)

Source: Shah B, Mathur P. Surveillance of cardiovascular disease risk factors in India: the need & scope. Indian Journal of Medical Research 2010; 132:634-42

PHYSICAL INACTIVITY IN INDIA

A recent study in India (2014) among 14, 227 adults showed that:

- 54.4% were physically inactive
- Females were significantly more inactive than males
- Urban subjects were more inactive than rural subjects (65% vs 50%)
- Fewer than 10% engaged in recreational physical activity

Anjana et al 2014

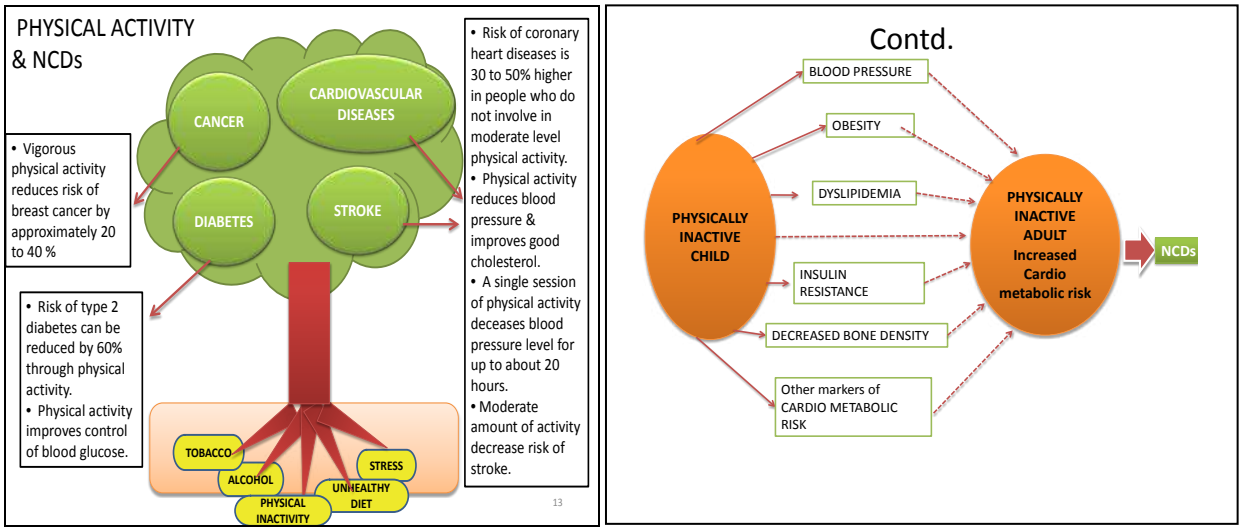
[96] Lee IM, Shiroma EJ, Lobelo F, Puska P, Blair SN, Katzmarzyk PT. Effect of physical inactivity on major non-communicable diseases worldwide: an analysis of burden of disease and life expectancy. Lancet 2012; 380(9838):219-29.

[97] Blair SN. Physical inactivity: the biggest public health problem of the 21st century.J Sports Med 2009; 43 (1):1-2.

A review on diet and physical activity for prevention of NCDs in low and middle income countries suggests that policy makers urgently need to develop a comprehensive policy to incorporate dietary quality and physical activity[98]. There is a large gap in knowledge where physical activity is concerned in the Indian context[99].

In an Indian study[100] on NCDs, high prevalence of excessive weight was seen in all the age groups except among the young and was prevalent in both sexes. It was higher in the urban population compared with rural. Low prevalence of being overweight was recorded among illiterates as well as those working in agriculture or as manual workers. More female respondents were in the category of low physical activity compared to males across all the age groups. Rural population was doing more physical work than urban. In an ICMR-India study carried out in four regions of India[101], physical activity was assessed in 14,227 individuals over the age of 20 years. In this population, 54% were inactive. Inactivity was higher among urban compared to rural populations (65% versus 50%). No recreational activity was reported by 88.4 to 93.1% of the respondents. The study concludes that less than 10% of Indian adults are engaged in recreational physical activity and that urgent steps need to be initiated to promote physical activity to stem the twin epidemics of diabetes and obesity in India.

Slide 13 and 14



[98]Lachat, C, Otchere, S, Roberfroid, D, Abdulai,A, Seret,F, Milesevic, Xuereb, G, Candeias, Kolsteren, P. Diet and Physical Activity for the Prevention of Non communicable Diseases in Low- and Middle-Income Countries: A Systematic Policy Review, 2013. http://plosmedicine.org/article/info%3Adoi%2F10.1371%2Fjournal.pmed.1001465

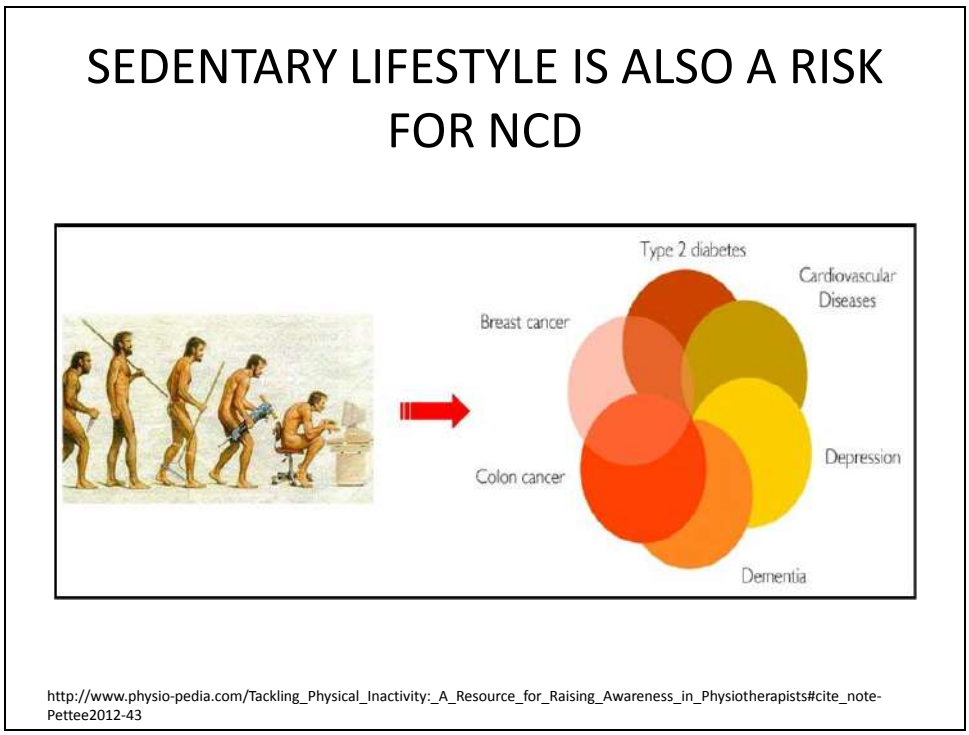
[99]Swaminathan S[1], Vaz M. Childhood physical activity, sports and exercise and non communicable disease: a special focus on India. Indian J Pediatr, 2013 Mar; 80Suppl 1:S63-70.

[100]National Institute of Medical Statistics, Indian Council of Medical Research (ICMR), 2009, IDSP Non-Communicable Disease Risk Factors Survey, Phase-I States of India, 2007-08.National Institute of Medical Statistics and Division of Non-Communicable Diseases, Indian Council of Medical Research, New Delhi, India.

[101]Anjana RM, Pradeepa R, Das AK, Mohan D et al. Physical activity and inactivity patterns in India – results from the ICMR-INDIAB study (Phase-1) [ICMR-INDIAB-5]*International Journal of Behavioural Nutrition and Physical Activity* 2014, **11**:26 doi:10.1186/1479-5868-11-26

In healthy populations, research shows that physical inactivity is an independent risk factor for non-communicable diseases (NCD) such as obesity, diabetes, hypertension, cardiovascular disease, and cancer. The diagram below illustrates the health consequences of physical inactivity and lack of physical activity based on various studies.

Slide 15



Sedentary behaviour refers to carrying out activities that involve sitting or lying down that result in low levels of energy expenditure (sitting at a desk, watching television). There is now significant evidence that sedentary behaviour is associated with increased risk for chronic disease and death, independent of vigorous physical activity[102,103].

ACTIVITY (GROUP WORK)

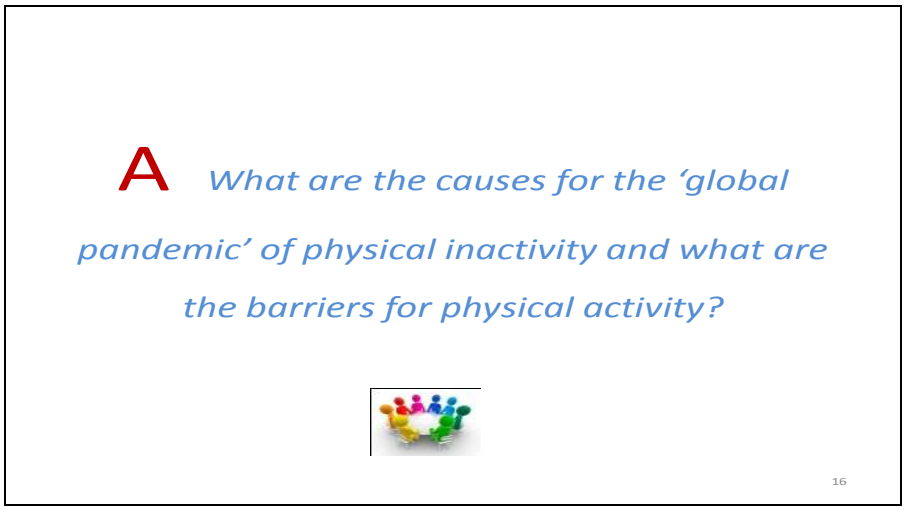
Duration: 30 minutes

Divide participants into small groups. The groups will discuss what are the causes for global pandemic of physical inactivity and barriers for physical activity? Give chart paper and pens to

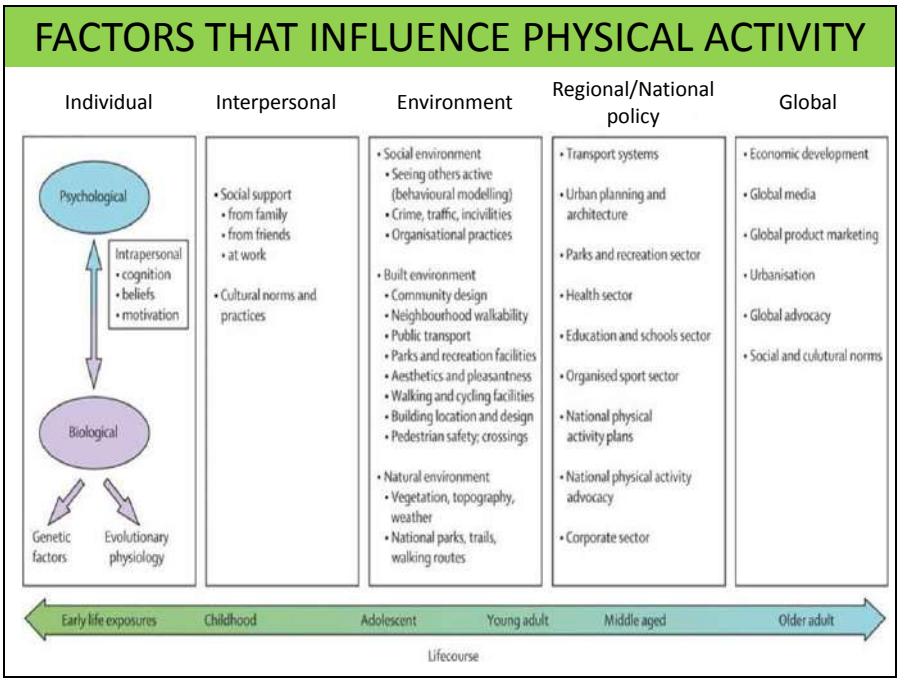
[102]Khan K. Guest editorial: physiotherapists as physical activity champions. Physiotherapy Practice 2013. http://sunshinephysio.com/resources/articles/PhysicalActivityChampions.pdf
Dean E. Physical therapy in the 21st century (Part I): Toward practice informed by epidemiology and the crisis of lifestyle conditions. Physiother Theory Prac 2009;25(5-6):330-353.
[103]Dean E. Physical therapy in the 21st century (Part I): Toward practice informed by epidemiology and the crisis of lifestyle conditions. Physiother Theory Prac 2009;25(5-6):330-353.

make presentations (15 minutes). Each group can nominate a representative to make the presentation. Generate discussion during the presentation.

Slide 16



Slide 17



Factors that influence physical activity

Low or decreasing physical activity levels often correspond with a high or rising gross national product. The drop in physical activity is partly due to inaction during leisure time and sedentary behaviour on the job and at home. Likewise, an increase in the use of "passive" modes of transportation (which does not involve any energy expenditure for the traveler) also contributes to physical inactivity.

Need for national policies on physical activity

As early as in the 1950's, a study [104] showed that men engaged in active physical work (conductors and post men) were less likely to suffer from coronary heart disease compared to men with sedentary occupations (bus drivers or clerical workers). More than six decades later, it has become very evident that physical exercise has an important preventive role for a variety of NCDs. Many countries have now evolved policies and guidelines for physical activity.

Recommendations for physical activity

According to the Global Action Plan for the Prevention and Control of Non –Communicable Diseases 2013-2020, WHO member states have agreed to reduce physical inactivity by 10%. Policies to increase physical activity include the following:

- Walking, cycling and other forms of active transportation which are accessible and safe for all.
- Labour and workplace policies that encourage physical activity.
- Schools to have safe spaces and facilities for students to spend their free time actively. Students must have protected physical training time.
- Quality Physical Education (QPE) that supports children to develop behaviour patterns that will keep them physically active throughout their lives and
- Sports and recreation facilities that provide opportunities for everyone to do sports.

[104]Paffenbarger RS Jr, Blair SN, Lee IM. A history of physical activity, cardiovascular health and longevity: the scientific contributions of Jeremy N Morris, DSc, DPH, FRCP. Int J Epidemiol 2001;30(5):1184-92.

Slide 18

COMMON BARRIERS TO PHYSICAL ACTIVITY

PRACTICAL BARRIERS	PSYCHOLOGICAL BARRIERS
Work commitments	No motivation to do more
Insufficient leisure time	Prefer to do other things
Caring for children or older people	Not sporty - type
Financial problems	Worried about injury
Physical limitations – poor health or physical disabilities	Do not enjoy physical activity
No exercise companion	Shy or embarrassed
No support from partner/family/friends	Beliefs – too old, overweight, not necessary or waste of time
No suitable local environment – safety, traffic, facilities or pollution	Self-conscious about exercising in front of others
Sedentary interest – video games or TV	
Lack of awareness on the importance of physical activity	
Cultural restrictions – clothing	

Reasons for physical inactivity

The levels of physical inactivity have increased across the globe. Globally, around 31% of adults aged 15 and over were not active enough in 2008 (men 28% and women 34%). In high-income countries, 41% of men and 48% of women were insufficiently physically active, as compared to 18% of men and 21% of women in low-income countries.

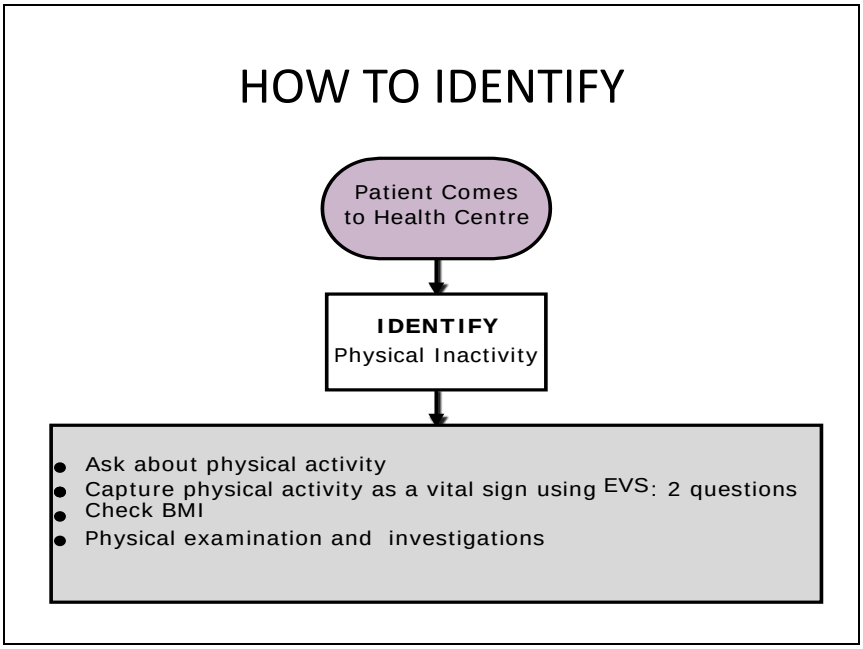
Slide 19

B *How do we identify physical inactivity or inadequate physical activity ?*

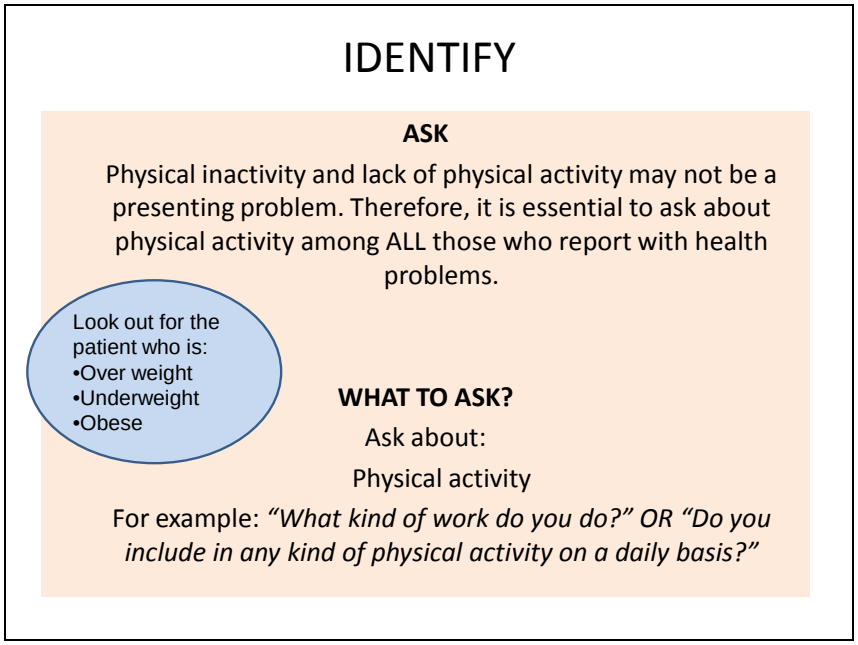
19

Generate discussion and write the points on the board.

Slide 20



Slide 21

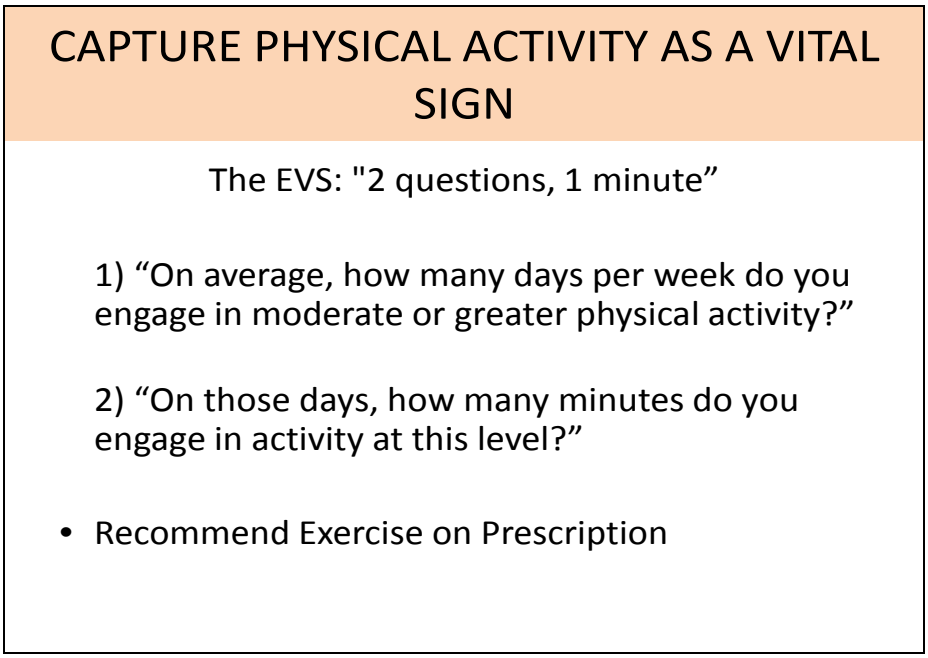


Ask about physical activity to all those who report health problems at the PHC.

