

Edition 2075

# Package of Essential Non Communicable Disease (PEN) Intervention at Primary Health Service setting



तालिम प्रशिक्षक निर्देशिका

## PEN Training Trainer's Guide



Ministry of Health and Population  
Department of Health Services  
National Health Training Center



Ministry of Health and Population  
Department of Health Services  
Epidemiology and Disease Control Division





# Package of Essential Non Communicable Disease (PEN) Intervention at Primary Health Service Setting



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**PEN Training Trainer's Guide**





Ref. No.



Tel. : 4261436  
: 4261712  
Fax : 4262238

Pachali, Teku  
Kathmandu, Nepal

Date:-.....

## Foreword

Epidemiology and Disease control division and National Health Training Center have developed the PEN Training Trainer's Guide in this fiscal year of 2075/76. It supports the implementation of PEN Program to meet the target of NCDs related Sustainable Development Goal. We hope that this trainer's guide helps to achieve the objectives of NCDs program. The guide is aimed at facilitating trainings for health personnel to deliver quality NCDs services even in areas with limited resources. The primary objective of this guide is to assist trainers and enable participants to manage NCDs scientifically, based on evidence and utilizing best available resources.

Non-communicable diseases (NCDs) constitute a major public health problem in Nepal. NCDs are leading cause of death globally and also in Nepal due to many social determinants like unhealthy lifestyles (behavioral and metabolic risk factors), globalization, trade and marketing, demographic and economic transitions. NCDs currently contribute to 66% of total deaths (2018 AD) in Nepal.

Addressing the non-communicable diseases, Nepal Government developed and implemented the Multi Sectoral Action Plan for Prevention and Control of Non Communicable Disease 2014-2020 A.D. The major objective of this plan is to promote, prevent, and provide effective treatment to reduce the further complication, disabilities and premature death from NCD through the multi-sectoral collaboration.

At last we would like to appreciate and thank the Consultants, Public health experts, Technical Coordinator, District coordinators, Section Chief, Medical officers, Paramedics and staffs of EDCD, NHTC and WHO, who were involved in development process of Trainer's guide. We thank the kind participation of all health workers, volunteers and provincial as well as local government people for prevention and control of NCDs.

**Dr. Gunaraj Lohani**

Director General

Department of Health Services





Government of Nepal

Ministry of Health and Population

**DEPARTMENT OF HEALTH SERVICES**

(.....)



Tel. : 4261436

: 4261712

Fax : 4262238

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## Preface

NCDs constitute a major public health problem in Nepal. Non-communicable diseases (NCDs) are emerging as the leading cause of death (66 percent of total death-2018 AD) nationally due to changes in many social determinants like unhealthy lifestyles, globalization, trade and marketing, demographic and economic transitions. To reduce the burden of NCDs, Nepal adopted WHO PEN as an essential package, based cost effective and high impact intervention for integrated management of diabetes, hypertension, kidney disease and cardiovascular risks. Its guidelines had been applied as PEN Program of Nepal. PEN implementation bridges the NCD service gaps between what is needed and what is available to reduce the burden through a system approach.

Epidemiology and Disease control division and National Health Training Center have combined to develop the PEN Training Trainer's Guide in the fiscal year of 2075/76. It supports to implement of training to meet the target of NCDs related sustainable Development Goal. We hope that this trainer's guide helps to achieve the objectives of NCDs program. This trainers guide is based on the implementation of NCD management at primary health care level by supporting quality NCD services, counselling services, physical exercise, screening, early diagnosis and treatment, chest rehabilitation, healthy fooding, supervision and monitoring, recording reporting including referral and others activities. The guide is aimed at facilitating trainings for health personnel to deliver quality NCDs services even in areas with limited resources. The primary objective of this guide is to assist trainers and enable participants to manage NCDs scientifically, based on evidence and utilizing best available resources.

At last we would like to appreciate and thank the Consultants, Public health experts, Technical Coordinator, District coordinators, Section Chief, Medical officers, Paramedics and staffs of EDCD, NHTC and WHO, who were involved in development process of Trainer's guide. We thank the kind participation of all health workers, volunteers and provincial as well as local government people for prevention and control of NCDs.

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**Mr. Jhalak Sharma Paudel**  
Director  
National Health Training Center

.....  
**Dr. Bibek Kumar Lal**  
Director

Epidemiology and Disease Control Division





**Government of Nepal**  
**Ministry of Health & Population**  
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### Preface

The Constitution of Nepal 2072 has recognized health as a fundamental right of citizen. The quality health services ensure the productive lifespan of Nepalese people that helps to increase the economic productivity of Nepal. Primarily, Nepal faces triple burden of disease in the health sector: Communicable disease, Non communicable disease and Natural Hazards including disaster, accidents, violence, injuries and effects of climate change. We could tackle and overcome such burden through the effective and efficient health service throughout Nepal which is major priority indicates by National Health Policy and Nepal Health Sector Support Program.

Non-communicable diseases (NCDs) constitute a major public health problem in Nepal. NCDs are leading cause of death globally and also in Nepal due to many social determinants like unhealthy lifestyles (behavioral and metabolic risk factors), globalization, trade and marketing, demographic and economic transitions. NCDs currently contribute to 66% of total deaths (2018 AD) in Nepal.

Addressing the non-communicable diseases, Nepal Government developed and implemented the Multi Sectoral Action Plan for Prevention and Control of Non Communicable Disease 2014-2020 A.D. The major objective of this plan is to promote, prevent, and provide effective treatment to reduce the further complication, disabilities and premature death from NCD through the multi-sectoral collaboration.

Nepal Government, Ministry of Health and Population already endorsed the WHO PEN package (Protocol 1, 2, 3, and 4) in Nepalese context for management of CVD, diabetes, COPD and cancer. On February 2017A.D, Ministry of Health and Population started PEN Program as piloting from Ilam and Kailali districts and has been extended to 30 districts of the country in F.Y. 075/076. Ministry of Health and Population has planned to scale the PEN program throughout the country by the next two years. EDCD and NHTC have completed a couple of batches of "Training of Trainers of PEN Protocol" and service-provider training of PEN Protocol to the health workers. While we conducted the training, we felt the need of Trainer's Guide for effective implementation of PEN training at local, provincial and federal level.