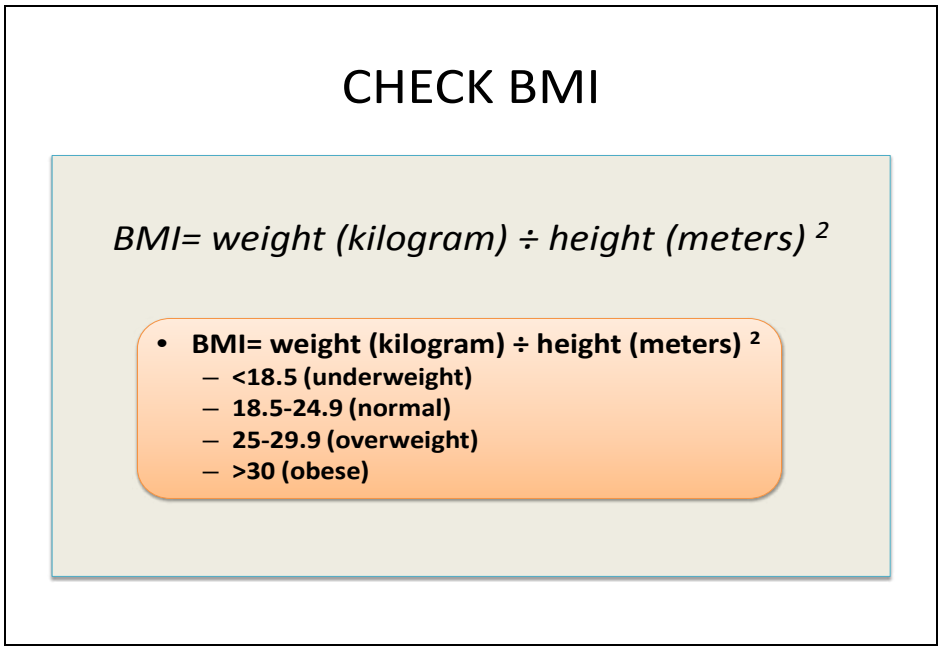
Assessing physical activity

Patient's physical activity and sedentary activity are not routinely asked about during a clinical assessment. Asking about physical activity has now been recommended as the 5th vital sign[105], along with Pulse and BP.

Slide 22

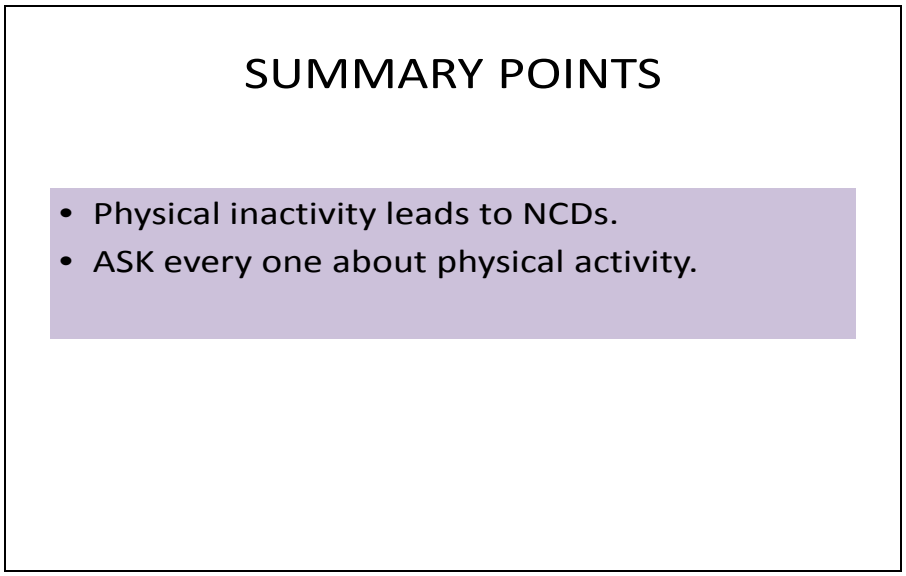


Slide 23

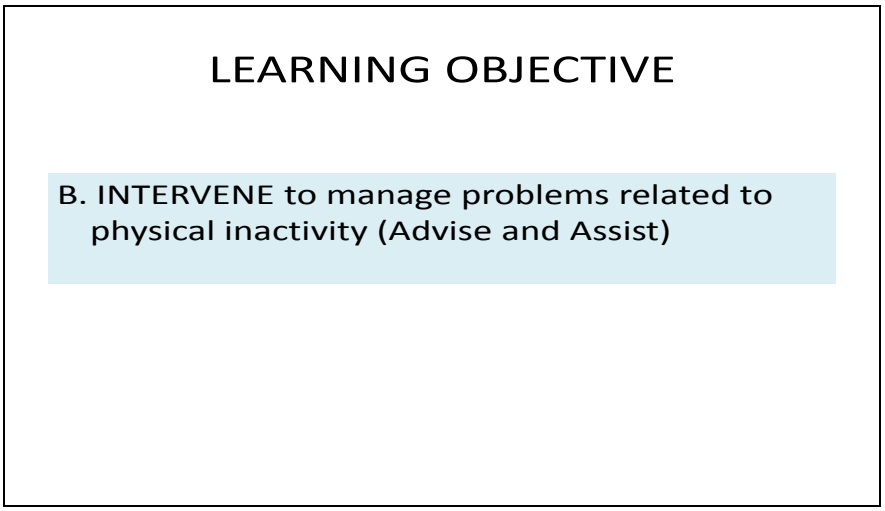


[105]Sallis R. Developing healthcare systems to support exercise: exercise as the fifth vital sign. Br J Sports Med. 2011;45:473-74

Slide 24



Slide 25



INSTRUCTION

Discuss using brainstorming the steps to address physical inactivity as a risk factor when patients come to the Health Centre. Flow charts have been to illustrate the steps to offer care.

Activity (Role play)

Total duration: 30 minutes

Sit in pairs and face each other. Nominate one person as the MO and the other as the patient. Use the case given to continue the activity. Before role play, give 5 minutes for reading and clarifying the case study. Ask participants what they learnt from the activity and summarize.

Slide 26

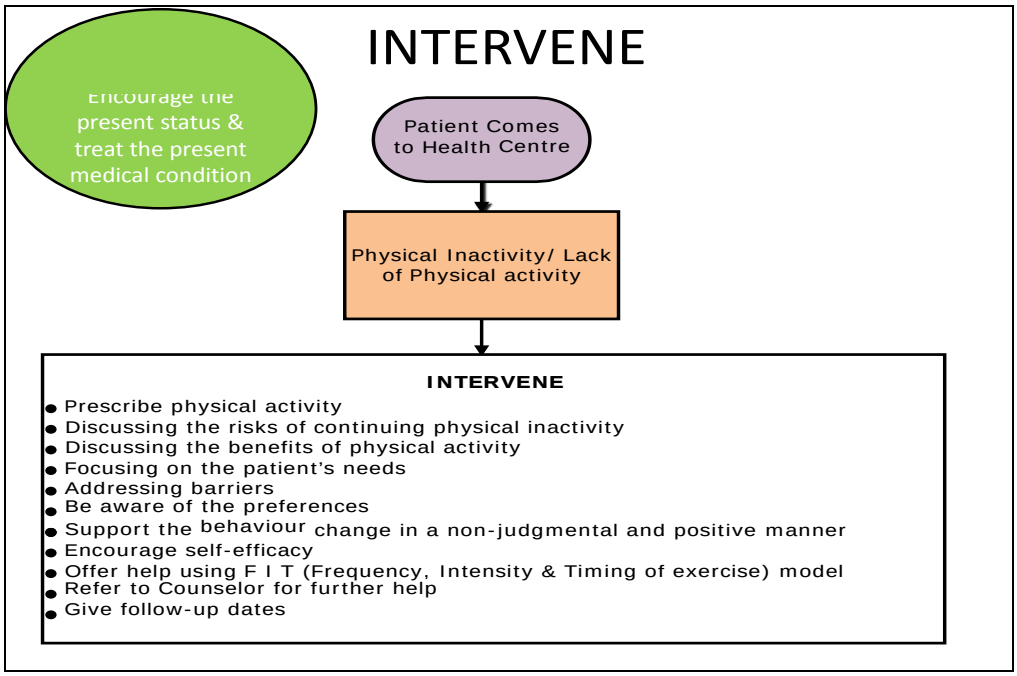
A ROLE PLAY

A 38 year old male patient who is obese (BMI 32) comes to you with symptoms of breathlessness. His cardiac and respiratory evaluation is normal. He has a family history of heart disease.

How would you intervene regarding physical exercise?

26

Slide 27



Slide 28

INTERVENE: PRESCRIPTION FOR PHYSICAL ACTIVITY AND AVOIDANCE OF SEDENTARY ACTIVITY

Brief Advice consists of a short (3 minute), structured conversation with the patient aimed at raising awareness of the benefits of physical activity, exploring barriers and identifying some solutions.

Slide 29

BRIEF INTERVENTION (3-20 MINUTES) MOTIVATING BEHAVIOUR CHANGE FOR PHYSICAL INACTIVITY

- To what extent does the person consider his/her level of physical inactivity as unhealthy?
- Does the person believe that physical activity will improve his/her health status?

Achieve this by:
- Discussing the risks of continuing physical inactivity
- Discussing the benefits of physical activity
- Focusing on the patient's needs
- Addressing barriers
- Be aware of the preferences
- Support the behaviour change in a non-judgmental and positive manner
- Encourage self-efficacy

Slide 30

STEPS TO ADDRESS PHYSICAL ACTIVITY AND OFFER HELP: FIT

- ***Frequency of Exercise:*** The number of occurrences of a particular physical activity during the day OR the number of days dedicated to a particular physical activity programme.
- ***Intensity of Exercise:*** How 'vigorous' a physical activity is.
- ***Timing of Exercise:*** The measure in minutes or hours expended for a particular physical activity programme

STEPS TO ADDRESS PHYSICAL ACTIVITY AND OFFER HELP

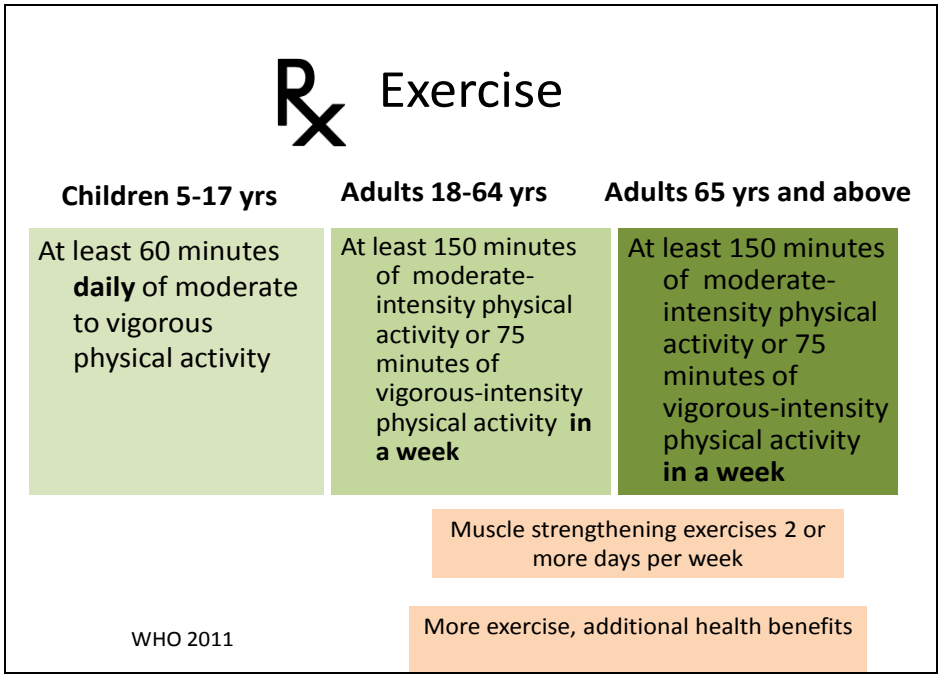
1. Frequency: The **Frequency** refers to the number of occurrences of a particular physical activity during the day OR the number of days dedicated to a particular physical activity programme. Simple interventions, such as encouraging individuals to stand and/or walk when television adverts are in progress or, if working behind a computer, to take regular 15 minute breaks every hour to stretch ones legs and walk, may aid in reducing sedentary behaviour. It is a matter of strategising and prioritising what is feasible and to what the patient is ready to commit.
2. Intensity: The Intensity refers to how 'vigorous' a physical activity is. A positive dose response exists of derived health benefits from increasing physical activity intensity. Knowledge of the applicability of the 'progressive overload' principle with regards to intensity levels may be of use. Much like training a particular muscle, physical activity levels below certain minimum intensities is unlikely to elicit any beneficial physiological changes. However, it is important to note that minimum intensity varies from individual to individual.

3. Time: The Time refers to the measure in minutes or hours expended for a particular physical activity programme. Interestingly time is also the most commonly reported barrier among those not meeting the recommended national guidelines.

In patients with health conditions, different health conditions and their risks must be taken into consideration while recommending physical activity.

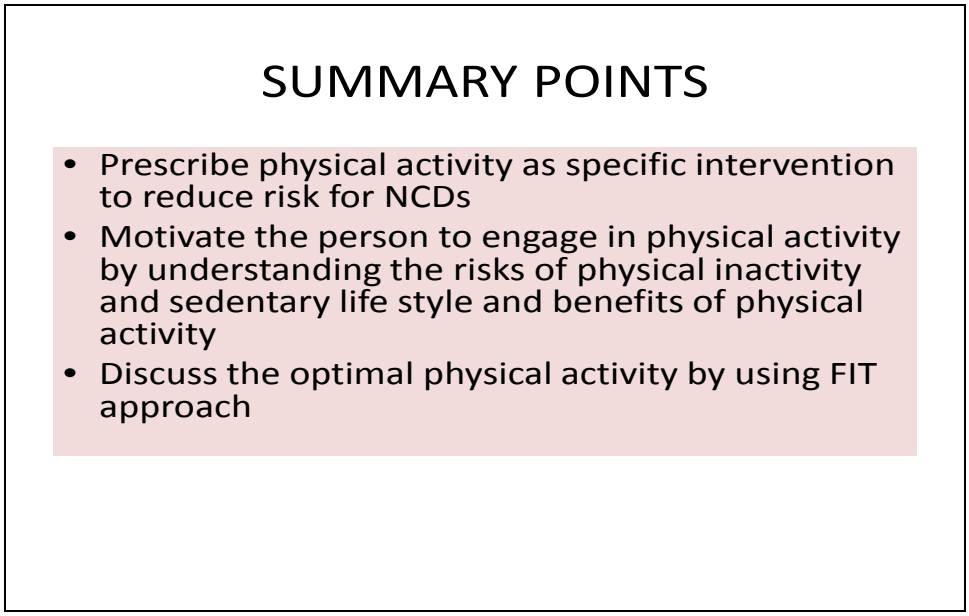
Following the brief intervention, if the person requires more intensive counseling for behavioural change, the Medical Officer should refer to the counselor.

Slide 31



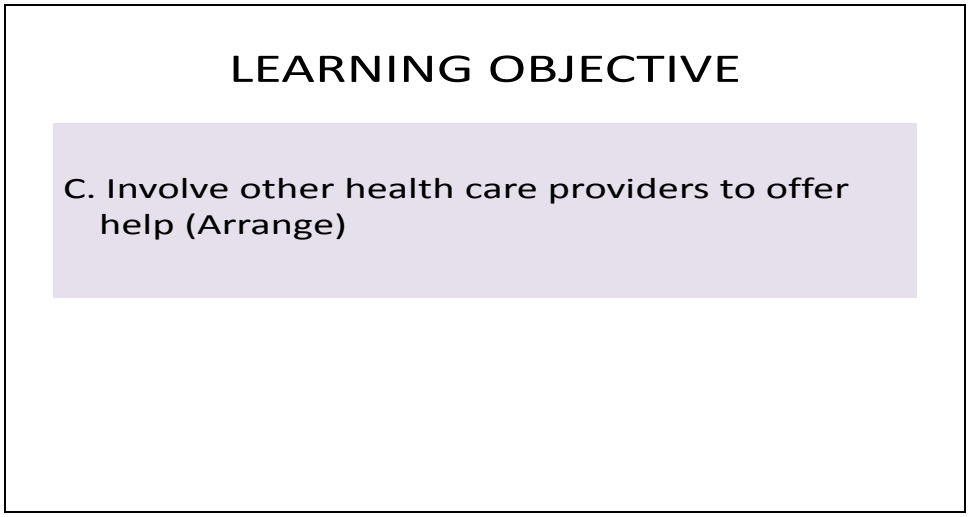
The WHO guidelines recommend 150 minutes of moderate intensity activity per week for adults (30 minutes per day most days of the week) and for children and adolescents, 60 minutes of moderate to vigorous physical activity per day.[106] However, the recommendations do not address the risks of sedentary behaviour.

Slide 32



[106] World Health Organization 2014, opcit

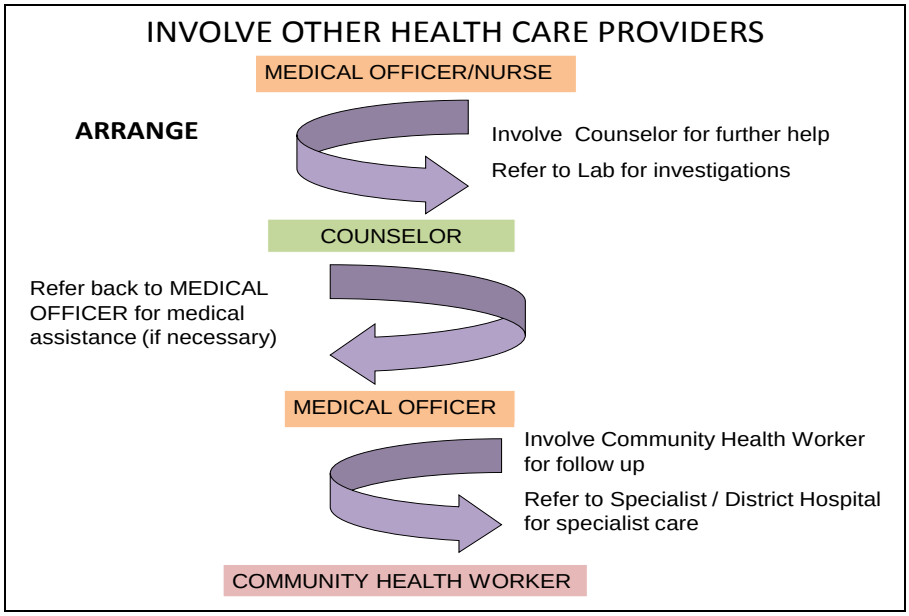
Slide 33



INSTRUCTION

Discuss using brainstorming the steps taken by the Medical Officer to refer the patient to other health care providers at the health centre. Flow charts have been to illustrate the steps.

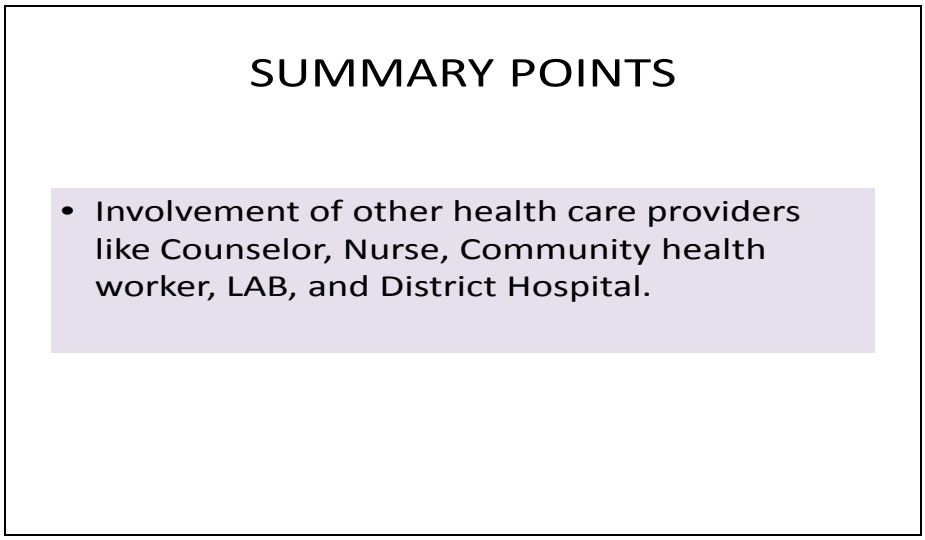
Slide 34



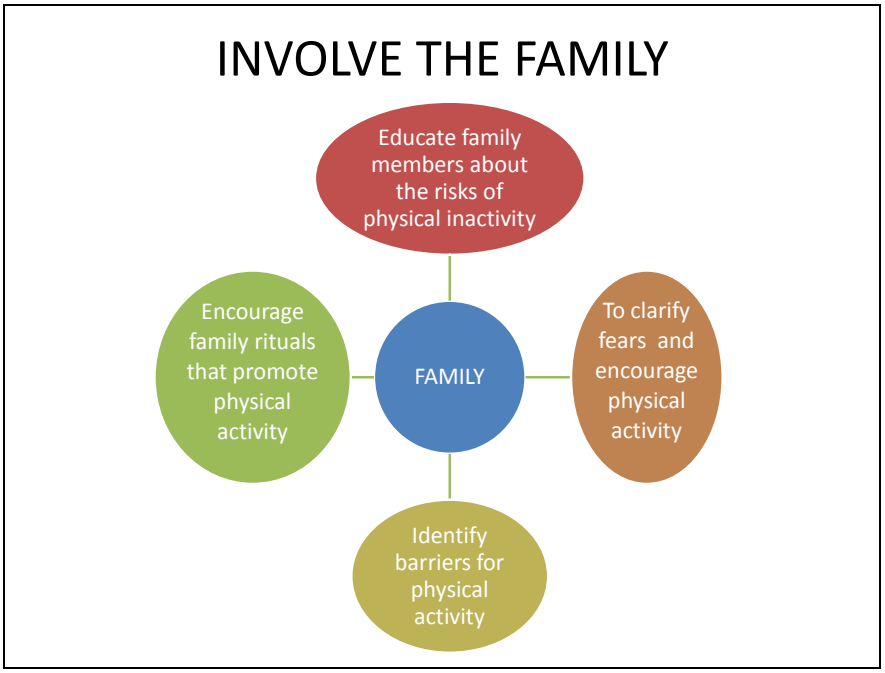
The Medical Officer will link the patient by referring him/ her to the Counselor to manage physical activity as a risk factor. It is important to reiterate importance of meeting the Counselor in order to make lifestyle changes to address current health condition.

Inform patients to come on follow- up dates given by the Counselor/ Medical Officer (when the patient is not regular for follow - up the Community Health Worker will be asked to make home visits).

Slide 35



Slide 36

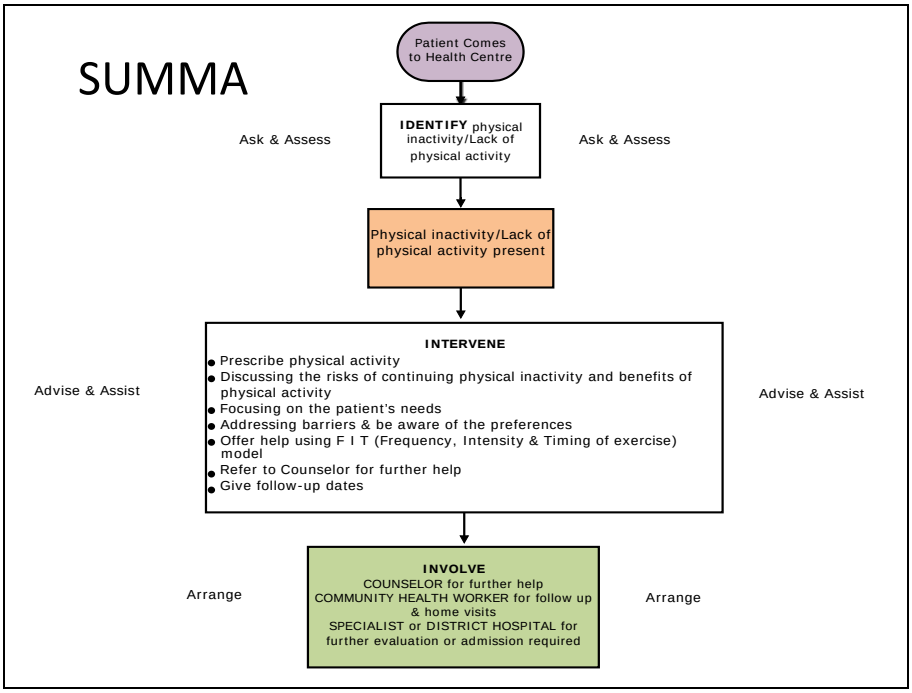


The family needs to be educated about the risks of physical inactivity. Some families discourage physical activity in a person with a health problem, particularly a heart condition. Families need to be educated about the preventive role of physical activity for NCDs. Many families have rituals like television watching which does not provide any physical activity. A suggestion from the medical officer on the importance of physical activity can be a good impetus for the family members. Further information about physical activity can be provided by the counsellor or nurse.

Slide 37

In the community, the Medical Officer can serve as an agent of change by providing information about the risks of physical inactivity and the advantages of being physically active, through talks, discussions, articles in newspapers, interviews and so on. Talking about the need for 'healthy' spaces for physical activity so that town planners and municipality bodies start to think about preserving and creating such spaces, lobbying for open areas for children, youth and adults can have long-term benefits for future generations.

Slide 38



Slide 39

WRAP UP

B

- *What do you take back at the end of the session?*

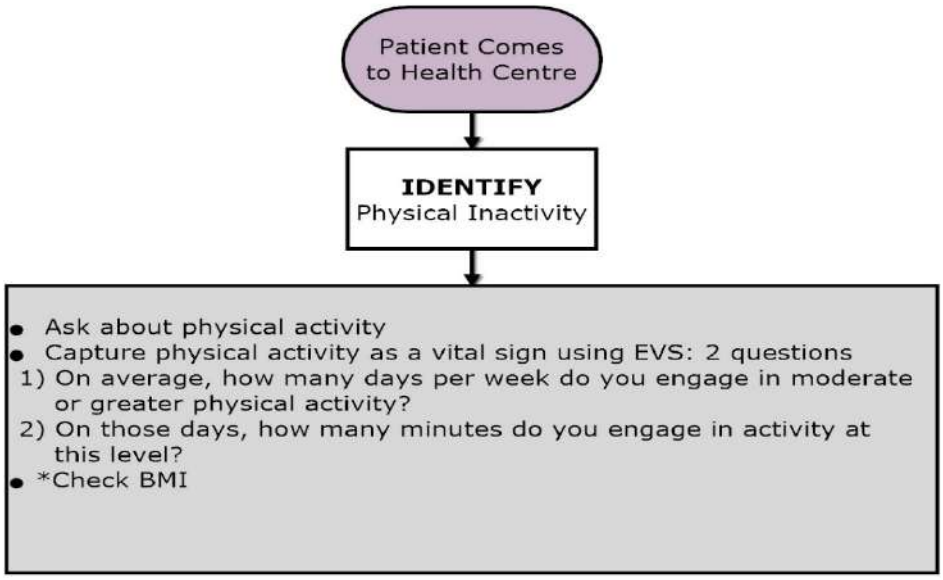
HANDOUTS

5.1 Identify

5.2 Intervene

5.3 Involve

5.1 STEP 1: IDENTIFY

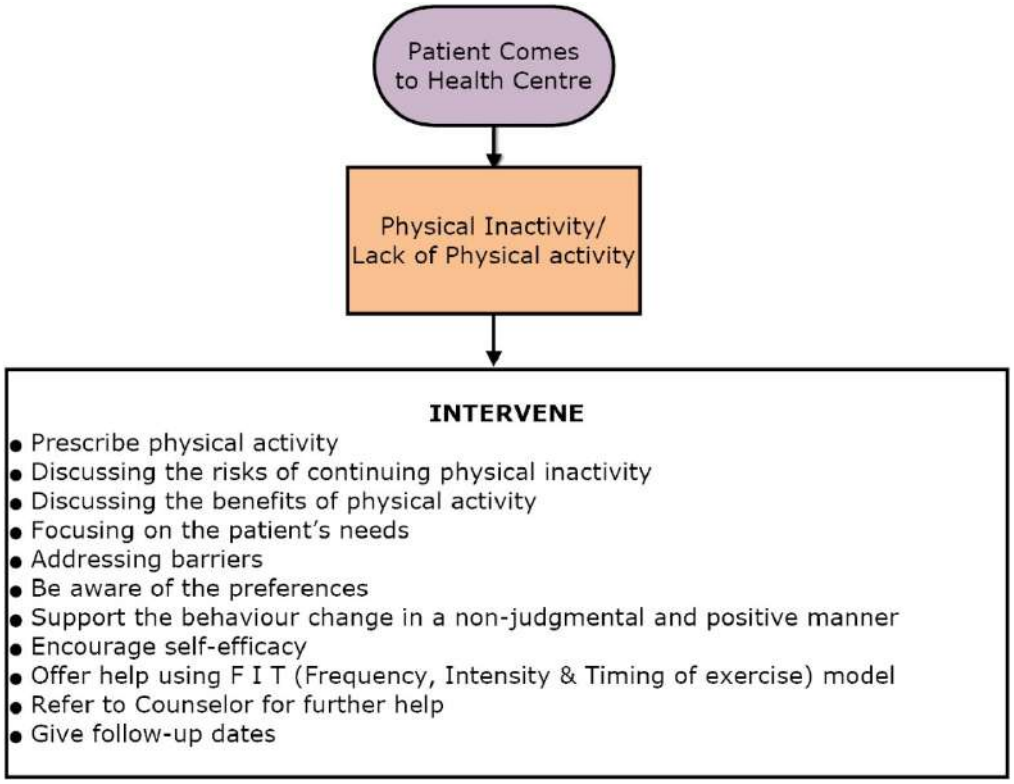


*BMI $= \frac{\text{Wt in kgs}}{\text{Height in M}^2}$

BMI classification for Indians:
Less than 18.4 - Underweight
18.5 - 22.9 - Normal
23 - 24.9 - Overweight
More than 25 – Obese

BMI classification	
Underweight	< 18.5
Normal range	18.5 - 24.9
Overweight	⩾ 25.0
Preobese	25.0 - 29.9
Obese	⩾ 30.0
Obese class I	30.0 - 34.9
Obese class II	35.0 - 39.9
Obese class III	⩾ 40.0

5.2 STEP 2: INTERVENE



5.3 STEP 3: INVOLVE OTHER HEALTH CARE PROVIDERS

- Counselor for promoting behavioural change:
    - Assessing physical activity
    - Providing brief counselling: educating health consequences, using balance sheet for motivating and discussing tips to promote physical activity.
- Community Health worker for follow up (patients who miss follow up dates) and home visits (to monitor progress)
- Specialist/District Hospital for specialist care
- Lab for investigations

Stress as a risk factor for NCDs

Session 6

Objectives of the session

By the end of this session, the participants will understand the following:

- Health problems associated with stress and stress as a risk factor for NCDs
- Causes of stress and its effects
- Differentiating stress and psychological distress from depression and anxiety disorders
- Identification of stress among patients
- Intervention for stress
- Involvement of other care providers in stress reduction and mental health promotion in the clinic and community

Organization of the session

- *Facilitator's reading material:* The facilitator should read the material before the session. Sources for specific information are quoted and included as references in the footnotes.

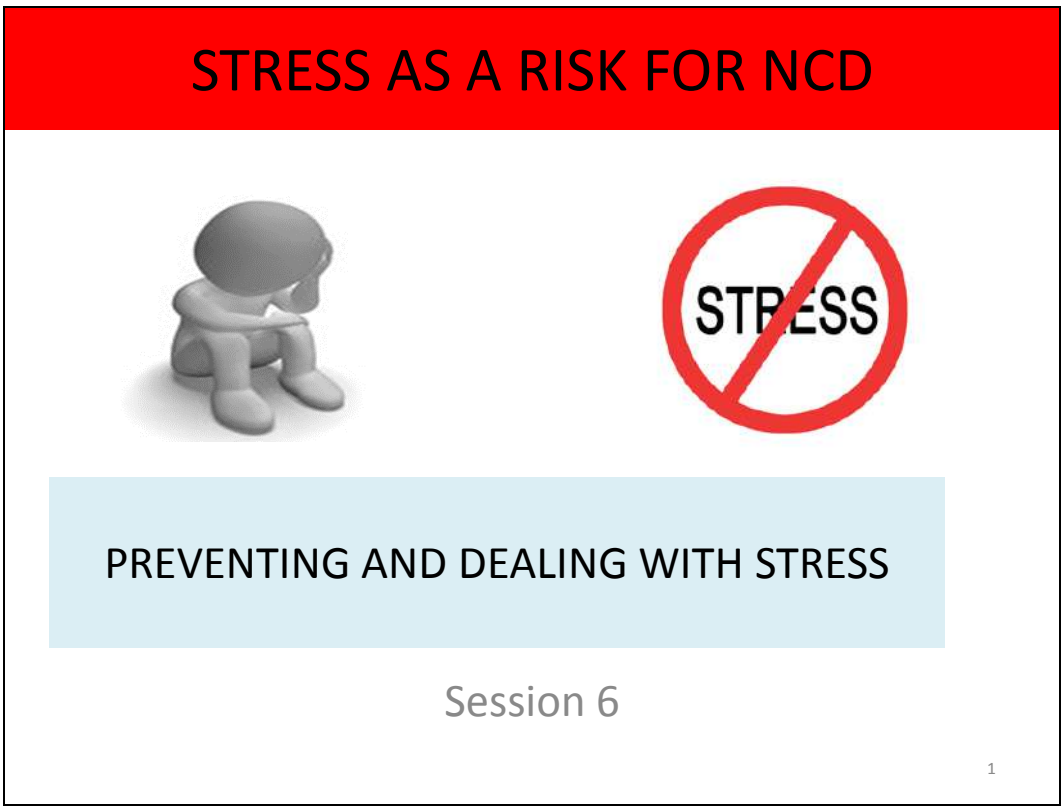
- *Handouts:* Copies of handouts will be made before the session and distributed either before or after the session. List of handouts are included at the end of each session.

- *Power point presentation:* A DVD containing the power point presentations accompanies the training manual. The slides for each session are reproduced in the manual to aid the facilitators.

- ***Activities****:*

  Activities during the training session may include:

  - **Brainstorming** or whole group interaction, indicated by the letter '**B**' and the symbol 
  - **Group activity** or discussion in small groups, indicated by the letter **GA** and the symbol 
  - **Individual Activity**, indicated by letter **IA** the symbol 
  - **Role Play** is indicated by the letter **RP** and symbol 



INTRODUCTION

Stress increases the risk for NCDs and can worsen the course of NCDs if they have already developed. It can come in the way of help seeking, treatment adherence and outcome. Sources of stress in patients coming to the Health Centre may be within the family, or generated from work conditions. Individual vulnerability and coping styles can influence stress perception and presentation. Non-communicable chronic diseases, stress and common mental disorders such as depression and anxiety often occur together[107]. The odds of non- compliance with medical treatment regimens are three times greater for depressed patients compared with non-depressed patients[108]. Treatment provided in primary care settings to address risk factors including mental health care are effective for patients, strengthen health care service systems, and reduce costs and can be provided by physicians, nurses and lay health workers.

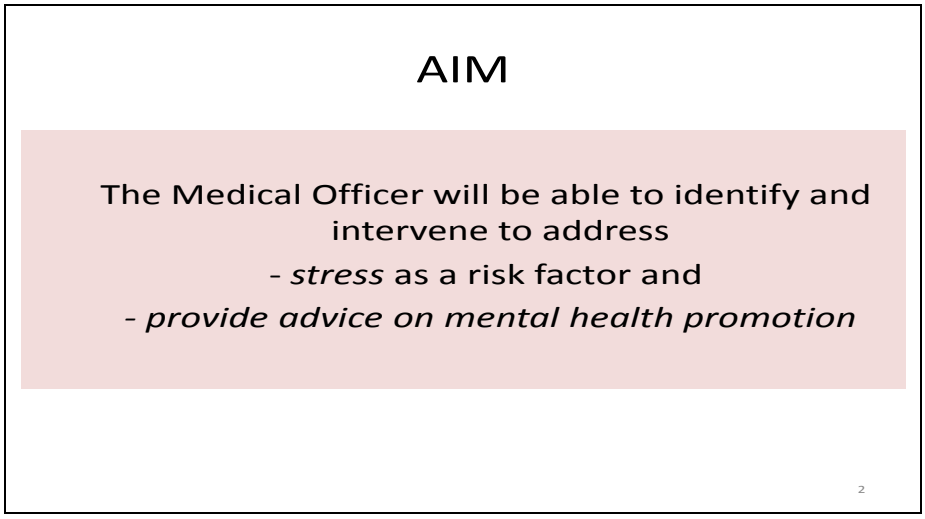
Stress, other risk factors and its impact on health: Stress can contribute to anxiety, depression, hypertension, heart diseases and cerebrovascular disease, peptic ulcers, inflammatory bowel disease and alter immune functions leading to the development of cancer. To cope with stress, persons may use tobacco and alcohol; develop unhealthy diet practices and become physical inactive.

[107] Ngo VK, Rubenstein, A, Ganju V, Kannellis P, Loza, N, Rabadan-Dieh C and Daar AS. Grand Challenges: Integrating Mental Health into the Non –communicable Disease Agenda. PLos Med 2013; 10(5)
[108]DiMatteo MR, Lepper HS, Croghan TW Depression is a risk factor for noncompliance with medical treatment - Meta-analysis of the effects of anxiety and depression on patient adherence. Arch Intern Med 200; 160: 2101–2107.

This session on stress will help the Medical Officers to understand the linkages of stress as a risk factor to other risk factors and non communicable diseases. The first objective is about identifying stress as a risk factor followed by the intervention to manage problems related to stress and involvement of other health care providers through referrals.

Total duration: 2 hours 45 minutes approximately

Slide 2



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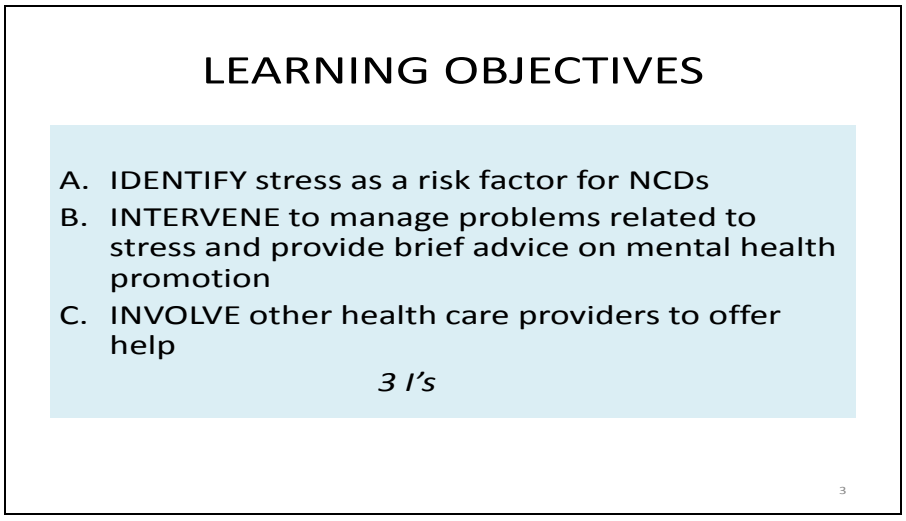
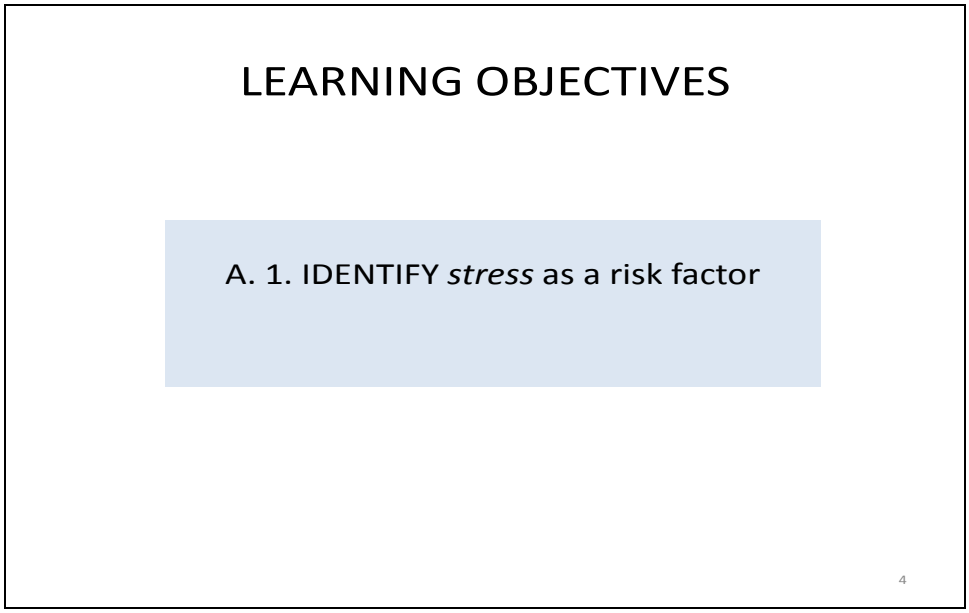


The 3 I's is an easy way to remember the MOs approach to address stress.