At last we would like to appreciate and thank the Consultants, Public health experts, Technical Coordinator, District coordinators, Section Chief, Medical officers, Paramedics and staffs of EDCD, NHTC and WHO, who were involved in development process of Trainer's guide. We thank the kind participation of all health workers, volunteers and provincial as well as local government people for prevention and control of NCD .

  
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**Dr. Narendra Jha**

Chief

Training Accreditation and Regulation Section

**NHTC**

  
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**Dr. Phanindra Prasad Baral**

Chief

NCD and Mental Health Section

**EDCD**



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This Trainer's guide have been developed based on the Trainee's Manual of adopted version of WHO Package of Essential Non-communicable (PEN) in context of Nepal. In addition, the trainers guide supports to deliver training related to the Non-communicable diseases relevant to Nepal focused for primary health care in low-resource settings,

The trainer's guide have been developed under the aegis of Epidemiology and Disease Control Division and National Health Training Center. We would like to give thanks to Dr. Phanindra Prasad Baral, Chief of NCD and Mental Health Section; Dr. Narendra Jha, Chief of Training accreditation and Regulation Section; Mr. Jiwan Malla, Chief of Curriculum Development, Dr Basudev Karki, Dr Ramraj Panthi, Mr Alesh Regmi for their leadership taking.

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**Epidemiology and Disease Control Division**  
**National Health Training Center**





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# Scope of the PEN Trainer's Guide

## PEN तालीम प्रशिक्षक निर्देशिका





# Clip Art Notification



Presentation



Objectives



Brain storming



Design training implementation



Group discussion



Time period



Content, written



Advanced preparation



Session start



Trainer instruction



Review



Trainer note  
Further readings



Trainee reading



Role play



Lunch break



Tea break



Case/Practical Study

The notification use at the session plan and description



## Concepts

### Introduction

Non communicable diseases (NCDs-Cardiovascular diseases [CVDs], diabetes, chronic obstructive pulmonary disease [COPD], asthma, and cancers) and modifiable risk factors such as tobacco and alcohol use, unhealthy diet and physical inactivity can be addressed in primary care settings using cost-effective interventions. Although using the primary health care (PHC) approach has been a success story in addressing public health issues, at the moment, its full potential for NCD prevention and control remains untapped in Nepal. Currently, Primary health care have a low capacity and resources for NCD care and management and only provide reactive and episodic responses rather than using a coordinated and community patient centered approach. The existing PHC systems need to be fully strengthened and optimized for early detection, treatment and follow-up care of patients with NCDs.

Nepal have endorsed a commitment to align their national NCD targets towards the 2025 through the adopted Multi-Sectoral Action Plan for Prevention and Control of NCDs 2014-2020. These include achieving the two health service targets: ensuring that 80% of health facilities have essential NCD medicines and technologies, and 50% of high-risk populations needing drug therapy and counseling. Nepal Government has committed to strengthen the PHC approach to deliver NCD services from all health facilities.

In order to support essential NCD services, Nepal has adopted World Health Organization (WHO) cost-effective intervention known as the Package of Essential Non-communicable Disease Interventions (PEN) since 2016. It contains a set of validated, evidence-based simple clinical algorithms and protocols for clinical diagnosis and management of CVDs & Diabetes, management of chronic respiratory diseases, suspected breast and cervical cancers, guidance on minimum requirements for essential medicines and affordable technologies, and indicators to measure progress. Adopted PEN also consists of protocols for behavioural interventions to address key modifiable risk factors: tobacco cessation, dietary modification, avoiding harmful use of alcohol and increasing physical activity, which can be delivered by doctors, public health professionals, nurses and other paramedics health worker (e.g. health assistant, Auxiliary health worker etc.). The both PEN trainee's book and Trainer's guide cover four thematic areas.



## Four Theme

### **Theme 1.**

#### **Overview of the burden of NCDs and cost-effective public health interventions**

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The course begins with participants discussing the epidemiological situation of NCDs at the global, regional and national levels. Participants then discuss the current situation of NCD services and conclude by discussing the concept of PEN as a PHC approach, and the contents and components of PEN interventions.

### **Theme 2.**

#### **Health education and counseling on lifestyle risk factors for NCDs**

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This section covers the brief interventions and counseling of individuals and patients on NCD risk factors in the PHC setting. Topics include the basics of brief interventions using the 5A's and 5R's, motivational interviewing of individuals for behaviour change on tobacco and alcohol use, physical inactivity, unhealthy diet and exposure to indoor air pollution.

### **Theme 3.**

#### **Approaches to NCD management in the PHC setting**

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The sessions include a review of the basic clinical approaches to early detection and management symptoms and signs, complications, and management of common NCDs are discussed in simple language. Additional topics include co-morbidity of NCD and mental disorder and palliative care.

### **Theme 4.**

#### **Delivering PEN services within the health facility**

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The sessions dwell on the delivery of essential NCD services through a team-based approach at the PHC level and turning PHC centers into learning organizations through team-based learning and peer coaching. It also covers building service linkages and improving work flow for patient care within the various units of the health facility, strengthening quality improvement processes and information systems, integrating supportive supervision for PEN services.



## Competency Focused

The training course is intended to increase

- ↑ **Increase and build Knowledge**
- ↑ **Enhance the application of skills and**
- ↑ **Attitude and Practices of Health workers**

in the early detection and appropriate management of NCDs

Expected competencies to be acquired by trainees including their ability to do the following:

<b>1</b>	<b>Detect, treat and appropriately refer patients with major NCDs</b>	<b>2</b>	<b>Employ the 5A and 5R techniques to motivate positive behavioural change</b>
<b>3</b>	Measure weight, height, waist circumference and calculate BMI	<b>4</b>	Calculate cardiovascular risk using the WHO/ISH risk prediction chart
<b>5</b>	Able to use of glucometer, PEFr, spacer and inhaler, BP set and interpret results	<b>6</b>	Link indoor air pollution to health risks and advise on preventive
<b>7</b>	Develop a plan to enhance a team-based approach to deliver NCD services	<b>8</b>	Conduct peer coaching on PEN interventions at PHC centers; and
<b>9</b>	Record, collect, generate and report NCD services data and use data evaluation of NCD program at facility level		

## Arrangements



### Teaching Learning Techniques

Participants are in-service candidates with cumulative experiential knowledge and practice in the delivery of NCD interventions. Teaching–learning techniques are designed according to the background of the participants. Overall, the training sessions are learner-centric, and made practical using adult learning techniques promoting problem solving critical thinking and collaborative learning.