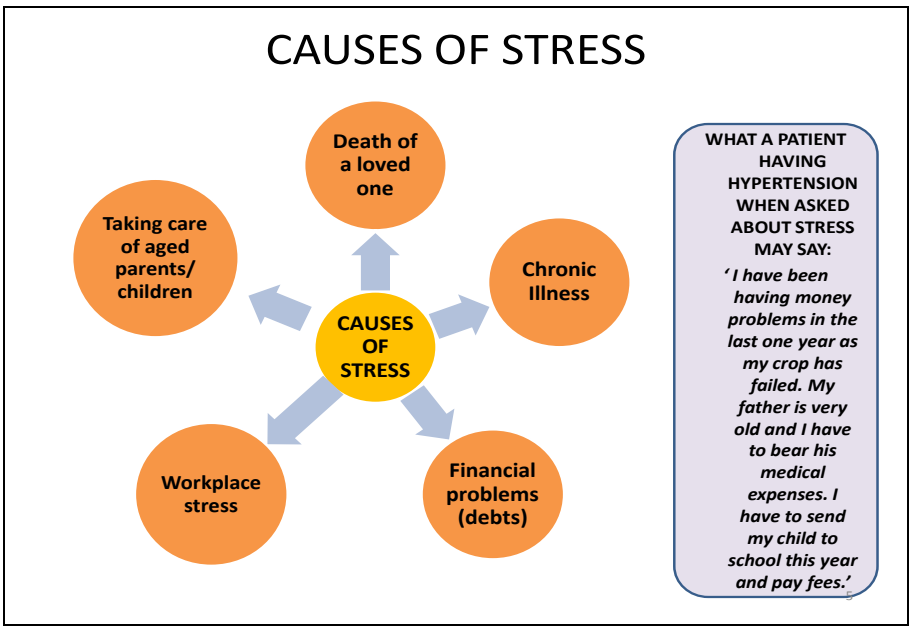
Slide 4



INSTRUCTION

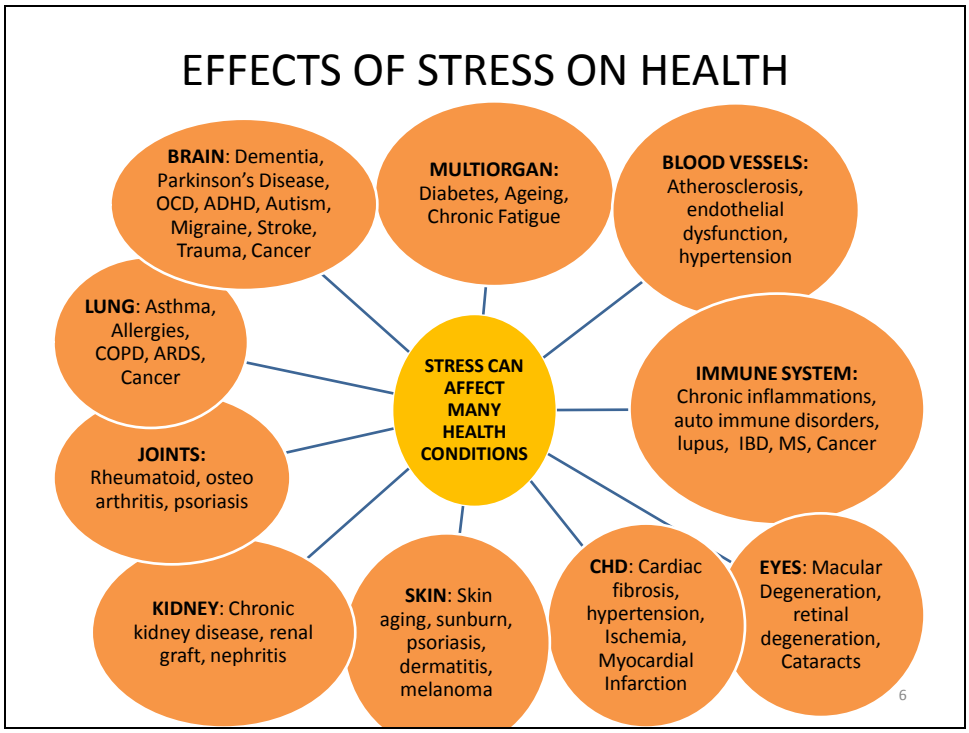
Facilitate a discussion about how stress can be identified in primary care. Discuss different aspects of stress among participants with examples from their field settings and use case studies.

Slide 5



Stress in a person can occur due to various causes i.e. work related, home related (like taking care of children, aged parents, loss of a loved one), having a chronic illness, being in debt and so on. Thus, stress can occur from various areas of our lives, life health, occupation, social, financial, etc.

Slide 6



Stress can affect health in many ways. Unchecked and unhealthy levels of stress can lead to lead to many health problems such us hypertension, heart disease, digestive problems, disturbed sleep, musculoskeletal disorders depression and anxiety and so on. The immune system can get impaired and make a person vulnerable to infection including cancer.

GROUP ACTIVITY (Case studies)

IDENTIFYING STRESS

Total duration: 30 minutes

Divide the participants into groups and distribute the three case studies. The cases are about individuals facing stress. Since there is an overlap between symptoms of stress and common mental disorders like anxiety and depression, these case studies focus on the need to evaluate for common mental disorders in people who have stress. The participants will read the case studies and discuss the questions and share what they understand as the problem and what steps they would take to help the patient as part of intervention (15 minutes). Each group will present (with the help of a spokesperson) their understanding and steps they will take to help the patient (10 minutes). Handouts will be distributed after group presentations.

HANDOUTS:

6.1. Checklist for identifying stress
6.2. Checklist for identifying anxiety
6.3. Checklist for identifying depression
6.4. Intervention for stress
6.5. Intervention for anxiety
6.6. Pharmacotherapy for anxiety
6.7. Intervention for depression
6.8. Pharmacotherapy for depression
6.9. Flowchart summary (3 I's)

Slide 7

A

1. CASE STUDY

Raja is 40 years old and has a teashop near the railway station.
He has a busy day and he runs his shop alone. He starts the day early in the morning and finishes late at night and has little sleep. He takes breaks to smoke bidis saying that it reduces tension. Due to lack of time he has quick meals at the local hotel. Last week, he was found to have high BP during a medical camp. He says he gets irritable at work and gets into fights with his customer and at home he gets angry easily and shouts at his wife and children for no reason. He comes to the Health Centre with his wife.
After screening he meets the Medical Officer with his recent reports.

What is your understanding about Raja's problems?
As a Medical Officer what steps would you take to help him?

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Slide 8

2. CASE STUDY

Rani is 32 years old and has been married for the past 7 years and has four daughters. Recently, she experiences difficulty in breathing and burning sensation in her stomach. She finds it hard to rest and finds it difficult to sleep as she says she worries about her future. She feels fearful when she visits her in-laws who ask her about having a male child.

She comes to the Health Centre and her medical tests are normal. The Medical Officer finds out from Rani that her husband is talking about his second marriage to try for a male child.

- *What is your understanding about Rani's problems?*
- *As a Medical Officer what steps would you take to help her?*

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Slide 9

3. CASE STUDY

Chotu is 35 years old and is a bus driver doing long overnight routes. When he meets the Community Health Worker he complains that his body has become weak and that there is pain in his legs. His wife adds that Chotu prefers to stay at home and avoids family functions. She says that he has been taking tonics and injections given by different doctors over the past few months but it has not helped him. He is worried that he will become weaker and lose his job. He comes to the Health Center for help and after screening his medical tests reveal that he has diabetes.

He meets the Medical Officer.

What is your understanding about Chotu's problems?
As a Medical Officer what steps would you take to help him?

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Slide 10

DEBRIEFING
(3 CASES)

- *Case 1: This case illustrates the impact of stress on Raju. Cause of stress is work- related and the consequences are poor sleep, feeling tense, unhealthy diet, use of tobacco, quarrels at home and high blood pressure. The Medical Officer will have to monitor and manage Raju's BP and address stress.*
- *Case 2: There is the presence of stress. Rani's stress is related to family problems. Rani will need help for dealing with stress. A discussion on how to differentiate between stress and an anxiety disorder (a common mental disorder) can be made here.*
- *Case 3: Chotu has* developed multiple *somatic complaints, poor sleep and appetite and worries. His work and family life are affected and he has been diagnosed as being diabetic. The Medical Officer will need to address and manage diabetes, and stress that can aggravate diabetes. The medical officer will also have to rule out a depressive disorder (a common mental disorder)*

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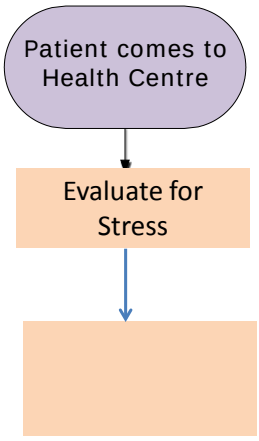
The Medical Officer will identify stress, and evaluate for anxiety and depression presented in the 3 cases and offer specific help to address them.

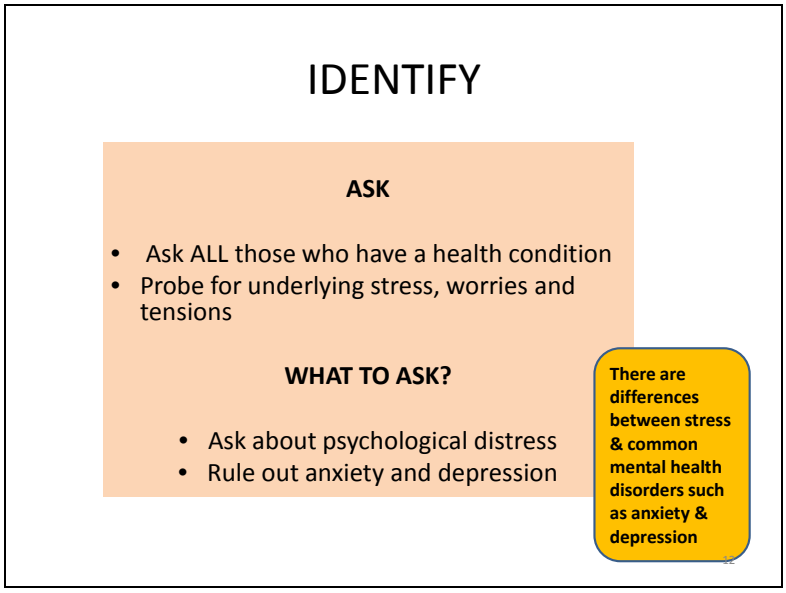
Slide 11

IDENTIFY STRESS



The flowchart describes the patient coming to the Health Centre. The Medical Officer will ask and assess in order to identify symptoms related to stress.

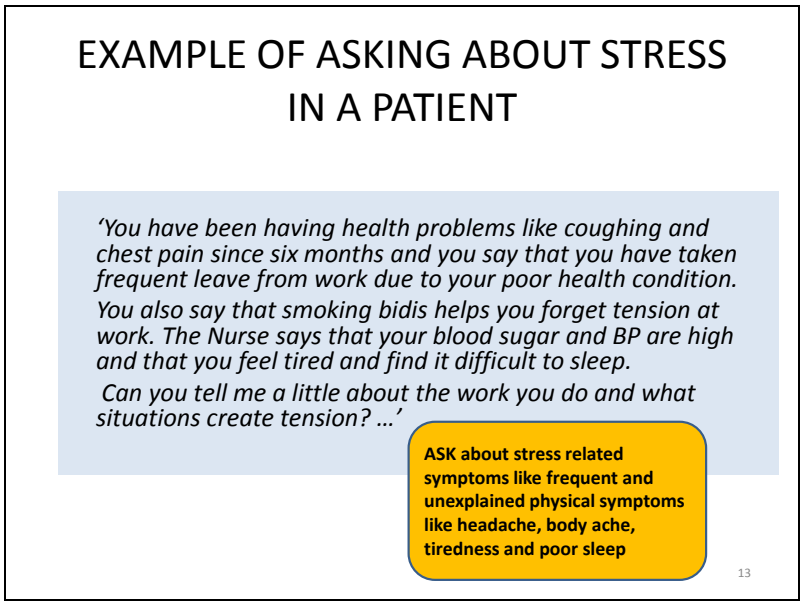
Slide 12



WHOM TO ASK? Ask ALL who report with health problems and probe for underlying stress, worries and tensions. Evaluate for common mental disorders (anxiety and depression as per checklist given as handouts).

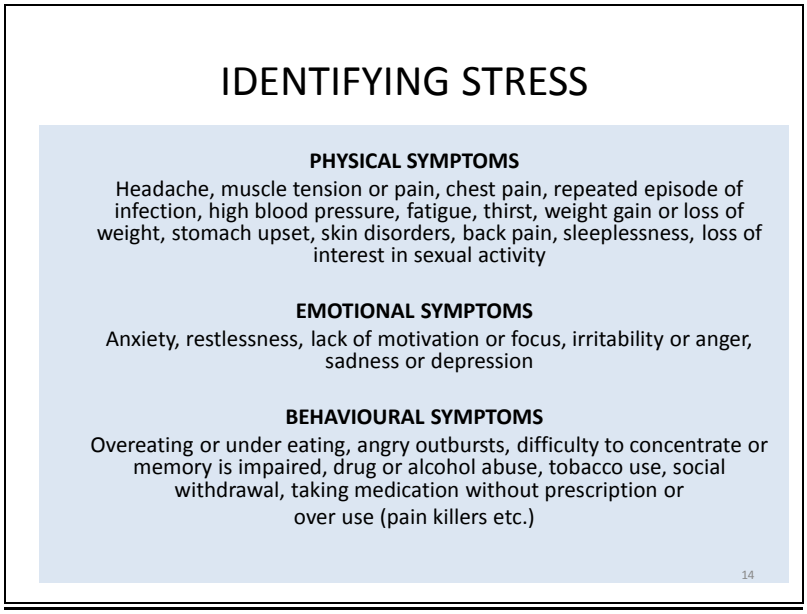
WHAT TO ASK? The Medical Officer will probe for stress and evaluate for anxiety and depression using the checklist.

Slide 13



The verbatim illustrates how the Medical Officer can ask for stress related problems.

Slide 14



SYMPTOMS INDICATING STRESS[109]

- *Physical symptoms:* Headache, muscle tension or pain, chest pain, repeated episodes of infection, high blood pressure, fatigue, thirst, weight gain or loss of weight, stomach upset, skin disorders, back pain, sleeplessness, loss of interest in sexual activity

- *Emotional symptoms:* Anxiety, Restlessness, Lack of motivation or focus, Irritability or anger, Sadness or depression

- *Behavioural symptoms:* Overeating or under eating, angry outbursts, difficulty to concentrate or memory is impaired, drug or alcohol abuse, tobacco use, social withdrawal, taking medication without prescription or over use (pain killers etc.)

[109]International Labour Organization. Integrating Health Promotion into Workplace OSH Policies, 2012. *http://ilo.org/wcmsp5/groups/public/@ed_protect/.../wcms_178397.pdf*

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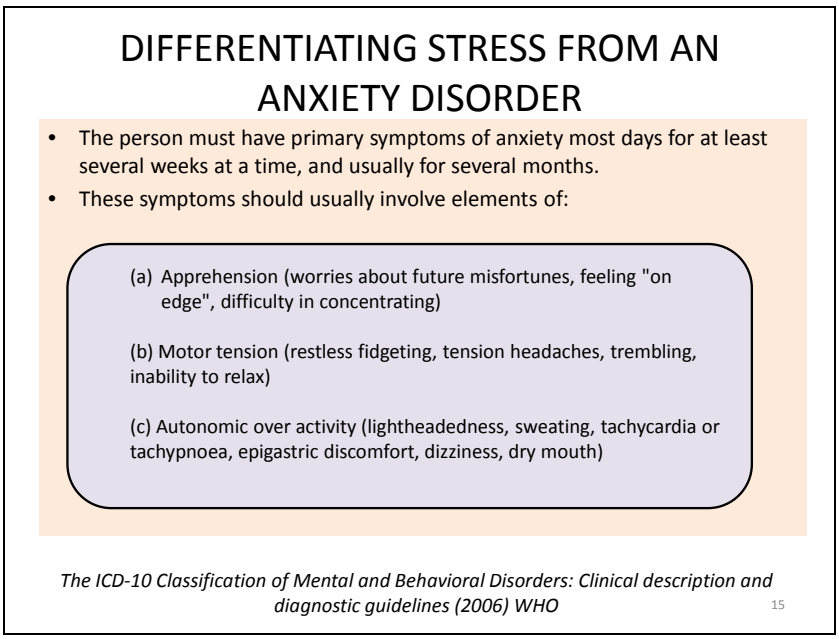
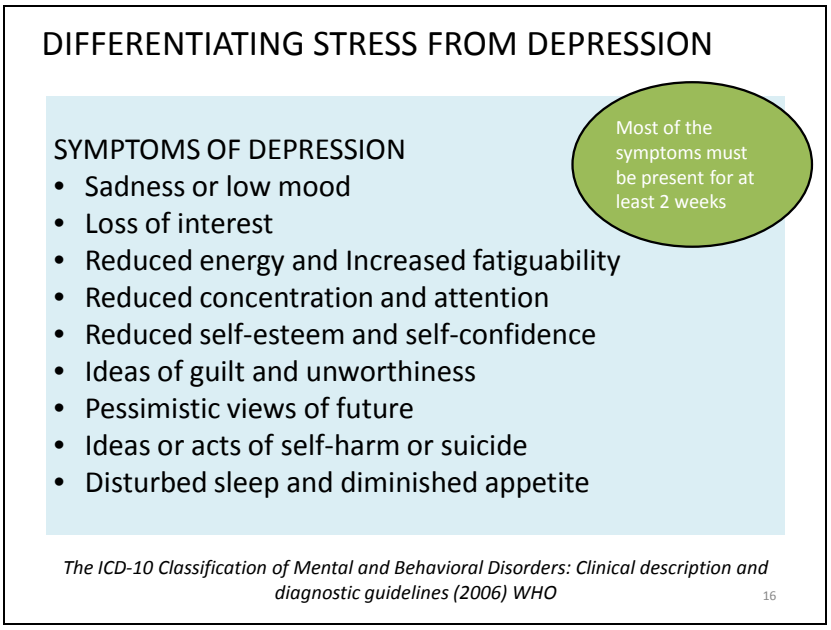


The Medical Officer can identify primary symptoms of anxiety using ICD-10[110].

Slide 16



The Medical Officer can identify primary symptoms of depression using ICD-10.

[110] World Health Organization. ICD-10 Classification of Mental and Behavioural Disorders.http://who.int/classifications/icd/en/bluebook.pdf

Slide 17

ASSESSMENT FOR STRESS

- *Physical examination*
  Rule out physical illness and treat physical condition.
- *Investigations* as appropriate (lab etc.)
- *Mental state examination*
  Rule out common mental disorder like anxiety and depression

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Slide 18

SUMMARY POINTS

- IDENTIFY stress as a risk factor for NCDs
- Look for the presence of a common mental disorder like anxiety or depression

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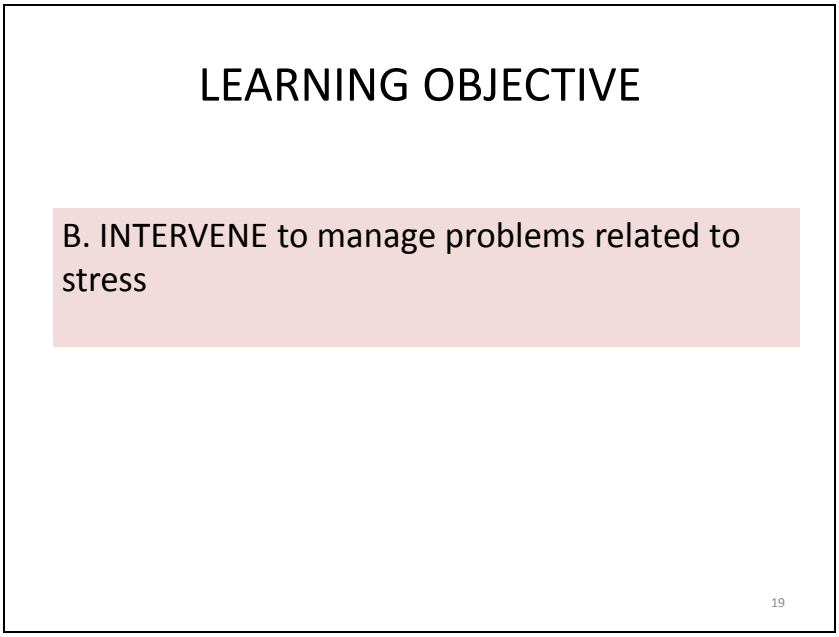
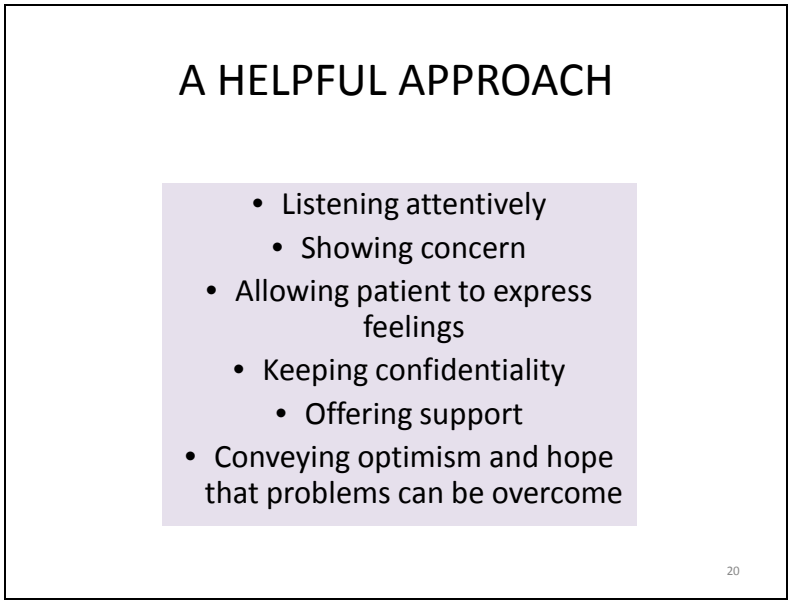
Slide 19



INSTRUCTION

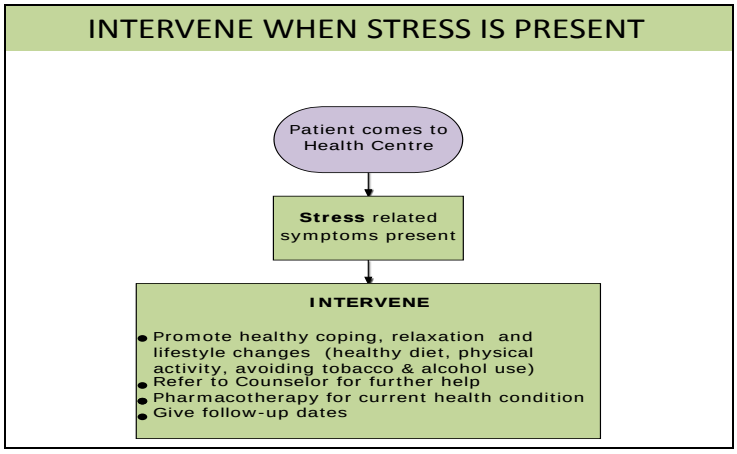
Interventions to manage problems related to stress are discussed.

Slide 20



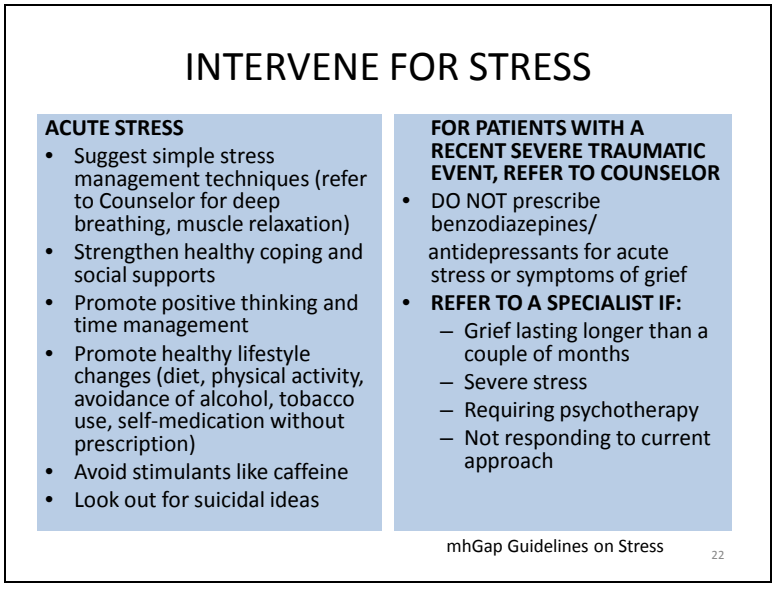
The Medical Officer should convey a caring attitude to the patient. Listening and showing concern, allowing the patient talk and express feelings, keeping the information confidential, offering support from the health providers at the Health Centre and conveying hope and optimism about making lifestyle changes are helpful approaches.

Slide 21



The flowchart describes the patient having stress related symptoms. The Medical Officer will advise and assist for symptoms related to stress e.g. promoting healthy coping, relaxation, lifestyle changes and referral to Counselor for further help including pharmacotherapy for any underlying health condition. The patient must be told prior to referral to the Counselor about the importance of counseling to address current issues. Follow-up dates should ideally be given at the same time by both the Medical Officer and the Counselor.

Slide 22



The interventions for acute stress and recent severe traumatic stress will vary[111]. For acute stress, stress management techniques, strengthening healthy coping and social supports (from family and community) and healthy lifestyle changes are advised. Refer to a specialist for further management if the symptoms are severe.

[111] World Health Organization. Assessment and Management of Conditions Specifically Related to Stress. mhGAP Intervention Guide Module,2010. http://who.int/iris/bitstream/10665/85623/1/9789241505932_eng.pdf

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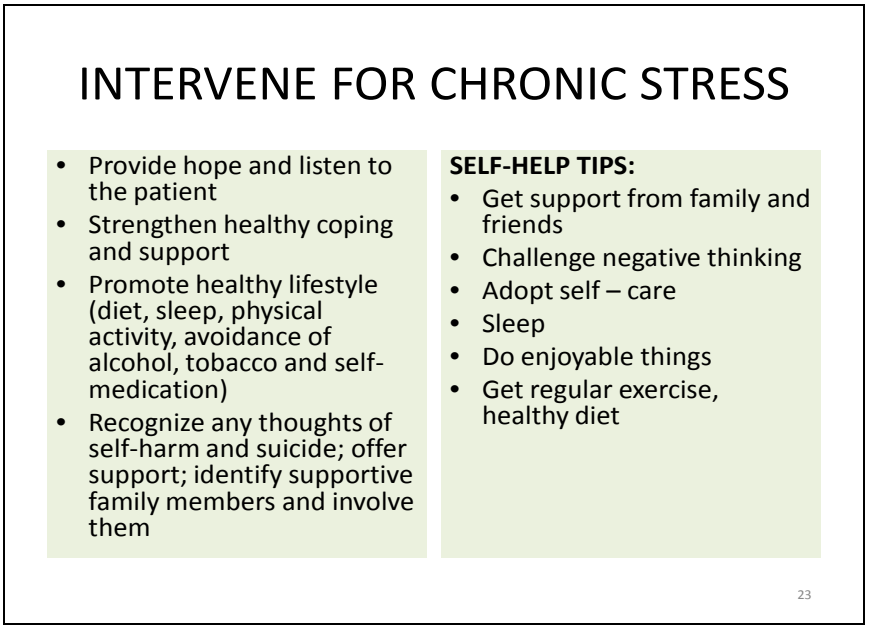

Providing hope, strengthening healthy coping and support systems and promoting healthy lifestyle are part of intervention. Self help tips can be advised by the Medical Officer.

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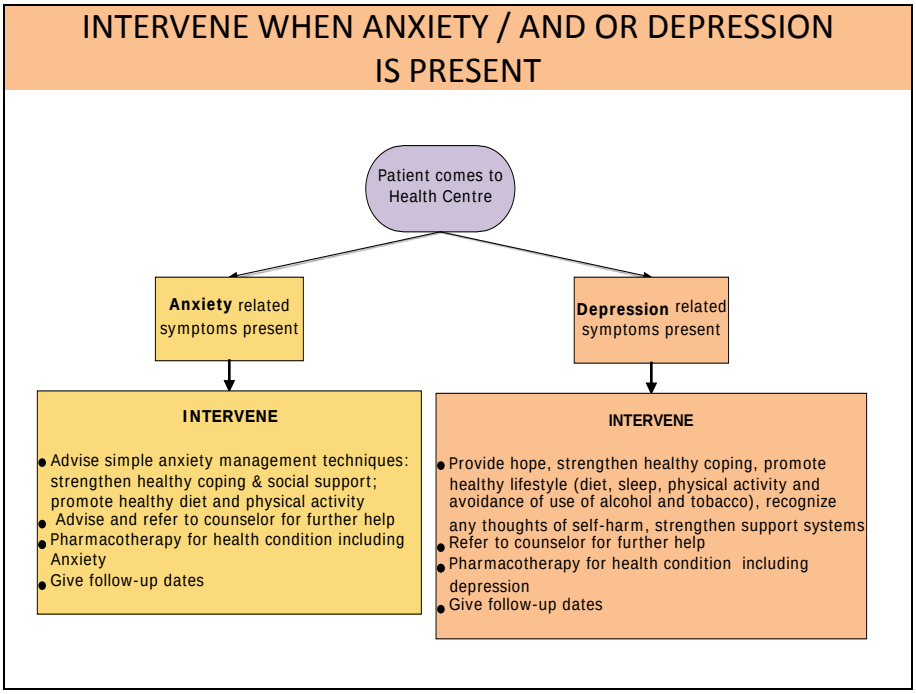

The flowchart illustrates how the Medical Officer will advise and assist with interventions after identifying anxiety and depression[112].

[112] World Health Organization. mhGAP Intervention Guide for mental, neurological and substance use disorders in non-specialized health settings, 2010. http://whqlibdoc.who.int/publications/2010/9789241548069_eng.pdf

The Medical Officer will advise simple anxiety management techniques, strengthen coping and social support using local resources, suggest healthy ways of managing stress and promote healthy diet and physical activity. The patient will be cautioned against the use of stimulants, alcohol and tobacco use and non-monitored prescription drugs.

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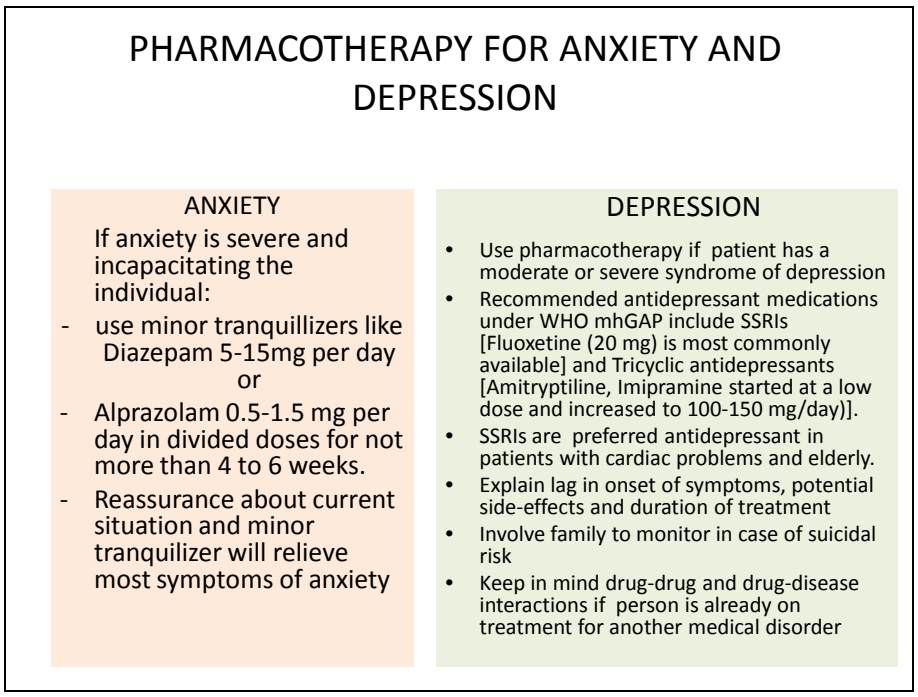
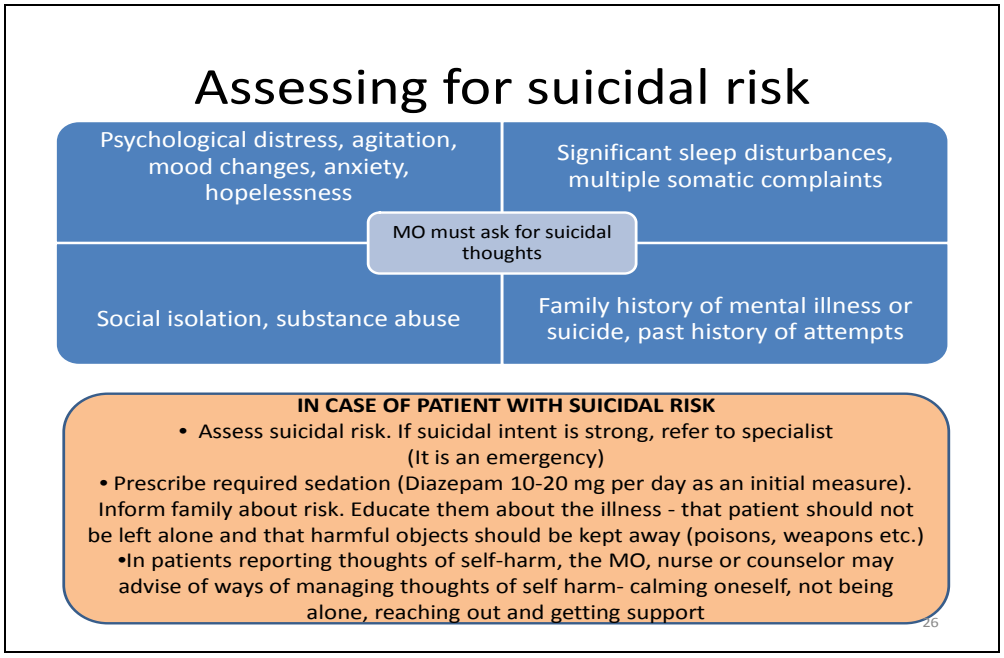


The use of anxiety reducing drugs like benzodiazepines or antidepressants is not routinely recommended for the treatment of acute stress or grief.

If the anxiety is severe and incapacitating the individual significantly, use minor tranquillizers like diazepam 5-15mg per day or alprazolam 0.5-1.5 mg per day in divided doses for not more than 4 to 6 weeks. Reassurance about the current situation along with a minor tranquilizer will relieve most of the symptoms of anxiety.

Use of benzodiazepines can rapidly lead to dependence. Therefore they must be used only in exceptional cases. These drugs must be used cautiously in the elderly (at half the adult dose, short-acting preferred over long-acting) (mhGAP), avoided in pregnant and breast feeding women and not prescribed in children. Patients needing more intensive interventions may be referred to a specialist.

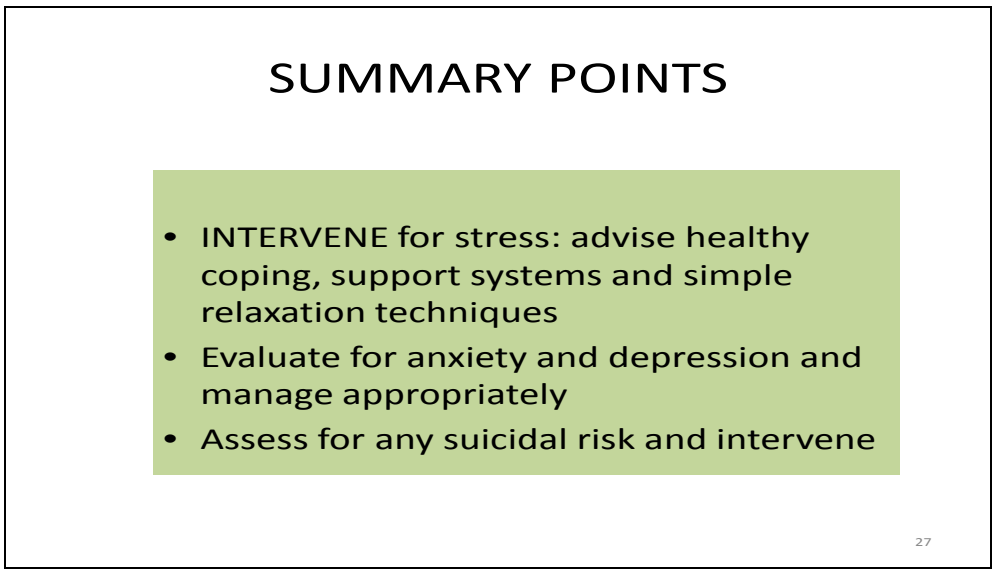
Slide 26



When self - harm and suicide are recognized, offer support and involve family members. It is important to involve the Counselor and Community Health Worker for providing support and after-care. Patients with a strong suicidal risk must be managed as in-patient and referred for specialist care.

In the case of persistent anxiety and suicidal ideation with depressive symptoms (those in stupor and refuse food) having no improvement in one month of continued treatment refer patient to a specialist/ District Hospital.

Slide 27



Slide 28

LEARNING OBJECTIVE

C. INVOLVE other health care providers to offer help

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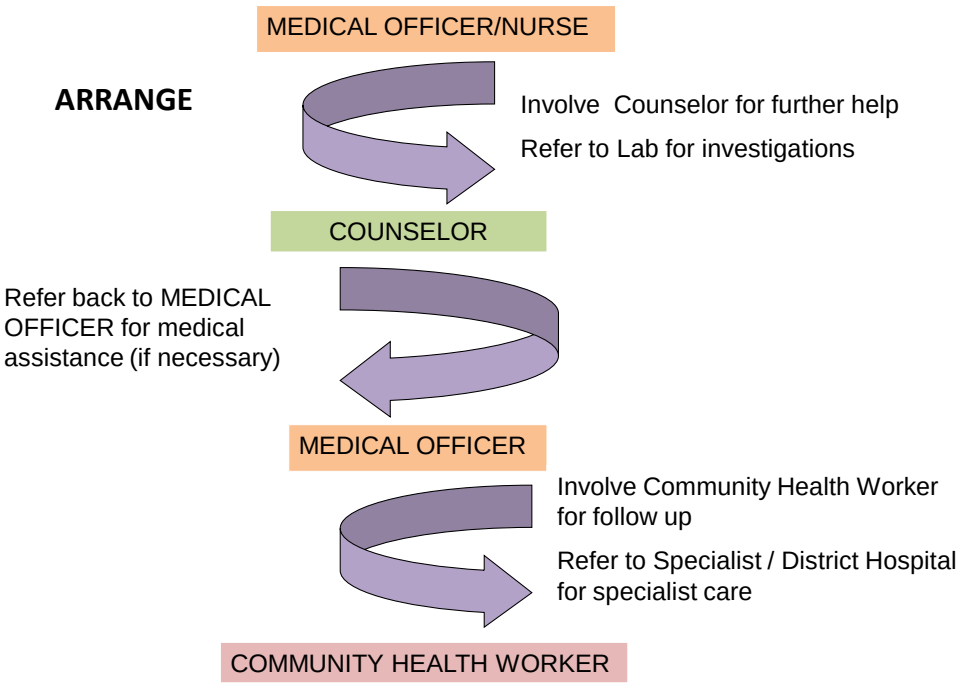
Slide 29

INVOLVE OTHER HEALTH CARE PROVIDERS



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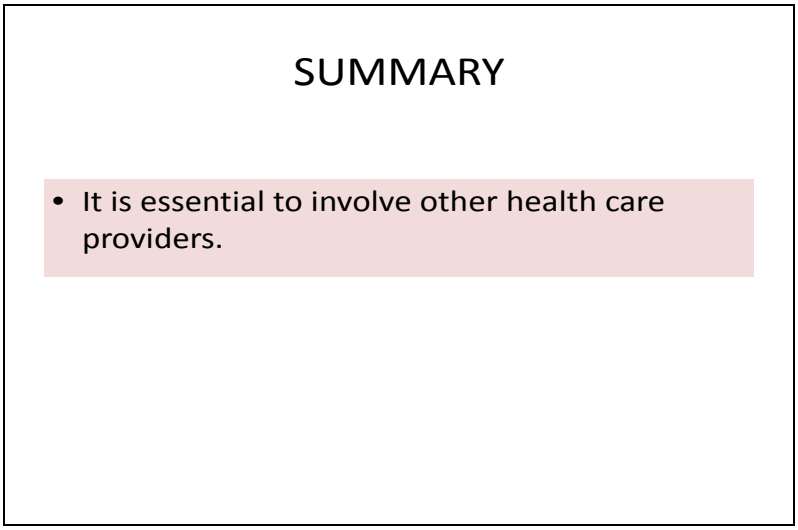

The Medical Officer will link the patient by referring him/ her to the Counselor to manage stress. It is important to reiterate the importance of meeting the Counselor in order to discuss and ventilate and find ways of managing problems and that the Community Health Worker will make home visits and follow up if necessary.

Where there is no Counselor, the Nurse can be trained in providing counseling. In many countries, Nurses have been shown to be able to provide effective counseling and improve health outcomes.

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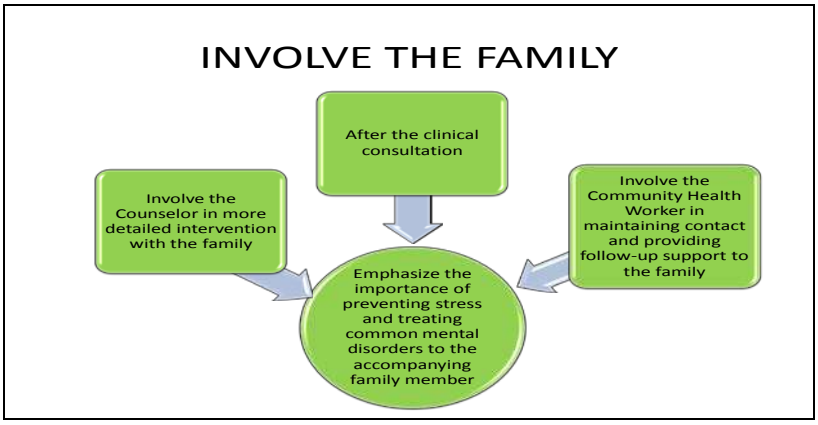
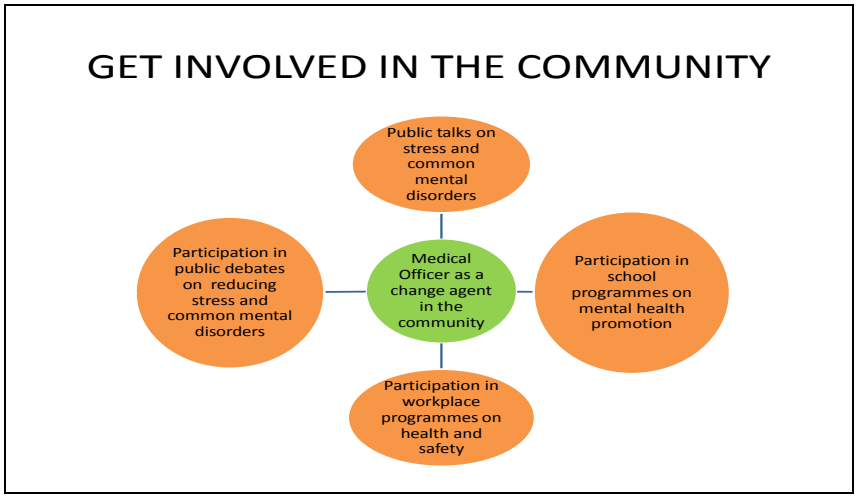


Even in a busy practice, it is useful for the Medical Officer to spend some time explaining to the family member on the importance of stress prevention to reduce risk and improve outcome for NCDs. This will help to reduce the caregiver's worry about the person's health and better support the person's recovery. Often, stress is related to problems within the family. In such cases, it is useful to involve the counselor in talking to the family members. Families also need to understand that common mental disorders are real disorders, and not just because of 'psychological weakness'. Finally, health problems in one family member can cause stress for other family members, and helping them can help the whole family, and not just the specific health condition.