### Learning will be enhanced by using effective methods such as:

- Presentation
- case studies
- session end review questions
- group discussion
- role play
- individual and group practicum
- videos
- recap quizzes
- review of learning
- Action planning.



### Participants Will be Encouraged

- To stay engaged in learning
- To ask questions
- To share experiences
- To learn from discussions (learning from each other)
- To make useful notes
- To minimize outside distractions.



### Training Design and Implementation

Training materials should be prepared before the training commences. The following training documents, instruments should be provided during the training:

#### Training multimedia equipment (Must needed)

1. LCD Projector with laptop
2. Slider with pointer
3. Speaker/Sound system
4. Multiplug

#### Training Documents

1. Trainer's guide
2. Trainee's manual
3. Video
4. Counseling and patient education aids (flipchart, NCD toolkit)
5. Sheet (Recording and reporting sheet -50 set)
6. Pre-test and post-test questions
7. Other necessary training aids.



### Stationary

1. Note book with pen
2. Meta card
3. News print, card board paper
4. Marker (Different Colour)
5. Pencil with eraser, sharpener
6. Masking tape
7. Register etc.

### Clinical Logistics

SN	Name	No
1	Glucometer set	4
2	Test strip	75
3	Cotton with sprit swap	Small packet
4	Lancet	75
5	Urine Protein and urine ketone strip with urine collection container	10
6	Weighing machine	2
7	Portable stadio meter	2
8	Non-elastic, non-tensile measuring tape	4
9	Peak flow meter	4
10	DPI/MDI with salbutamol capsule	4/4
11	BP set	4
12	Spacer	4
13	Disposal plastic	4
14	Rechargeable torch light	4
15	Loose Gloves	1 pack
16	zipper bag	10
17	Safety box	4



### Training Duration

In general, the Training of Trainers designed for 5 days of however 4 days is designed for service provider at primary health care settings. The detail about the schedule is attached under the section of schedule.

- The training course follows a very strict time table.(duration)
- It is therefore essential that the sessions begin and end at the allocated time.



## Training Facilities of Venue

This is a participatory training, requiring trainees to participate in role-plays, group discussion & case based learning activities. It is therefore essential and preferred to use a room that does not resemble a lecture room. The room should be large enough to allow the anticipated number of trainees to be seated in small table groups (usually not more than five per table) or U shaped, and should have enough space for participants to engage in learning activities that require individuals to move around the room.

It is further recommended that training venues have an adequate number of toilet facilities, along with temperature maintaining and lighting to ensure a comfortable atmosphere for training. A backup power supply is highly recommended.

- Tends to contribute to the general satisfaction of trainees and allows them to focus on the material being learned
- It also creates flexibility within the program should there be a need to shorten breaks or complete work within a break.



## Refreshments Recommended

- Timely consider providing meals to the trainees at the training venue.
- Food should be provided on time as per schedule. The food composition should be considered as heart healthy NCD food category



Don't give junk, deep fried, extreme sweet, packed any type juice of cold drinks



Promote Healthy food, vegetables, protein contain and fruits.

### Administrative management of Trainee and Trainer themselves

- Ensure TA and DA form and distribute in first day at end of training to all participants and trainers
- Collection in second day & ensure the form are filled correctly
- Distribute the TA and DA as per training program norms. OR recommended to as per training programme design and norms

Also explain about the stretching exercises to be done at the end of the sessions & to be managed as needed



# Legislation of PEN training and TOT



Training of Trainers

## Training of Trainers (TOT)

Training of trainers involves building a team of master trainers representing various professional disciplines such as clinicians, nurses, nutritionists, public health professionals, health counselors and promoters, health managers and planners. Trainers will in turn train the sub-national level of trainees from the provinces, districts and local levels the training team must include a clinician and public health professional, however health counselor, nurses and nutritionist could also be participants of TOT. A previously trained & mentored trainer who has participated and involved in prior training on PEN interventions and possesses good understanding of essential NCD interventions. Must be included in team for proper mentoring & to clarify and doubts during the training.

### Criteria of participants of TOT

- Number: Only 20
- Criteria: (Government and Non-government sector)
  - For Clinical: MBBS degree and above
  - For Public health: At least BPH degree with working experiences as public health officer and above
  - For Nursing: At least B.Sc Nursing/PBN degree with working experiences as nursing officer and above

### Ratio of Participants of TOT

- At least 3:1 to 3:2 of medical officer and public health/nurses

### Facilitator Criteria for TOT

- Existing experienced Trainers
- subject matter as well as training process experts



## Training of Service Provider

The intended audience are in-service PHC setting (PHCC, HP, Urban health center, Primary health care hospital etc.) workers involved in clinical care at the first point of contact. PHC workers consist of medical, nursing and paramedics health care providers. The participants are expected to possess considerable field and work experience.

### Criteria of participants of training

- Number: Only 25
- Criteria:
  - Medical officer, PHO/PHI,HA, SN, AHW and ANM



### Ratio of trainer and Trainee for training of service provider

- At least 1 trainer for 5 trainee i.e. 5 trainer for each training of service provider
- Clinical (At least 3 to 4)
- Public Health/Nursing (At least 1 to 2)

**CERTIFIED**

## Certification process of Trainer

For Trainer

1. After taking the TOT, the participants will receive the participation certificate
2. For certificate of PEN : Trainer must conduct at least 2 training under the supervision of seniors trainers

For service provider

1. After completion of service provider training, the participants will receive the training completion certificate.

## Health facility-based PEN coaching



PEN implementation involves various cadres of primary health care professionals. At the health facility level, PEN implementation involves a constant interaction within and across various units of health facilities. For example, screening for diabetes may involve a laboratory staff to do the blood test, a nurse to provide healthy lifestyle education, a medical officer or non-paramedics health care worker for clinical work-up, prescription, and to dispense medicines and so on. Depending on the staffing composition at a health facility, the skills mix and role delegation may vary slightly in different settings. However, the fundamental module in all settings is a reliance on team work, shared responsibility, close coordination and sense of team belonging among the cadre of health facility workers.

Engagement in a health-facility based approach not only has the potential to improve the quality of delivery of NCD services but can also transform health service delivery by strengthening team work among health facility staff.

It is important to ensure that the PEN coaching programme conforms to the defined parameters, such as: exposure and dosage of lessons, and quality of the training content. PEN coaching should aim at enhancing knowledge and skills and build a culture of continuous learning among health facility workers. The PEN coaching programme should be introduced in a health facility without interrupting the routine services. The coaching should be scheduled within a specific duration with an agreed starting and end date over an extended duration of 6–8 weeks on a designated day/s of the week such as an afternoon of a relatively lean day.



## Objectives of TOT



### Objectives of Service Provider Training

1. Provide theoretical, practical and sustainable skills to participants about the NCDs
2. Prevention, early detection, treatment and management of major 4 NCDs (CVD, Diabetes, Cancer and COPD/Asthma) at health facility level according to PEN protocol
3. Increase capacity of regular follow up and availability of essential NCDs related medicines and equipments.
4. Improve the knowledge and skills to the health workers related to the motivational and behaviors change counseling
5. Provide knowledge and skills to establishment and continuation of NCDs related prevention and control services at health facility and coordination at local level and community through community engagement and mobilization
6. Provide knowledge, skills and established the mechanism of recording, timely reporting of NCDs related date and information for necessary program monitoring and evaluation
7. Specially the decrease the intake of tobacco and smoking and alcohol, promote behavior to take healthy food and regular physical exercise



### Objectives of TOT Training

1. To increase knowledge of skills of delivering of training to the health service provider on the contents that include in the objectives of service provider above and competence increase on that
2. Participants of TOT more focused on content along the process of delivery
  - Explain the systematic approach to training;
  - Explain adult learning principles
  - Design and implement training course;
  - Select appropriate training methods and effective learning;
  - Demonstrate effective presentation and facilitation skills;
  - Describe training evaluation process and criteria; and



# Schedule of PEN Training (4 days)

(Service Provider)

Schedule is developed for PEN training implementing at Province, District and Palika level to those health worker providing PEN services at facility level.

Time	Minute	Session no/other Activities	Activities/Content
<b>Day One</b>			
10.00-10.45	45	OA-1	Registration, Opening session
10.45-11.00	15	OA-2	Pre-test assessment
<b>Theme 1: Public health approaches to NCD prevention and control</b>			
11.00-11.30	30	SN-1.1	Introduction of NCDs and About PEN program
<b>11.30-11.45</b>	<b>15</b>		<b>Healthy break time</b>
<b>11.45-12.15</b>	30	SN-1.2	Situation of major NCD and Common risk factors
12.15-12.45	30	SN-1.3	PEN as a primary health care approach and best buys
<b>Theme 2: Brief interventions on addressing NCD risk factors at PHC level</b>			
12.45-1.30	45	SN-2.1	Counseling skills, Behaviour change communication and process including 5A's and 5R's
<b>1.30-14:15</b>	<b>45</b>		<b>Healthy Lunch</b>
2.15-2.45	30	SN-2.2	Intervention for tobacco cessation
2.45-3.15	30	SN-2.3	Intervention for alcohol use
3.15-4.00	45	SN-2.4	Intervention for healthy diet
<b>4.00-4.15</b>	<b>15</b>		<b>Healthy break time</b>
4.15-4.45	30	SN-2.5 and 2.6	Intervention for obesity and promotion for physical activity
4.45-5.00	15	OA-3	Summary
<b>Day Two</b>			
10.00-10.15	15	OA-4	Review of previous day
<b>Theme 3: Review of management of major NCDs</b>			
10.15-11.30	75	SN-3.1	Hypertension and CVD: early detection and management of HD, Stroke and Others
<b>11.30-11.45</b>	<b>15</b>		<b>Healthy break time</b>
11.45-12.30	45	SN-3.2	Diabetes: Introduction, types, cause, early detection and management
12.30-1.30	60	SN-3.3	Total CVD risk assessment and management
<b>1.30-2:15</b>	<b>45</b>		<b>Healthy Lunch</b>
2.15-3.30	75	SN-3.4	PEN Protocol 1
<b>3:30-3.45</b>	<b>15</b>		<b>Healthy break time</b>



Time	Minute	Session no/other Activities	Activities/Content
3:45-4.45	60	SN-3.6	Practicum II – (take blood pressure, use glucometer, calculate BMI, WC)
4.45-5.00	15	OA-5	Summary
<b>Day Three</b>			
10.00-10.15	15	OA-6	Review of previous day
10.15-10.45	30	SN-3.5	PEN Protocol 2
10.45-11.45	60	SN-3.7	Case management using PEN protocol 1 and 2
<b>11.45-12.00</b>	<b>15</b>		<b>Healthy break time</b>
12.00-12.45	45	SN-3.8	Introduction COPD and Asthma
12.45-1.15	30	SN-3.9	Pract III – Apply PFER, DPI/MDI
1.15-1.45	30	SN-3.11	Chest Rehabilitation
<b>1.45-2.30</b>	<b>45</b>		<b>Healthy Lunch</b>
2.30-3.30	60	SN-3.10	Protocol 3 with (COPD and Asthma)
<b>3:30-3.45</b>	<b>15</b>		<b>Healthy break time</b>
3.45-4.30	45	SN-3.12	Case management using PEN protocol 3
4.30-5.15	45	SN-3.13	Introduction to Cancer (Breast, cervical and oral cancer)
<b>Day Four</b>			
10.00-10.15	15	OA-7	Review of previous day
10.15-11.00	45	SN-3.14	Protocol 4 Cancer (detection of suspected cases and referral) of breast cancer and cervical cancer
11.00-11.30	30	SN-3.15	Practicum IV– Video show and practical on BHE, VIA video show
<b>11.30-11.45</b>	<b>15</b>		<b>Healthy break time</b>
11.45-12.30	45	SN-3.16	Discussion with case study including role play
<b>Theme 4: Service delivery and community linkages and NCD prevention and care</b>			
12.30-1.00	30	SN-4.1	Team support, communication and referral management
1.00-1.30	30	SN-4.2	Community mobilization and engagement for NCD prevention and control
<b>1.30-2:00</b>	<b>30</b>		<b>Healthy Lunch</b>
2.00-2.45	45	SN-4.3	Introduction of Recording and reporting tools
2.45-3.45	60	SN-4.4	Practicum on Recording and Reporting tools
<b>3.45-4.00</b>	<b>15</b>		<b>Healthy break time</b>
4.00-4.30	30	SN-4.5	Introduction to work plan and group work on development of work plan
4.30-4.45	15	OA-8	Post test
4.45-onwards	15	OA-9	Closing and certification



# Schedule of PEN Training (5 days)

(Training of Trainers-TOT)

Schedule is developed for PEN Training of Trainers (TOT) at Federal and Province level to those person who full fill the eligibility for TOT.