Slide 32



Health of the community cannot be effectively taken care of by only clinical interventions. We need to take prevention activities into the community. Talking about the prevention and management of stress and common mental disorders in public platforms (lectures, public discussions, television shows, mobile messages), adopting healthy lifestyles to avoid stress, recognizing symptoms of common mental disorders among ourselves, our co-workers and families and taking corrective action are all activities for better health and well-being of our communities.

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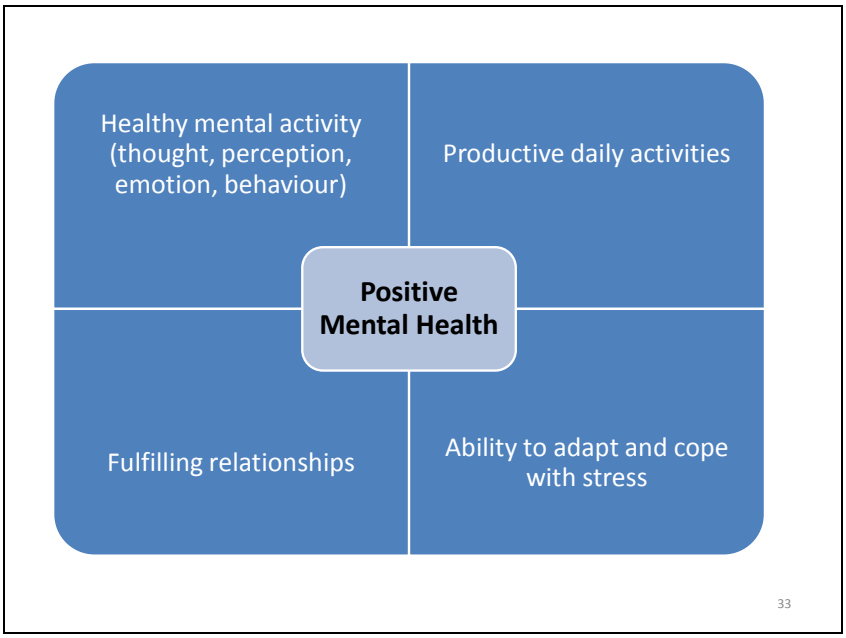
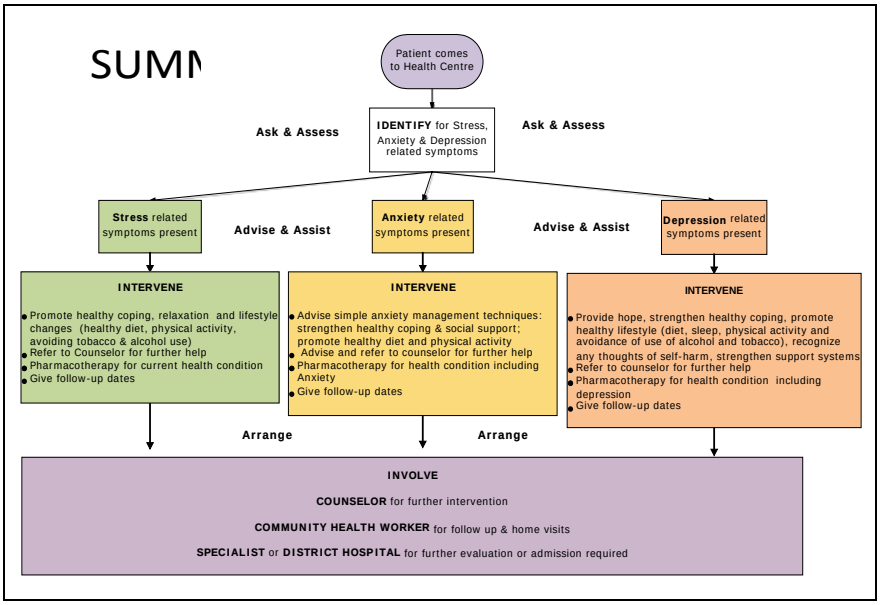


Messages from doctors on positive mental health and attitudes at public for a can be an effective technique for mental health promotion.

Slide 34



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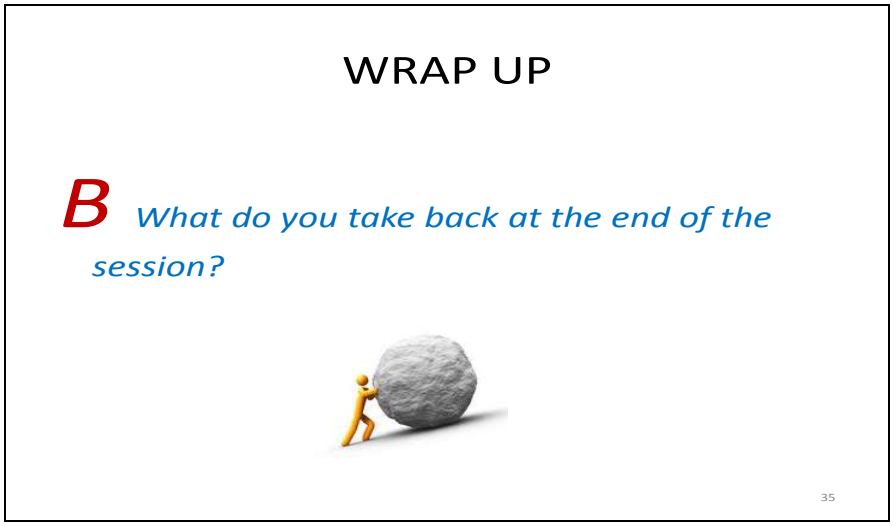


Invite the participants to share about what they take back from the session and how they can use the learning at their Health Centre.

HANDOUTS:

6.10. CHECKLIST FOR IDENTIFYING STRESS
6.11. CHECKLIST FOR IDENTIFYING ANXIETY
6.12. CHECKLIST FOR IDENTIFYING DEPRESSION
6.13. INTERVENTION FOR STRESS
6.14. INTERVENTION FOR ANXIETY
6.15. PHARMACOTHERAPY FOR ANXIETY
6.16. INTERVENTION FOR DEPRESSION
6.17. PHARMACOTHERAPY FOR DEPRESSION
6.18. FLOWCHART SUMMARY (3 I'S)

6.1 IDENTIFYING STRESS

PHYSICAL SYMPTOMS: Headache, muscle tension or pain, chest pain, reduced immunity to infection, high blood pressure, fatigue, thirst, weight gain or loss of weight, stomach upset, skin disorders, back pain, sleeplessness, loss of interest in sexual activity

EMOTIONAL SYMPTOMS: Anxiety, restlessness, lack of motivation or focus, irritability or anger, sadness or depression

BEHAVIOURAL SYMPTOMS: Overeating or under eating, angry outbursts, difficulty to concentrate or memory is impaired, drug or alcohol abuse, tobacco use, social withdrawal, taking medication without prescription, over use (pain killers etc.)

6. 2. IDENTIFYING ANXIETY

The symptoms should be present for a period of at least six months with prominent tension, worry and feelings of apprehension, about every-day events and problems and at least four symptoms out of the following list of items must be present, of which at least one from items (1) to (4).

Autonomic arousal symptoms:

(1) Palpitations or pounding heart, or accelerated heart rate.
(2) Sweating.
(3) Trembling or shaking.
(4) Dry mouth (not due to medication or dehydration).

Symptoms concerning chest and abdomen:

(5) Difficulty breathing.
(6) Feeling of choking.
(7) Chest pain or discomfort.
(8) Nausea or abdominal distress (e.g. churning in stomach).

Symptoms concerning brain and mind:

(9) Feeling dizzy, unsteady, faint or light-headed.
(10) Feelings that objects are unreal (de realization), or that one's self is distant or "not really here" (depersonalization).
(11) Fear of losing control, going crazy, or passing out.
(12) Fear of dying.

General symptoms:

(13) Hot flushes or cold chills.
(14) Numbness or tingling sensations.

Symptoms of tension:

(15) Muscle tension or aches and pains.
(16) Restlessness and inability to relax.
(17) Feeling keyed up, or on edge, or of mental tension.
(18) A sensation of a lump in the throat, or difficulty with swallowing.

Other non-specific symptoms:

(19) Exaggerated response to minor surprises or being startled.
(20) Difficulty in concentrating, or mind going blank, because of worrying or anxiety.
(21) Persistent irritability.
(22) Difficulty getting to sleep because of worrying.

6.3 IDENTIFYING DEPRESSION

At least one of these following symptoms for most days (most of the time) for at least 2 weeks:

1. Persistent sadness or low mood; and/or
2. Loss of interests or pleasure
3. Fatigue or low energy

If any of above present, ask about associated symptoms:

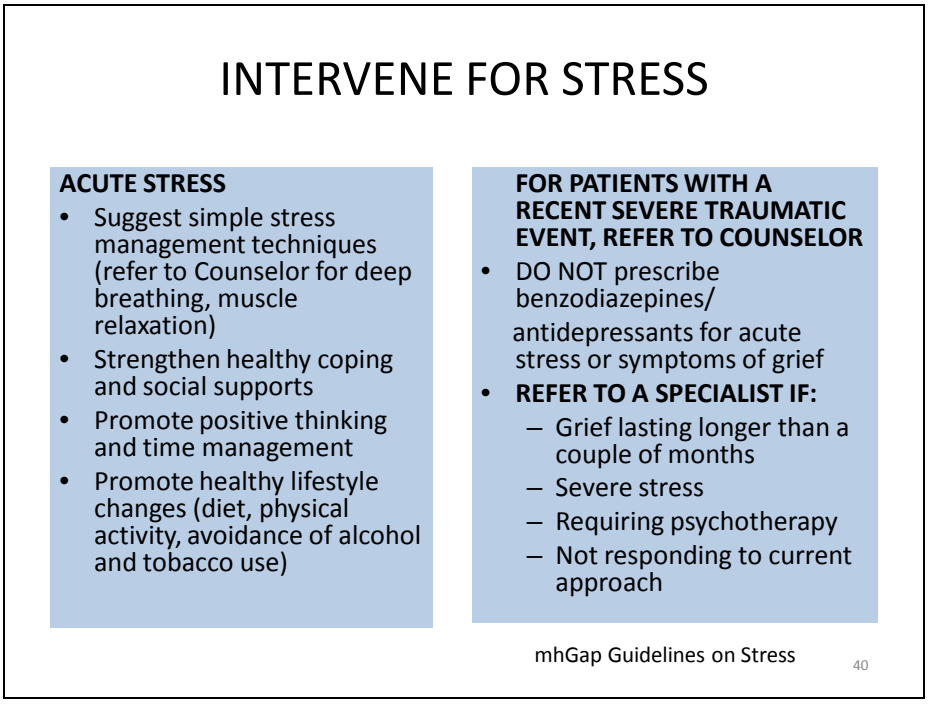
4. Disturbed sleep
5. Poor concentration or indecisiveness
6. Low self-confidence
7. Poor or increased appetite
8. Suicidal thoughts or acts
9. Agitation or slowing of movements
10. Guilt or self-blame

The 10 symptoms then define the degree of depression and management is based on the number of symptoms and the degree to which they are present:

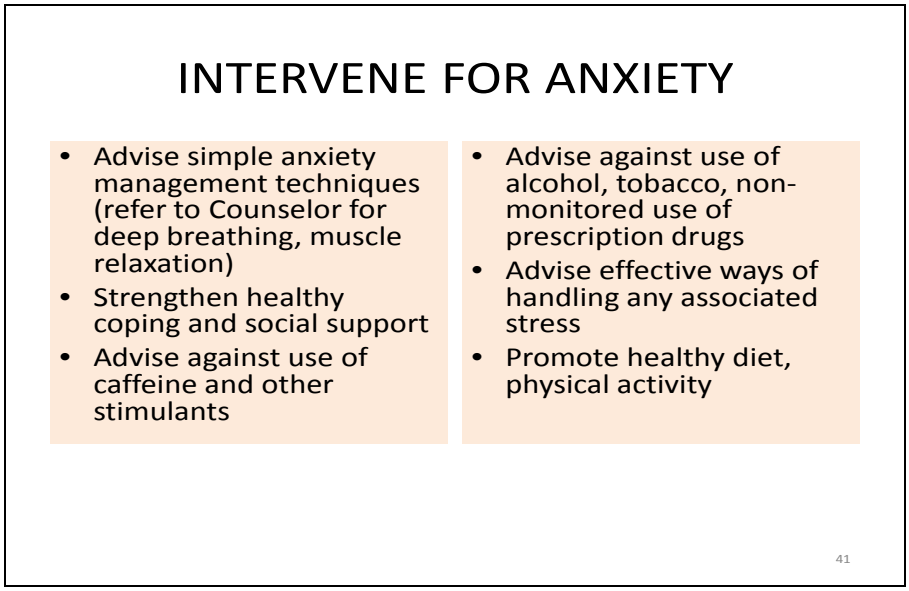
- not depressed (fewer than four symptoms)

- mild depression (four symptoms)
- moderate depression (five to six symptoms)
- severe depression (seven or more symptoms, with or without psychotic symptoms)
- symptoms should be present for a month or more and every symptom should be present for most of every day

6.4. INTERVENTION FOR STRESS



6.5. INTERVENTION FOR ANXIETY



6.6. PHARMACOTHERAPY FOR ANXIETY

PHARMACOTHERAPY (ANXIETY)

- ANXIETY

  If anxiety is severe and incapacitating the individual:

- use minor tranquillizers like Diazepam 5-15mg per day or
- Alprozolam 0.5-1.5 mg per day in divided doses for not more than 4 to 6 weeks.
- Reassurance about current situation and minor tranquilizer will relieve most symptoms of anxiety

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6.7 INTERVENTION FOR DEPRESSION

INTERVENE FOR DEPRESSION

- Provide hope and listen to the patient
- Strengthen healthy coping and support
- Promote healthy lifestyle (diet, sleep, physical activity & avoidance of use of alcohol & tobacco)
- Recognize any thoughts of self-harm and suicide; offer support; identify supportive family members and involve them

SELF-HELP TIPS:

- Get support from family and friends
- Challenge negative thinking
- Adopt self – care
- Sleep
- Do things you enjoy
- Get regular exercise, healthy diet
- Seek help if depression worsens or thoughts of self -harm emerge

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6.8 PHARMACOTHERAPY FOR DEPRESSION

PHARMACOTHERAPY
(DEPRESSION)

START ANTI DEPRESSANTS

- Recommended antidepressant medications under WHO mhGAP include SSRIs (Fluoxetine is most commonly available) &Tricyclic antidepressants(Amitryptiline, imipramine).
- Fluoxetine is prescribed in the dose of 20 mg/day.
- SSRIs are preferred antidepressant in patients with cardiac problems and elderly.
- Imipramine and amitryptiline may be given to young adults without any medical co-morbidity. Starting dose is 75 mg at bedtime, built up a therapeutic dose of 100-150 mg of these two tablets within few weeks.

IN CASE OF DEPRESSION WITH SUICIDAL RISK

- Assess suicidal risk. If suicidal intent is strong, refer to specialist (it is an emergency)
- Prescribe required sedation (Diazepam 10-20 mg per day as an initial measure). Inform family about risk. Educate them about the illness - that patients should not be left alone and that harmful objects should be kept away (poisons, weapons etc.)

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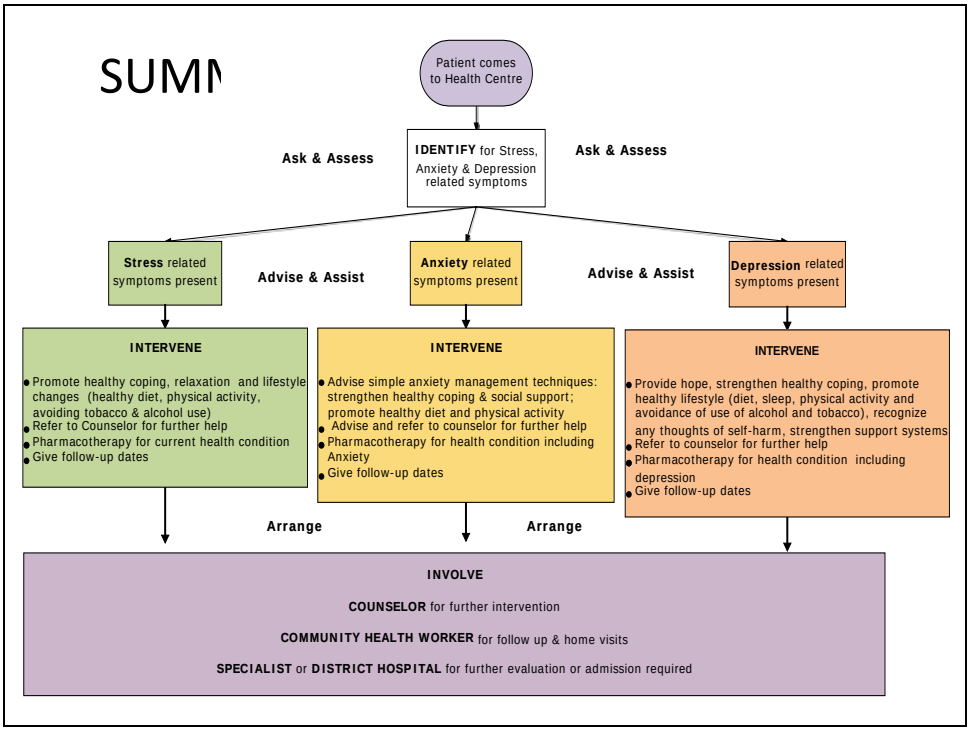
6.9 FLOWCHART WITH 3 I's



Team work and developing an integrated approach to managing risk factors for NCDs

Session 7

Objectives of the session

By the end of this session, the participants will understand the following:

- The patient's journey to help seeking and the various points where risk factors can be identified and addressed
- The roles and responsibilities of team members in carrying out activities to prevent and reduce risk factors for NCDs
- The involvement of all care providers as a co-ordinated team to carry out activities in the clinic and community to prevent and reduce risk factors for NCDs

Organization of the session

- *Facilitator's reading material:* The facilitator should read the material before the session. Sources for specific information are quoted and included as references in the footnotes.

- *Handouts:* Copies of handouts will be made before the session and distributed either before or after the session. List of handouts are included at the end of each session.

- *Power point presentation:* A DVD containing the power point presentations accompanies the training manual. The slides for each session are reproduced in the manual to aid the facilitators.

- ***Activities****:*

  Activities during the training session may include:

  - **Brainstorming** or whole group interaction, indicated by the letter '**B**' and the symbol 
  - **Group activity** or discussion in small groups, indicated by the letter **GA** and the symbol 
  - **Individual Activity**, indicated by letter **IA** the symbol 
  - **Role Play** is indicated by the letter **RP** and symbol 

TEAMWORK AND DEVELOPING AN INTEGRATED APPROACH TO MANAGING RISK FACTORS FOR NCDs

Session 7

1

INSTRUCTION

Close the training to discuss how health care providers work as a team to address risk factors and leading to NCDs.

Slide 2

Activity (Group Work)

A WORKING AS A TEAM

How can we work as a team in primary care?