Time	Minute		Activities/Content
<b>Day One</b>			
8.30-9.00	30		Registration with Tea
9.00-9.30	30	OA-1a	Opening session and introduction
9.30-10.00	30	OA-1b	Objectives and importance of TOT
10.00-10.20	20	OA-2	Pre-test assessment
10.20-10.35	15		Tea Break
<b>Theme 1: Public health approaches to NCD prevention and control</b>			
10.35-12.05	30	SN-1.1	Introduction to NCDs and PEN program
<b>11.05-11.40</b>	35	SN-1.2	Major NCDs, and Common risk factors
11.40-12.20	40	SN-1.3	PEN as a primary health care approach and best buys
Theme 2: Brief interventions on addressing NCD risk factors at PHC level			
12.20-1.00	40		<b>Healthy Lunch</b>
1.00-2.00	60	SN-2.1	Counseling skills, Behaviour change communication and process including 5A and 5R
2.00-2.30	30	SN-2.2	Intervention for tobacco cessation
2.30-3.00	30	SN-2.3	Intervention for alcohol use
3.00-3.45	45	SN-2.4	Intervention for healthy diet
<b>3.45-4.00</b>	15		<b>Healthy break time</b>
4.00-4.45	45	SN-2.5 & 2.6	Intervention for obesity and promotion for physical activity
4.45-5.00	15	OA-3	Summary
<b>Day Two</b>			
8.30-9.00	30	OA-4	Recap of previous day with tea
<b>Theme 3: Review of management of major NCDs</b>			
9.00-10.30	90	SN-3.1	Hypertension and CVD: early detection and management of Coronary heart disease, Stroke and Others
<b>10.30-10.45</b>	<b>15</b>		<b>Healthy break time</b>
10.45-11.45	60	SN-3.2	Diabetes: Introduction, types, cause, early detection and management
11.45-12.15	30	SN-3.3	Total CVD risk assessment and management
<b>12.15-1.00</b>	<b>45</b>		<b>Healthy Lunch</b>



1.00-1.30	30	SN-3.3	Total CVD risk assessment and management and practical
1.30-2.45	75	SN-3.4	PEN Protocol 1
2.45-3.15	30	SN-3.5	PEN Protocol 2
<b>3.15-3.30</b>	<b>15</b>		<b>Healthy break time</b>
3.30-4.45	75	SN-3.6	Practicum II – (take blood pressure, use glucometer, calculate BMI, WC)
4.45-5.00	15	OA-5	Summary
<b>Day Three</b>			
8.30-9.00	30	OA-6	Recap of previous day with tea
9.00-10.30	90	SN-3.7	Case management using PEN protocol 1 and 2
<b>10.30-10.45</b>	<b>15</b>		<b>Healthy break time</b>
10.45-11.45	60	SN-3.8	Introduction COPD and asthma
11.45-12.15	30	SN-3.9	Practicum III – PFER, DPI /MDI
<b>12.15-1.00</b>	<b>45</b>		<b>Healthy Lunch</b>
1.00-2.00	60	SN-3.10	Protocol 3
2.00-2.45	45	SN-3.11	Chest Rehabilitation (Theory and Practical)
2.45-3.30	45	SN-3.12	Case management using PEN Protocol 3
<b>3.30-3.45</b>	<b>15</b>		<b>Healthy break time</b>
3.45-4.45	60	SN-3.13	Introduction to cancer (Breast, cervical and oral)
4.45-5.00	15	OA-7	Summary
<b>Day Four</b>			
8.30-9.00	30	OA-8	Recap of previous day with tea
9.00-10.00	60	SN-3.14	Protocol 4 Cancer (detection of suspected cases and referral) of breast cancer and cervical cancer
10.00-10.45	45	SN-3.15	Video show on BHE and Case discussion using protocol 4
<b>10.45-11.00</b>	<b>15</b>		<b>Healthy break time</b>
<b>Theme 4: Service delivery and community linkages and NCD prevention and care</b>			
11.00-12.15	75	SN-3.16	Role play using counseling skills (5A and 5R)
<b>12.15-1.00</b>	<b>45</b>		<b>Healthy Lunch</b>
1.00-1.30	30	SN-4.1	Team support, communication and referral management
1.30-2.00	30	SN-4.2	Community mobilization and engagement for NCD prevention and control
2.00-2.45	60	SN-4.3	Introduction of Recording and reporting tools
2.45-3.45	60	SN-4.4	Practicum on Recording and Reporting tools
<b>3.45-4.00</b>	<b>15</b>		<b>Healthy break time</b>
4.30-4.50	20	OA-9	Post test
4.50-5.00	10	OA-10	Summary of the day



<b>Day Five</b>			
8.30-9.00	30	OA-11	Recap of previous day with tea
9.00-9.30	30	SN-4.5	Group work for developing a health facility-PEN integration plan and evaluation
9.30-10.30	60	SN-5.1	How to conduct training
<b>10.30-10.45</b>	<b>15</b>		<b>Healthy break time</b>
10.45-11.45	60	SN-5.2	Micro teaching skills
<b>11.45-12.30</b>	<b>45</b>		<b>Healthy Lunch</b>
12.30-1.30	60	SN-5.2	Contd...Micro teaching skills
1.30-3.45	135	SN-5.3	Practical on teaching learning skills
<b>3.45-4.00</b>	<b>15</b>		<b>Healthy break time</b>
4.00-4.15	15	OA-12	Review of the day
4.15-5.00	45	OA-13	Closing



# How to Implement PEN Training Effectively

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## *Guide to Trainers*





## How to be an effective trainer:

### Prepare for the training

Whether you have been invited to facilitate a training session or are the focal point of a training session, you can prepare and organize yourself in advance in a number of ways to avoid obstacles during the sessions. A checklist can help trainers make sure they have the necessary materials and resources ready and that the venues and facilities meet their expectations.

### Know the training arrangements

- Check the training timetable
- Be sure you know exactly what day and time you are scheduled to facilitate the training session.
- Check the venue you will be training in.
- Take all relevant documentation with you: (letters from the organization, outline the training details, names of people coordinating the training, ensure participants availability, the names of any support or administration staff who may be available to help you, and the names of other trainers who may be attending your training session)

### Know the materials

- Trainers must be familiar with the materials they are presenting. Read over the materials before the presentation. Be prepared to answer questions about it. A reference list would be handy so you can let participants know where they can find additional information on a specific subject.
- A session plan can help guide the length of question time and when to suggest that the group move on to the next subject. Gather training materials, in more than one format, e.g., PowerPoint presentations. Ensure availability necessary equipment, logistics, materials etc
- Ensure availability of Trainers guide, Trainee's Manual, exercise sheet etc
- Ensure availability of necessary adequate stationary

### Know the environment

- *Arrive early* at the training facility and find out the location of the training room.
- Orient yourself to the area.
- Make sure the training room is appropriate.
- It should be large enough for all participants and allow you to conduct the training activities e.g., for forming small groups. If you feel that the room is not adequate, inform the facility administrator and see if another room is available. Trainees can always be redirected to the new room as they arrive.
- Minimize distractions.
  - If the environment is noisy or there is a great deal of movement in the corridors, etc., close the doors before you start presenting.



- If the doors are closed, the ventilation and temperature inside the room must be regulated to ensure comfort.
- If you are the first to arrive, don't be afraid to *arrange furniture* to suit the needs of the training. This can save time later.
- Be familiar with the location of *light switches* and controls for blinds, curtain strings, etc.

### **Know the Equipments**

- Determine in advance, all equipment are available for training. It will be impossible to present a Power Point session when the facility has only an overhead projector available.
- When you arrive make sure all equipment and instruments needed are available. Check this off on the checklist.
- Practice using each piece of equipment to make sure it is working correctly. Make sure that the overhead machine or slide projector is focused adequately for your presentation. The screen should also be visible to all participants in the training room.

### **Know the Audience**

If possible, try to obtain a list of the trainees for the training course in advance. The list should contain their positions and place of employment. This information is important for a number of reasons:

- Knowing the number of trainees attending allows trainers to plan activities and group work adequately.
- Knowing the professions of the trainees, will give trainers an idea of the trainees' level of education.
- Knowing the trainees' place of employment helps determine the following:
  - The field each participant is working in so the various examples or case studies can be made relevant to their experiences,
  - How many of the participants come from a similar organization.
  - Knowing the trainees' positions will give trainers an idea of the range of seniority among the group. This may be important in identifying junior trainees so that they can be encouraged to contribute to the training session to the same extent as senior trainees.
  - Knowledge of the average trainee's level of education and degree of background
  - Knowledge allows trainers to pitch the training content and materials at the correct level. The trainees should not find the training too difficult or not challenging enough.
  - Knowing the audience also gives trainers an understanding of the social and cultural background of the trainees.

### **Presentation skills**

Some people are naturally gifted and entertaining speakers, but almost anyone can learn basic skills to help them present information. These presentation skills are broken down into a series of "microskills" to make them easier to learn.

#### **Getting attention**



One of the functions of the introductory part of the session is to gain the attention of the trainees.

The trainer can gain attention by:

- Explaining how the session is relevant to the trainees;
- Asking the trainees what their expectations are from the sessions;
- Providing a relaxed and an open learning environment;
- Using humor or an activity as an icebreaker;
- Using novelty, variety, or a surprise in the introduction;
- Using a case study or narrating a story, relevant to the situation of the trainees;
- Using interesting pictures or seek audiovisual help at the start of the session; and
- Use quizzes as a means of identifying gaps in knowledge.

### **Maintaining interest**

For adults to focus on learning, they need to remain interested throughout the session. The trainees must recognize the relevance of the session and be able to participate in the sessions therefore every session has to be presented in an interesting way. The trainer can help the trainees remain interested by:

- Personalizing the presentation—smiling, making eye contact, and addressing trainees by name when interacting;
- Keeping the subject relevant and emphasizing how the topic relates to their needs;
- Being enthusiastic;
- Making sure the pace is neither too fast nor too slow;
- Using a variety of presentation styles;
- Introducing a new activity or providing valid information,
- Encouraging the trainees to participate;
- Using stories as examples;
- Having brief physical activity or game breaks;
- Using humor; and
- Using appropriate and consistent non-verbal behaviour (discussed on the following page).

### **Selecting appropriate presentation styles**

Using more than one technique in each session will help capture and retain interest by targeting different trainees' learning styles. The technique used will depend on the following:

- **Trainer**—knowledge of topic and group, skills, personal style;
- **Content**—whether the aim is to learn knowledge or skills or change attitudes;
- **Trainees**—number, abilities, needs, and experience; and
- **Environment**—location, room set-up, time of day, day of week.

The following activities can be used with groups of different sizes:

Type of Activity	Large group	Small group	Pairs	individuals
Lecture	√	√		
Group discussion	√	√		
Question and answer	√	√	√	√



Type of Activity	Large group	Small group	Pairs	individuals
Case study	√	√	√	
Brainstorming	√	√	√	
Quiz	√	√	√	√
Game	√	√	√	
Hypothetical situation	√	√		
Past Experiences	√	√	√	√
Problem solving		√	√	√
Role play		√	√	√
Demonstration		√	√	√

### Use Non-verbal communication

While watching someone present different types of information more is learnt from his or her nonverbal communication (body language) rather than from words spoken. Non-verbal communication includes a range of signals which convey a message to the audience beyond what the speaker's words may be. It can also prove to be a powerful tool, reinforcing what the trainer is saying or it can contradict the trainer's message. Trainers should try to be aware of their non-verbal communication messages.