The team:

- Medical Officer
- Counselor
- Community Health Worker
- Health Centre
- District Hospital

(Duration: 30 minutes)

2

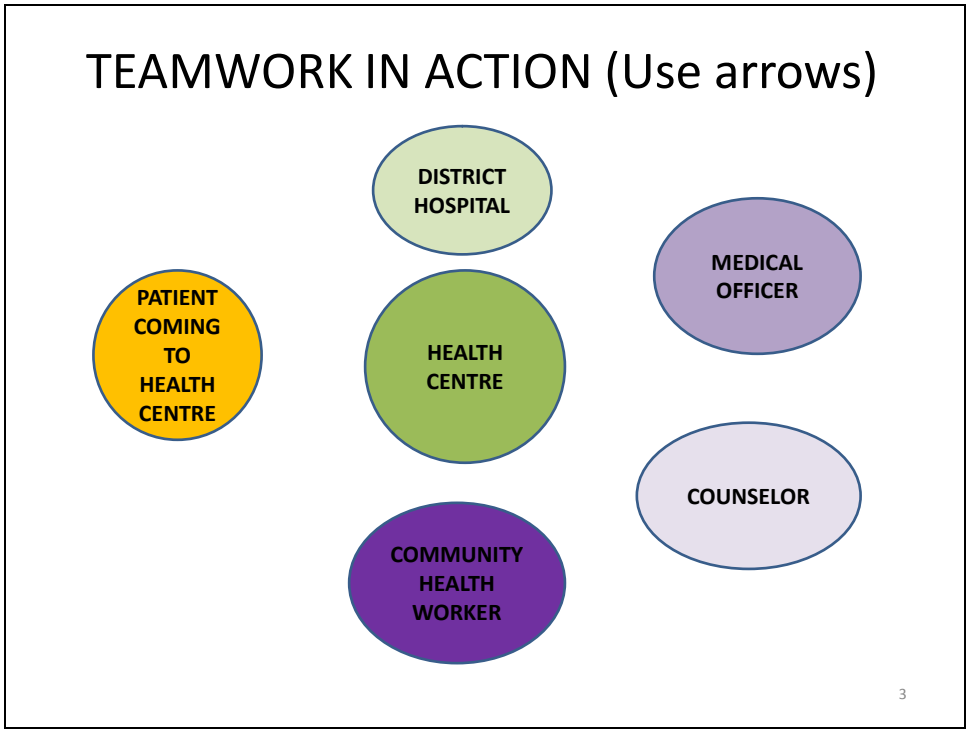
TEAMWORK IN ACTION

Total duration: 30 minutes

Divide participants into groups and give chart papers and pens for the activity. The group will nominate a representative to make the presentation (15 minutes). Ask the group how health care providers work as a team to help the patient from the time he/she enters the Health Centre. Arrows can be used to explain linkages among the team of health care providers in the given diagram (use Slide 3). Also discuss the team's role in the community.

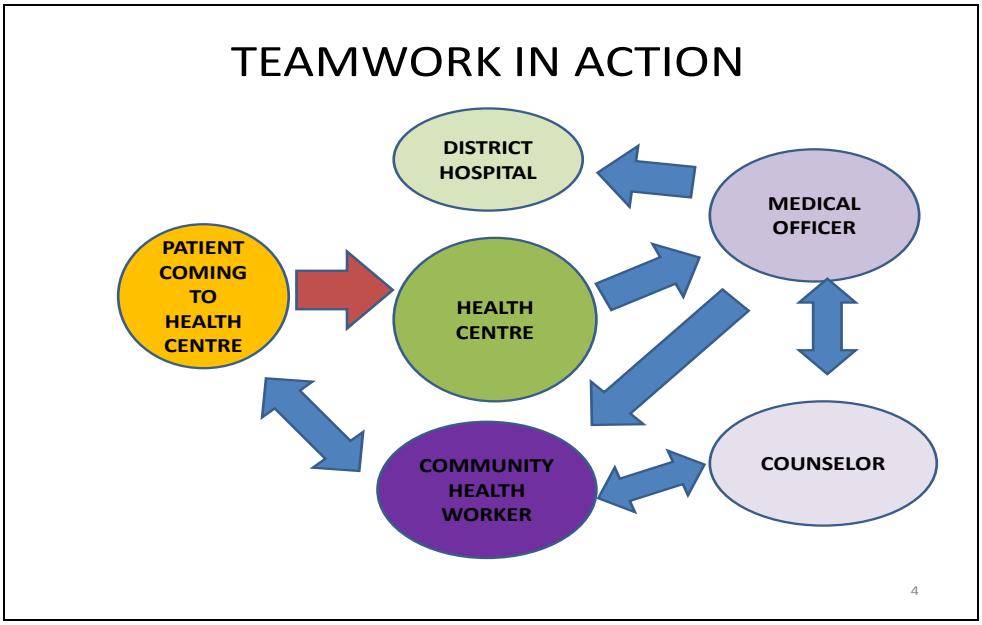
Summarize after group presentations.

Slide 3



Ask the groups to use arrows to depict linkages. Give 15 minutes for group work and after presentation by each group discuss.

Slide 4



There are many ways of interpreting the patient's journey to seek help. The patient can be referred by the Community Health Worker or come directly to the Health Centre after which he/ she is seen by the Medical Officer (and/or Nurse). The Medical Officer treats the patient and refers him/ her to the Counselor for further help. The Counselor after seeing the patient can refer the patient back to the Medical Officer for health related issues/ medication and link up to the Community Health Worker for home visits and follow-up.

Use of contemporary technology

All team members can use contemporary technology to engage and maintain patients in follow-up. SMS messaging, phone calls, quit lines and internet-based communication can increasingly be exploited to improve contact with patients and provide them continued support.

Referral

When there is a need for specialized care (beyond the capacity of primary care), the patient will be referred to the specialist/ District Hospital by the Medical Officer.

In the community, summarise the ways in which different health professionals can be involved in health promotion, health education, early detection and addressing risk factors.

Slide 5

RISK FACTORS IN NCDs

	Stress	Tobacco use	Harmful alcohol use	Unhealthy Diet	Physical Inactivity
Cardiovascular Diseases	√	√	√	√	√
Diabetes	√	√	√	√	√
Cancer	√	√	√	√	√
Chronic Respiratory Diseases	√	√	√	×	√
Common Mental Disorders	√	√	√	√	√

5

The more the risk factors, greater are the chances of developing NCDs.

Assessment of Risk Factors for NCDs and documentation at the Health Centre

Slide 6

NCD risk factor assessment and record in health care

Parameters	Details	Comments
Socio-demographic details	Date of visit Age, Gender, Contact Information Consent for follow-up	
Record risk for NCD **Non Modifiable Risk Factors**	Family history of: Cardiovascular disease Hypertension Diabetes Cancer Chronic respiratory disease Mental disorder	Whether present or absent
Modifiable Risk Factor	Tobacco use: Never Past (smoking and/or smokeless) Current (smoking and/or smokeless)	Age of initiation, quantity per day, age at quitting Age at initiation, quantity per day and currently, attempts to quit, severity of dependence, last use, desire to quit

Documentation of the absence or presence of risk factors for NCDs, of the intervention provided and monitoring whether the patient has been successful in reducing the risk factors with the support of the health providers is very important. In the long run, it will indicate whether reduction of risk factors has prevented the development and progression of the NCD.

Slide 7

NCD risk factor assessment and record in health care

Parameters	Details	Comments
Modifiable Risk Factors	Exposure to tobacco smoke Exposure to other environmental toxins	Enquire about passive or second hand smoking Enquire about exposure at home, workplace etc
Modifiable Risk Factor	Alcohol Never Past Current	 Age of initiation, frequency and type, age of quitting Age of initiation, frequency and type, frequency of more than 5 drinks/day, dependence, last use, desire to quit
Modifiable Risk Factor	Diet Frequency of fast/fried food Frequency of added salt intake (sprinkling extra salt, pickled and preserved foods) Servings of fruits Servings of vegetables 24 Hour dietary recall	 Frequency per week Frequency per day

It is important to record both non-modifiable and modifiable risks and give a feedback regarding these to the patient.

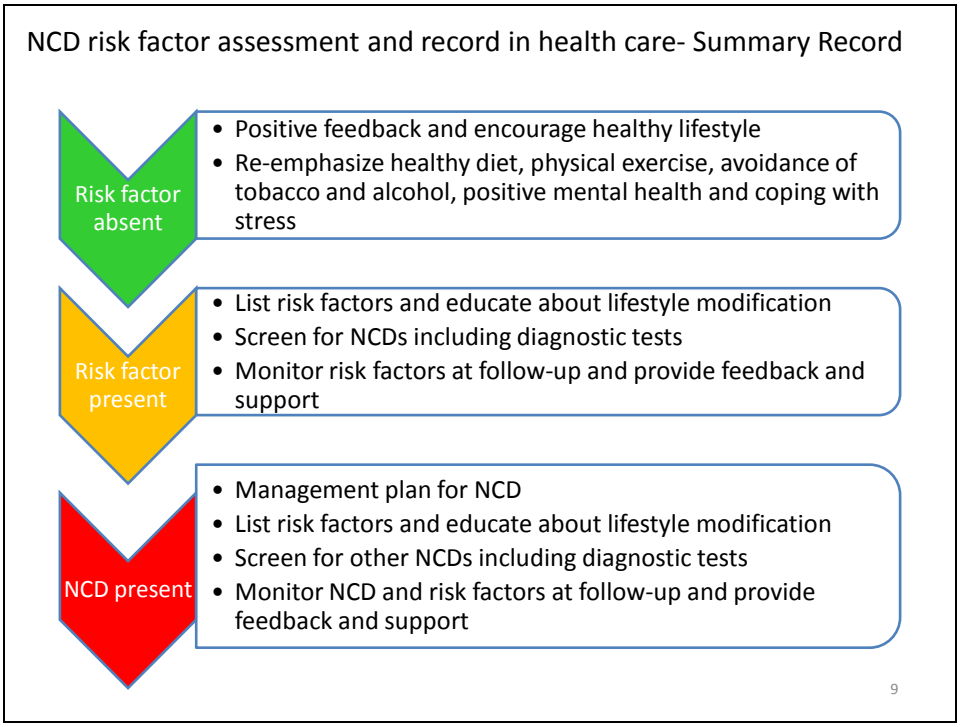
Slide 8

NCD risk factor assessment and record in health care

Parameters	Details	Comments
Modifiable Risk Factor	Physical Activity Type of work Level of physical activity Planned exercise	 High/moderate/low Quantity per week (moderate/vigorous)
Modifiable Risk Factor	Stress	Present or absent If present sources of stress Evaluate for common mental disorder like anxiety and depression
Metabolic risk factors	Diabetes Cholesterol levels High blood pressure Height in cms, weight in Kgs Waist circumference Hip circumference	Date of first diagnosis Blood sugar and date Total, LDL, HDL, Triglycerides and date BP record and date BMI and date Waist/hip ratio and date
Clinical evaluation	General examination Oral examination Systemic examination	Record significant findings
Follow-up visit	Adherence to treatment plan, success, barriers, revised plan	Record change in clinical parameters, metabolic risk factors and further plan. Provide a follow-up date and plan of action

For chronic diseases, follow-up and ongoing monitoring and support is important. In a good multi-disciplinary set-up, the care plan and individual health care provider responsibilities will be comprehensively documented. For eg. While the Medical Officer is responsible for providing treatment advice for the NCD and the Doctor/Nurse giving the patient brief advice on reducing the risk factor (e.g. smoking), the Counselor will provide counselling on how to deal with withdrawal and prevent relapse; the Community Health Worker will remind the patient on the follow-up date and provide support in between follow-ups.

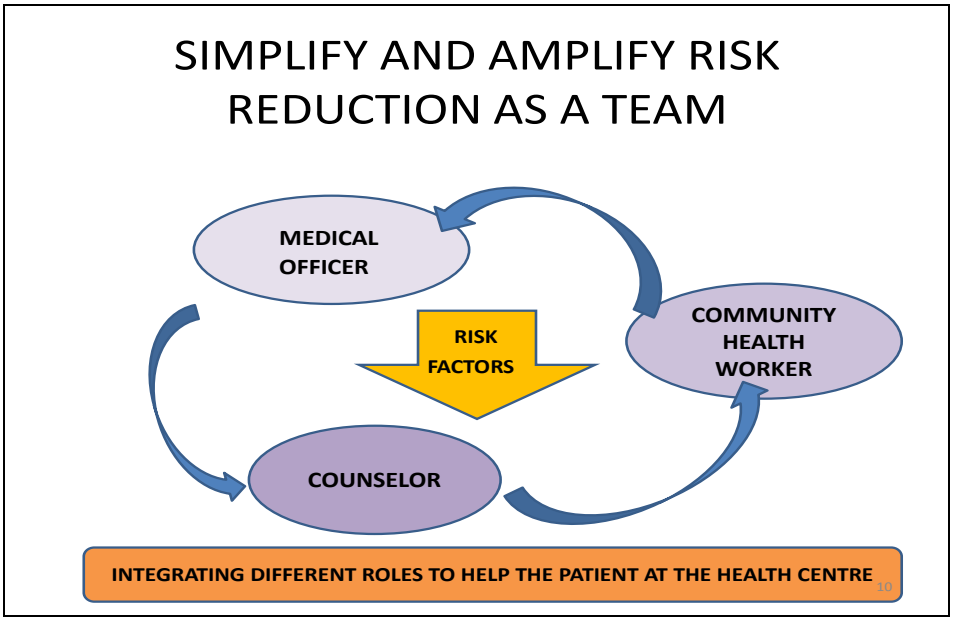
Slide 9



The patient's record should contain a summary of the risk factors and the intervention provided. While this is a summary of the details that need to be recorded for NCD risk reduction, this record may be maintained separately (for e.g. in an NCD clinic) or be integrated with the general case record in the primary health care centre.

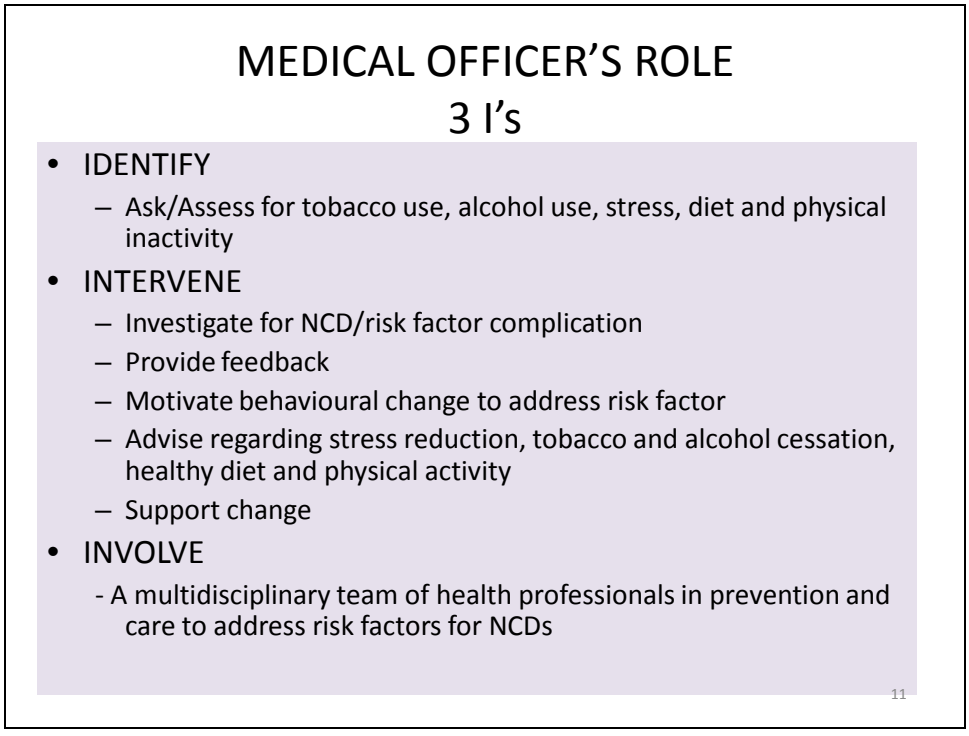
Counselors and community health care workers may add supplementary information on the frequency with which they have seen the patient, the nature of intervention (e.g. counselling session or home visit) and dates for follow-up.

Slide 10



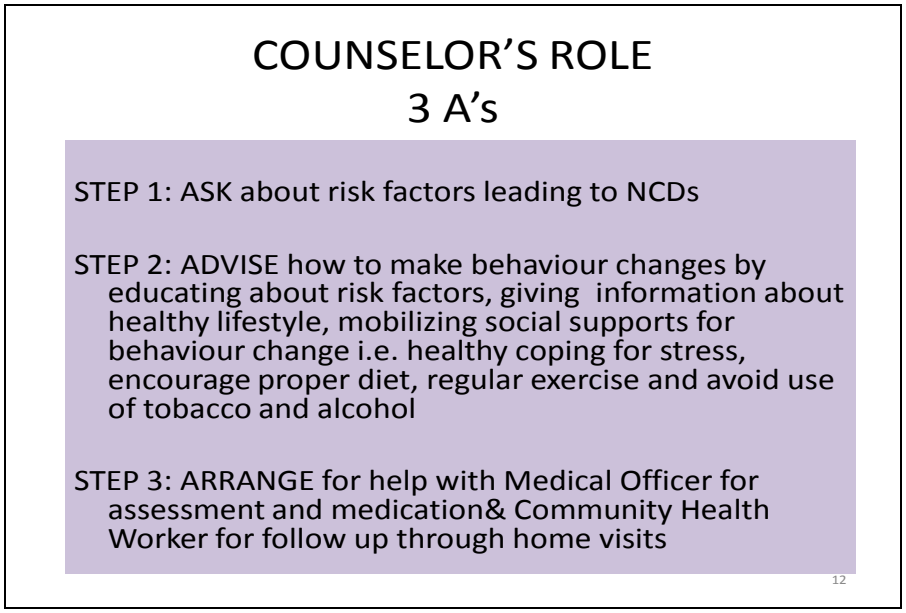
Working together as a team is more efficient and is greatly beneficial for the patient in order to reduce risk factors for NCDs.

Slide 11



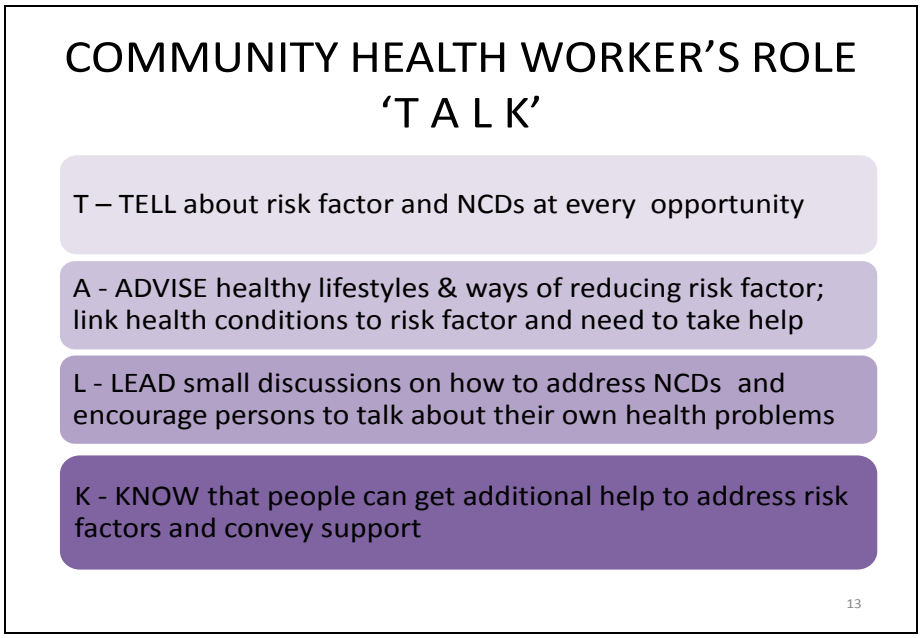
The Medical Officer will use the 3 I's approach when helping the patient.

Slide 12



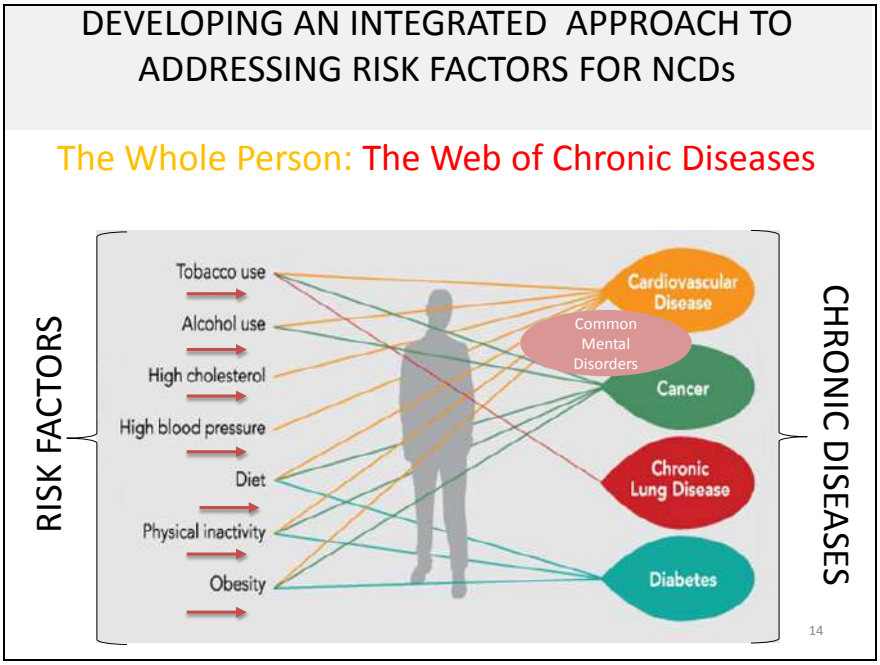
The Counselor will use the 3 A's approach when helping the patient.