### **Non-verbal communication includes:**

- **Voice.** The trainer should speak clearly and project his or her voice. Basically displaying loudness and a high/ low pitch helps sustain the trainees' interest. The trainer can adjust his/ her voice to emphasize important points that the trainees need to learn.
- **Dress.** Use formal and smart dress. Looking good may also give the trainer an added confidence.
- **Eye contact.** In order to make the trainees feel involved, the trainer needs to make eye contact with them. In a large group the trainer should try and make eye contact with as many trainees as possible.
- **Posture.** Depending on the size of the group, the trainer may need to stand upright to help project his or her voice to the whole group. Even within a small group, posture is important. The trainer should attempt to look relaxed (i.e., not stiff) without slouching or looking too casual.
- **Position.** Where the trainer stands is also important. When using audiovisual devices such as a board or a screen, the trainer should stand back from the board or screen or to the side so that the device can be seen. If the trainer has to write on a board, he or she should finish doing that first and speak to the trainees facing them. The room should be set up to minimize barriers of any kinds.
- **Movement and gestures.** A trainer should move about the room from time to time but not too often, since this may distract the trainees. The trainer should also use gestures for emphasis or explanation, as he or she would in conversation, but these should also not be distracting.



### **What to do if Trainer becomes Nervous**

Many people can get nervous before and during a presentation. Practice can help settle the nerves, but even the most experienced trainers may feel nervous before a training session. Here are some ideas to help you overcome nervousness and anxiety:

- Be well rested. Have plenty of sleep the night before and allow enough time to get to the training venue early.
- Be well prepared and familiar with your session plan, and do everything on your training preparation checklist (review Session Plans).
- Do a practice run of your presentation before the training session.
- Try to greet the trainees as they arrive. If you see some friendly faces you may not feel as if you are presenting to strangers.
- Help yourself relax. Try standing up straight and breathing deeply. Relax your muscles and even do some stretching.
- Try to talk to yourself in a positive way. Tell yourself that you are well prepared, you know the subject and that everything will be all right.
- Wear comfortable clothes. If you feel constricted or are unable to move freely around the training room, you may not be able to present confidently.
- Have a glass of water handy in case you develop a dry throat or nervous cough.
- At the start of the session, once you have been introduced to the trainees, give a short summary of your experience in the field. This helps to establish credibility and serves as a reminder that you are the right person to be conducting the training.

### **Personal style**

There is no “right” way to train. At the start of the session, when you think about presentations you liked, you probably thought of presenters with different styles. Some of the characteristics of personal style are:

- Use of appropriate humour,
- Use of relevant anecdotes,
- Personal enthusiasm,
- Self-confidence,
- Ability to develop rapport with trainees,
- Knowledge of the subject.

### **Selecting Appropriate Audiovisual Aids**

When choosing audiovisual devices, make sure they are relevant, simple, and not distracting. Fancy Power Point presentations with many colors and sounds can distract the trainees from the content. The technology available at the training venue, as well as its reliability, is also an important factor to be considered. If no computers are available, Power Point is not a viable option. The following are some general tips for using audiovisual equipment.

- Do not stand in front of or obscure the screen.
- Use a pointer.



- Cover all information until you are speaking about it. Otherwise, trainees will read the information rather than concentrate on what you are saying.
- Make sure all the trainees can see the audiovisual device.
- Talk to the audience, not the board or screen.
- Check that all slides or overheads are properly focused before starting.
- If using slides or computer projection, check that the room is not too bright. Ask someone to help you adjust the lighting.
- Use only one audiovisual device at a time.
- Have a backup. For example, if using PowerPoint™ slides, also have overhead transparencies just in case the equipment does not work.
- Keep the layout simple, with minimum detail.
- Use colors that can be seen clearly (not red or green for text).

**Some tips for using specific audiovisual equipment are as follows:**

Power Point:

- Keep the slides simple.
- Avoid placing too much text on one slide. Use two slides.
- Avoid using many different colors and sounds.
- Make the text large enough so it can easily be read by the trainees.

Whiteboard:

- Write legibly.
- Use the right type of pen.
- Cover or keep blank when not in use.
- Use more than one color—preferably blue or black, which can easily be read from a distance.
- Finish writing and turn to face your audience before speaking.

Flipchart:

- Cover pages that are not being used. Alternate blank and written pages.

Handouts:

- Consider an appropriate time to hand these out. When distributed at the start of the presentation, the trainees may focus on reading the handouts and not listen to your presentation.
- On the other hand, distributing handouts early can enable the trainees to follow the discussion without taking notes.

## **Managing Common Difficulties in Training**

Even the most experienced trainers can face difficulties while presenting or facilitating a session with a group. It is important to be aware of common problems and to understand ways to address them.



No one is a perfect trainer; we all have shortcomings which we constantly need to be aware of when managing a session. Below are common problems and practical responses that to get the session back on track.

### **Mixed group expertise and experience (high to low)**

The trainees may have a wide range of knowledge and experience. Some of the following strategies can be effective in meeting this challenge:

- If high expertise trainer is there then use as more as examples rather than content as per participants knowledge status and their capacity to learn, e.g., to provide examples based on their experience.
- Split the trainees into different groups on the basis of ability, knowledge, or experience.

### **The trainee who doesn't want to be there**

Early in the session, the trainer will become aware that one or more persons would rather not be at the training session. They may be indicated by being unwilling to participate in activities, talking to others, or just generally showing disinterest. In response, the trainer can:

- Ask the persons how they feel about being present at the training.
- Offer them the option of leaving the training: "It is OK by me if you don't want to stay." Usually they will choose to stay.
- Ask them what can be done to make the session relevant to their needs. You could perhaps clarify their objectives in attending the training and suggest how the training can meet their needs.

### **Late arrivals**

Enforcing punctuality among trainees can be a challenge. Those who arrive late can delay the start of the session or disrupt training that has already begun. Other trainees should not be penalized for the late arrival of others.

- At the onset of training it is important to stress the necessity of arriving on time to allow the training to start at the designated hour.
- Tell the trainees that you will begin the training session at the designated time and will not wait for people to arrive.
- Set group rules. Most groups usually agree that punctuality is important. Peer group pressure can be very effective in encouraging trainees to be punctual.
- Ensure that all trainees are aware of the timetable. Ask them if they are happy with the current timetable and if there is any reason that they cannot arrive on time.
- Stress the importance of punctuality in any promotion or invitation letters for the course.