Slide 13



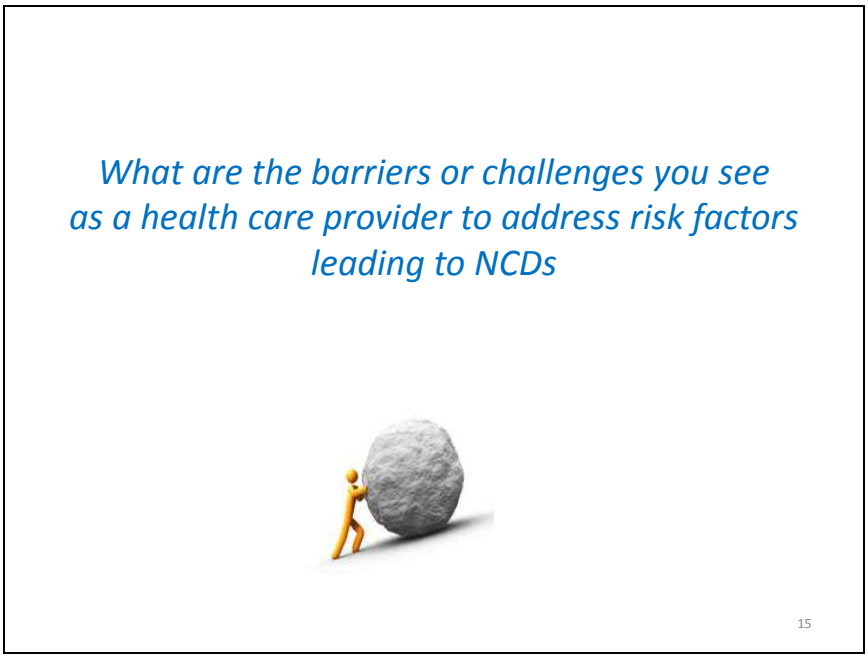
The Community Health Worker will use the TALK Model approach when helping the patient.

Slide 14



An integrated approach to addressing risk factors leading to chronic diseases is important. In some countries like Australia[113], it is estimated that more than 90% of people have at least one risk factor for NCDs. While it is acknowledged that there are non-modifiable risk factors for NCDs, the fact that most risk factors can be controlled, and that reducing the number of risk factors can reduce risk for disease must be recognized.

Slide 15



[113]Australia Institute of Health and Welfare.Risk Factors contributing to chronic disease. 2012 http://www.aihw.gov.au/publication-detail/?id=10737421466.

Annexure 1

REDUCING RISK FACTORS FOR NON COMMUNICABLE DISEASES (NCDs)

IN PRIMARY CARE

Training Programme for Medical Officers

PRE TRAINING EVALUATION QUESTIONNAIRE (MEDICAL OFFICERS)

NAME: **DATE:**

Tick the correct answer:

1. The following are NCDs:

a) Dysentery, tuberculosis, hepatitis
b) Diabetes, depression, chronic respiratory disorders, cancers, cardiovascular diseases
c) Psychosis, cholera, asthma, liver cirrhosis, influenza
d) Tuberculous meningitis and cysticercosis

2. Non- Modifiable risk factors for NCDs are:

a) Age, gender and family history
b) Stress, tobacco use, physical inactivity, unhealthy diet, alcohol use
c) Raised blood pressure, raised total cholesterol, age, gender, indoor smoke
d) All of the above

3. Tobacco use can best be picked up in health care by:

a) Noticing irritability, craving for tobacco
b) Routinely asking about tobacco use and detailed physical examination
c) Stained gums, teeth, fingers on physical examination
d) Report of nasal drip, hunger, headaches by patient

4. Range of pharmacological treatment strategies for tobacco cessation includes:

a) Nicotine gum and patch
b) Nicotine inhaler and spray
c) Nicotine and non-nicotine treatments
d) Antidepressants and anxiolytics

5. The following are harmful patterns of alcohol consumption EXCEPT:

a) Binge drinking
b) Dependence
c) Drinking in pregnancy
d) None of the above

6. Body Mass Index (BMI) in the normal range for Indians is:

a) 17-20

b) 18.5 – 22.9
c) 23-24.9
d) None of the above

7. Physical activity is contra-indicated in persons with

a) Cardiovascular disease
b) Patients with diabetes
c) Patients with cancer
d) None of the above

8. Stress:

a) Indicates that the person has a diagnosis anxiety disorder or depression
b) Mostly presents with psychological distress
c) Has a variety of presentations including physical symptoms, emotional and behavioural symptoms
d) Must be immediately treated with antidepressants

9. When a patient reports suicidal ideas:

a) The patient must immediately be sent to the district hospital which is six hours away
b) It must be reported to the police
c) Risk assessment must be carried out and appropriate measures taken
d) The family members must be held responsible for any consequence

10. In primary health care, approaches to reduce risk factors for NCDs are best carried out by:

a) Medical officer
b) Nurse
c) Multi-disciplinary team
d) Community Health Worker

State if the following are True/False

11. COTPA (2003) refers to the display of ingredients on food labels True/False

12. Alcohol consumption is a risk factor for diabetes, cancer and heart disease. True/False

13. Ten percent of Indian families consume about 10 g salt daily. True/False

14. There is no difference between physical activity and exercise. True/False

15. One standard diet with the four major food groups is applicable to everyone in India True/False

16. Inadequate intake of dietary fibre is associated with the development of hypertension True/False

17. Soya sauce has high sodium content True/False

18. Dancing is a form of aerobic exercise True/False
19. Tar is the chemical in tobacco that is addictive True/False
20. Community interventions play a minimal role in reducing NCD risk True/False

Annexure 2

REDUCING RISK FACTORS FOR NON COMMUNICABLE DISEASES (NCDs)

IN PRIMARY CARE

Training Programme for Medical Officers

POST TRAINING EVALUATION QUESTIONNAIRE (MEDICAL OFFICERS)

NAME: **DATE:**

Tick the correct answer:

1. The following are NCDs:

e) Dysentery, tuberculosis, hepatitis
f) Diabetes, depression, chronic respiratory disorders, cancers, cardiovascular diseases
g) Psychosis, cholera, asthma, liver cirrhosis, influenza
h) Tuberculous meningitis and cysticercosis

2. Non- Modifiable risk factors for NCDs are:

e) Age, gender and family history
f) Stress, tobacco use, physical inactivity, unhealthy diet, alcohol use
g) Raised blood pressure, raised total cholesterol, age, gender, indoor smoke
h) All of the above

3. Tobacco use can best be picked up in health care by:

e) Noticing irritability, craving for tobacco
f) Routinely asking about tobacco use and detailed physical examination
g) Stained gums, teeth, fingers on physical examination
h) Report of nasal drip, hunger, headaches by patient

4. Range of pharmacological treatment strategies for tobacco cessation includes:

e) Nicotine gum and patch
f) Nicotine inhaler and spray
g) Nicotine and non-nicotine treatments
h) Antidepressants and anxiolytics

5. The following are harmful patterns of alcohol consumption EXCEPT:

e) Binge drinking
f) Dependence
g) Drinking in pregnancy
h) None of the above

6. Body Mass Index (BMI) in the normal range for Indians is:

e) 17-20
f) 18.5 – 22.9
g) 23-24.9
h) None of the above

7. Physical activity is contra-indicated in persons with

e) Cardiovascular disease
f) Patients with diabetes
g) Patients with cancer
h) None of the above

8. Stress:

a) Indicates that the person has a diagnosis anxiety disorder or depression
b) Mostly presents with psychological distress
c) Has a variety of presentations including physical symptoms, emotional and behavioural symptoms
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10. In primary health care, approaches to reduce risk factors for NCDs are best carried out by:

a) Medical officer
b) Nurse
c) Multi-disciplinary team
d) Community Health Worker

State if the following are True/False

21. COTPA (2003) refers to the display of ingredients on food labels True/False

22. Alcohol consumption is a risk factor for diabetes, cancer and heart disease. True/False

23. Ten percent of Indian families consume about 10 g salt daily. True/False

24. There is no difference between physical activity and exercise. True/False

25. One standard diet with the four major food groups is applicable to everyone in India True/False

26. Inadequate intake of dietary fibre is associated with the development of hypertension True/False

27. Soya sauce has high sodium content True/False
28. Dancing is a form of aerobic exercise True/False
29. Tar is the chemical in tobacco that is addictive True/False
30. Community interventions play a minimal role in reducing NCD risk True/False

Annexure 3

REDUCING RISK FACTORS FOR NON COMMUNICABLE DISEASES (NCDs)

IN PRIMARY CARE

Training Programme for Medical Officers

Training Feedback Evaluation Form

Date: _____

Trainers: _____

Kindly indicate your level of agreement with the statements below:

		Strongly agree	Agree	Neutral	Disagree	Strongly Disagree
1	The objectives of the training were clear					
2	The workshop was interactive and actively involved the participants					
3	The topics were relevant					
4	The content was organised and easy to follow					
5	The practical exercises were useful					
6	The handouts were useful					
7	I will be able to use what I have learned in the training in my work					
8	The trainer was knowledgeable in the areas					
9	The trainer was well prepared					
10	The training was useful					
11	The time allotted to the training was useful					
12	The meeting room and facilities were adequate					
13	The administrative arrangements were satisfactory					

Annexure 4

REDUCING RISK FACTORS FOR NON COMMUNICABLE DISEASES (NCDs)

IN PRIMARY CARE

Training Programme for Medical Officers

Evaluation Questionnaire- Response Key

Question No	Correct Response	Additional Information
1	**b**	NCDs account for about 63% of all causes of deaths across the world and low and middle income countries the burden due to NCDs is rising rapidly. Nearly 80% of deaths in these countries occur below the age of 69 and in India the prevalence of NCDs is increasing and predicted to become the 'new epidemic'
2	**a**	There are few non-modifiable risk factors for NCDs. According to the WHO, there are many modifiable risk factors including behavioural risk factors such as tobacco use, harmful use of alcohol, low fruit and vegetable intake (unhealthy diet), poor physical activity and stress.
3	**b**	Tobacco use may not be a presenting problem and may be hidden. The Medical Officer should ask all patients who report with health problems about tobacco use including observing signs.
4	**c**	NRT supports the process of quitting and act on the brain to reduce craving and withdrawal symptoms. There is also non - NRT medication in such as Bupropion, Varenicline and Nortryptiline
5	**d**	Binge drinking refers to drinking 5 or more drinks on one drinking occasion and is associated with serious health risks. Dependence refers to a harmful pattern of consumption with tolerance, withdrawal and salience. Drinking in pregnancy can have adverse effects on pregnancy outcome and produce foetal alcohol spectrum disorders
6	**b**	The BMI is calculated as follows: Weight in Kgs/ Height in M2. The range for normal BMI among Indians is 18.5-22.9.
7	**d**	Physical activity is not contraindicated with just a diagnosis of NCD. In fact, physical activity is important in the control of NCDs, but some modification may be required in patients with certain NCDs.
8	**c**	Stress can present in numerous ways. Stress is an important modifiable risk factor for NCD. Preventing and learning to cope

		with stress is an important approach to reduce risk for NCD and improve outcomes.
9	**c**	The first step in the management of a patient expressing suicidal ideas is an assessment of suicidal risk. A patient with a serious suicidal risk needs to be referred for inpatient treatment. Providing support, ensuring a safe environment, involving a multi-disciplinary team for psychological support and follow-up are important steps in managing suicidal risk.
10	**b**	The MO will IDENTIFY, INTERVENE and INVOLVE the multi disciplinary team of health professionals in prevention and care to address risk factors for NCDs. The Counselor will ASK, ASSIST and ARRANGE The Community Health Worker will use the TALK approach -TELL what NCDs and risk factors are; ADVISE on how to reduce risk factors and adopt healthy lifestyles; LEAD collective community action ; KNOW more about NCDs, risk factors, self-help approaches and networks for treatment and support.
11	**False**	COTPA refers to the Cigarettes and Other Tobacco Products Act. It was enacted in 2003 to protect the public from adverse and harmful effects of second hand smoking.
12	**True**	According to the WHO report Alcohol and Health 2004, alcohol is responsible for 200 disease conditions and even moderate consumption is not free of health risk.
13	**False**	40% of Indian families consume 10 g of salt daily (NIN, 2010)
14	**False**	Physical activity is any bodily movement produced by skeletal muscles that requires energy expenditure (e.g. playing, house work, travelling). Exercise is a sub category of physical activity that is planned, structured, repetitive and aims to improve or maintain one or more components of physical fitness.
15	**False**	Dietary recommendations vary across the developmental continuum. Young children need food rich in energy and good for body building. Elderly people need food rich in fibre and low in fat.

16	**False**	Deficiency of dietary fibre is specially associated with a risk to colonic cancer.
17	**True**	Foods high in sodium content also include processed cheese, pickles, foods with preservatives and instant noodles
18	**True**	Other forms of aerobic exercise include running, brisk walking, swimming.
19	**False**	Nicotine is the primary addictive substance in tobacco. Nicotine is said to be many times more addictive than illicit drugs. Tar and nearly 4000 other chemicals are present in tobacco, including many carcinogens.
20	**False**	Community interventions play an important role in NCD risk reduction. Such interventions encompass not just health awareness, but access to healthy foods, proper environments for physical exercise and recreation, policies on tobacco and alcohol and a networks of services in the community for treatment and support

Annexure 5

NATIONAL MEETING OF EXPERTS FOR DEVELOPING TRAINING MANUALS TO ADDRESS PSYCHOLOGICAL/BEHAVIOURAL RISK FACTORS FOR NCDs

(NIMHANS, BANGALORE- 6th & 7th Feb 2014)

Ms. Aruna	ASHA worker,Kolar
Dr. Vivek Benegal	Professor & Head, Centre for Addiction Medicine, NIMHANS, Bangalore
Dr P Satish Chandra	Director/Vice-Chancellor and Professor of Neurology, NIMHANS, Bangalore
Dr. Prabhat Kumar Chand	Assoc Professor of Psychiatry, NIMHANS
Dr. Sudipto Chatterjee	Psychiatrist, Sangath, Goa
Dr George A. D'Souza	Professor & Head, Department of Pulmonary Medicine, St John's Medical College and Research Institute, Bangalore
Dr. N Girish	Additional Professor, Dept of Epidemiology.NIMHANS, Bangalore
Dr. Bipin Gopal	State Programme Officer (NCD),Trivandrum
Dr. Pradeepa R Guha	Sr. Scientist & Head, Research Operations, Madras Diabetes Research Foundation, Chennai
Dr. Vivek Gupta	Assistant Professor, Department of Epidemiology, NIMHANS, Bangalore
Dr. G. Gururaj	Professor and Head, Dept of Epidemiology, NIMHANS, Bangalore
Mr. Khaja Husain	NCD Counselor, Kolar
Dr. Jagannath P	State Consultant, National Tobacco Control Programme, Anti-Tobacco Cell, Bangalore
Dr Pradeep Joshi	National Professional Officer, WHO country office to India, New Delhi
Dr Arun Kandasamy	Assistant Professor, Dept. of Psychiatry, NIMHANS, Bangalore
Dr. Prakash Kumar	State Programme Manager, National Rural Health Mission, Directorate of Health & Family Welfare Services, Bangalore
Mr. Prem Kumar	Social Worker, Centre for Addiction Medicine, NIMHANS,Bangalore
Dr. C. Kuppaswamy	District Programme Officer, District Surveillance Unit, S.N.R Hospital Compound, Kolar
Dr. A Laxmaiah	Sr.Deputy Director (Scientist 'F'- Epidemiology) HoD, Division of Community Studies and Officer-In-Charge of NNMB National Institute of Nutrition, Hyderabad
Dr. Sathya Prakash Manimunda	Scientist-D (Medical), NCDIR (ICMR), Bangalore
Dr. C.N.Manjunath	Director and Prof. & Head of Cardiology, Sri Jayadeva Institute of cardiovascular Sciences and Research, Bangalore
Ms Tresa Mary	Research Associate, NCD Project, NIMHANS, Bangalore
Dr Vinalini Mathrani	Research Consultant, Health & Education, Bangalore
Dr. Sailesh Mohan	Senior Research Scientist & Adjunct Associate Professor, Public Health Foundation of India, New Delhi
Dr. Ashish Mohinde	Resident in Psychiatry, NIMHANS, Bangalore

Dr Pratima Murthy	Professor of Psychiatry, Centre for Addiction Medicine, NIMHANS, Bangalore
Dr. Prashanthi Nattala	Asst Prof. Dept of Nursing, NIMHANS, Bangalore
Ms. Nethravathi	Research Associate, NIMHANS, Bangalore
Dr. R. Dhanasekara Pandian	Additional Professor, Dept of Psychiatry Social Worker, NIMHANS, Bangalore
Mr. Dhanya Prasad	Social Worker, Centre for Addiction Medicine, NIMHANS, Bangalore
Dr. Jayashree Ramakrishna	Prof. & HOD, Dept of Health Education, NIMHANS
Dr. P Ravi	Registrar and Professor of Neurovirology, NIMHANS, Bangalore
Dr. Vishal Rao	Senior Consultant- Oncologist, Head Neck Surgeon, Bangalore
Ms. Rukmini	ASHA worker, Kolar
Mr. Sadananda	Program Assistant , Kolar
Dr Lakshmi Sankaran	Consultant, NCD Project, NIMHANS, Bangalore
Dr. Narasimha Setty	Director, Karnataka Institute of Diabetology, Bangalore
Dr. Manoj Kumar Sharma	Assoc Prof, Dept of Clinical Psychology, NIMHANS, Bangalore
Ms. Shilpa	Social Worker, Centre for Addiction Medicine, NIMHANS, Bangalore
Dr.R. Sukanya	Research Scientist Medical (II), National Centre for Disease Informatics and Research, Indian Council of Medical Research, Bangalore
Dr. Mathew Varghese	Professor and Head, Dept of Psychiatry, NIMHANS, Bangalore
Dr. Mario Vaz	Professor and Head, Department of Physiology, St. John's Medical College and Research Institute, Bangalore
Dr. R.T Venkatesh	State Nodal Officer NCD (Karnataka)

LIST OF PARTICIPANTS AT THE EXPERT GROUP MEETING TO REVIEW DRAFT TRAINING MANUALS TO ADDRESS RISK FACTORS FOR NCDS
(26 AUGUST 2014, NEW DELHI)

Dr T.P. Ahluwalia	Scientist 'G' & Head, Health System Research, Indian Council of Medical Research
Dr Monika Arora	Head: Health Promotion & Tobacco Control & Adjunct Assistant Professor, Public Health Foundation of India
Dr Damodar Bachani	Deputy Commissioner (NCD), Ministry of Health & Family Welfare, Govt of India
Dr W.D. Bhutia	Addl. DDG (NCD), Directorate, General Health Services, Govt of India
Dr P Satish Chandra	Director/ Vice-Chancellor and Professor of Neurology, NIMHANS
Ms Ankita Choure	NCD Team, WHO Country Office for India (WCO India)
Dr N. K. Dhamija	Deputy Commissioner, (Training-II) , Ministry of Health & Family Welfare, Govt of India
Dr Atreyi Ganguli	NCD Team, WHO Country Office for India (WCO India)
Dr. Bipin Gopal	State Programme Officer (NCD), State NCD Division, Kerala
Dr Pradeepa Guha	Sr. Scientist & Head, Research Operations, Madras Diabetes Research Foundation &Dr.Mohan's Diabetes Specialities Centre
Dr Sudhir Gupta	Add. DDG, Ministry of Health & Family Welfare, Govt of India
Dr Pradeep Joshi	NCD Team, WHO Country Office for India (WCO India)
Dr Amrita Kansal	NCD Team, WHO Country Office for India (WCO India)
Dr Devinder K. Kansal	Principal, Indira Gandhi Institute of Physical Education & Sports Sciences
Prof. Farhat Basir Khan	Professor, Anwar Jamal Kidwai Mass Communication Research Centre, Jamia Milia Islamia
Prof Pity Koul	School of Health Sciences, Indira Gandhi National Open University (IGNOU)
Dr Anand Krishnan	Professor, Centre for Community Medicine, All India Institute of Medical Sciences
Dr Pradeep Krishnatray	Communication Advisor (India), Johns Hopkins Bloomberg School of Public Health Centre for Communication Programs

Mr Rajeev Kumar	Director (NCD), Ministry of Health & Family Welfare, Govt of India
Dr Avula Laxmiah	Scientist 'F', National Institute of Nutrition (NIN), Hyderabad
Dr Rakesh Lal	Professor , National Drug Dependent Treatment Centre, All India Institute of Medical Sciences.
Mr Leonardo Machado	Trainer (Routine Immunization), WHO Country Office for India (WCO India)
Dr. Sailesh Mohan	Senior Research Scientist & Adjunct Associate Professor, Public Health Foundation of India
Ms Vineet Gill Munish	NCD Team, WHO Country Office for India (WCO India)
Dr Pratima Murthy	Professor of Psychiatry, Centre for Addiction Medicine, NIMHANS
Dr Harish Pemde	Professor, Adolescent Health, Lady Harding Medical College
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