### **Non-attendance**

Attendance of the trainees for all sessions and their entire duration is important. People who leave early or skip sessions can slow down the progress of the group, as they will need time to catch up. If they have been assigned to a particular group, the rest of their team is at a disadvantage. To help ensure full attendance at the training:



- At the start of the training, inform the trainees that those who do not attend the whole course will not receive certificates (unless they have a valid reason for being absent and miss only a small part of the training).
- A trainee who misses any segment should be briefed on his or her return about the portions missed.
- If a trainee cannot complete a course due to an emergency, negotiate with his or her trainer to complete the missed segments at a future course and obtain a certificate at that time.

### **Lack of time**

Trainers often run out of time. It is easy to underestimate the time needed to teach a certain subject. This holds true especially with regard to group activities which generally take longer than expected. Time management may also be a problem if you are teaching a particular session or conducting a training program for the first time. Use the following strategies to keep on time:

- Keep an eye on the time. Check it regularly but discreetly. Use your session plan to allocate the time needed for each topic.
- Skim topics and refer to the reading list if there are subjects that cannot be covered during the time available. Avoid skipping planned activities as these are an important part of reinforcing the learning process.
- Acknowledge the problem and negotiate with the trainees for an extension of time,
- Provide an overview of the remaining material and ask the trainees what they consider important and relevant to their work
- Offer to forward to the trainees a summary of the remaining material.

### **Equipment failure**

Virtually every trainer faces equipment failure at some point in his or her career. The more sophisticated the technology, the more likely it is to malfunction or cause difficulties. Preparation is the best strategy for avoiding equipment failure or overcoming it.

- Check the equipment make sure it is working, although sometimes equipment failures are unavoidable. Arrive early and familiarize yourself with the equipment especially if you have not used it before. Check the source of power.
- Apologize and remain calm. Tell a joke and move on.
- Write key points from manual on news print or on a whiteboard.
- Know your subject so you can present without equipment. A good trainer who is well prepared should be able to present without the aid of sophisticated technology.

### **When trainees do not respond to calls for feedback or questions after a focal activity**

You can throw the questions among the participants:

- **Open and closed questions.** Open questions are much more likely to get a response. The differences between closed and open questions are illustrated below.
- **Closed:** “Any questions? Any points people want to raise?”
- **Open:** “What are some of the key points raised by the session/video?”

### **For Dominating trainees**



- **Be respectful and courteous.** Trainees are unlikely to respond if you are angry or aggressive. Be assertive and confident in your manner.
- **Verbal responses.** You can try a range of verbal strategies. For example, “Thank you very much. I would now like to hear what (*use name*) has to say on this topic.” Do not say “Why don’t we come back to this later?” If you do not intend to return to the topic.
- **Non-verbal responses.** Orient your body away from the dominating trainee so you disengage from eye contact and your body language discourages him or her from continuing to speak. Combine this with a verbal response such as inviting another trainee to contribute.

### **Unresponsive trainees**

Some groups are naturally talkative and easy to work with. Others are unresponsive and may require you to call on additional techniques to engage them.

What you can try:

- **Use silence to pressure the group.** Ask a question that you know someone in the group can answer and wait for an answer. Remain silent and do not answer the question yourself. Eventually (in most cases) someone will respond.
- **Identify** one or two people in the group whom you can ask to say something.
- **Be controversial or challenging.** Used carefully, this technique can get a group going. In NCDs case management at PHC setting there are usually many controversial issues, so finding something that challenges the group at some level should not be too difficult.
- **Ask for feedback.** Say: “I sense that there is not a lot of interest in this subject” or “I sense that you feel this subject is not relevant to you.”
- **Introduce an activity,** something to energize the trainees and get them to respond either as a whole or in small groups.

### **Sleeping or inattentive trainees**

- **Walk near the person,** while talking to the group. Do not single the person out by looking directly at him or her. Stand next to the person for a while without necessarily looking at or drawing any other attention to him or her.
- **Throw a question** at the inattentive person, but remember to allow him or her to save face. Ask a question that the person is likely to know the answer to, or provide a quick summary of the current issue and then ask the question.

DO NOT say, “While you were asleep...” rather say, “Let me explain what we are up to.”

### **The argumentative trainee**

Some trainees may be argumentative. They may be genuinely upset or disturbed by something and choose to demonstrate this by arguing with the presenter or other members of the group.

- **Don’t get hooked into the power struggle.** It is not your duty as a trainer to win the argument, even though you may strongly disagree with the person’s opinion. The more you assert your opinion, the more likely it is that the person will stop listening to you.



- **Don't use personal attacks.** In challenging the argumentative trainee, do not use personal attacks. These tend to put people on the defensive and undermine your credibility as a facilitator.
- **Use assertive communication:** "I can see how you would think that. However,..."; "Some people feel that..."; "There is a range of opinions on this subject...".
- **Redirect discussion to other trainees.** Ask if anyone else in the group has a different opinion.
- **Use direct and calm but assertive body language.**

## Evaluating Your Training

Many stakeholders are involved while conducting the training sessions including the trainer, the trainees, the training institution, and the organization purchasing the training. Different stakeholders may have different expectations of the training and anticipate different outcomes. It is important to speak with different stakeholders to understand what they need to know about the training.

### What are the benefits of evaluating the training?

Evaluating specific aspects of training can benefit all stakeholders. The possible benefits may include the following:

#### **For trainers:**

- Information regarding ways to improve the training (contents, process, tools);
- Information about possible improvements in training process, style and skills.

#### **For trainees:**

- Assessment of whether they have achieved their learning goals;
- Consideration of how the knowledge and skills learned can be applied to their work;
- Decisions about whether training has been a worthwhile investment of time, effort, and money.

#### **For Management offices and sponsors:**

- Information about the extent to which the training was worth the time and money they invested in it.
- Information about staff that are capable, including their limitations and readiness for new responsibilities.

### What does evaluation measure?

#### **Goals.**

**Inputs.** Evaluation can give us information about:

#### Training tools:

- Was the course content targeted at the appropriate level for the trainees?
- Were the handouts easy to understand?
- Was the appropriate audiovisual equipment used?
- Did the audiovisual device work?



Training environment: Were the training facilities (e.g., room size, ventilation, temperature, refreshments, and audibility) adequate?

**Processes.** Evaluations can tell us about the quality of the training, including the following:

Training framework:

- Was the training too long or too short?
- Were there enough breaks?
- Were the sessions in logical sequence?

Training techniques:

- Was a variety of techniques (e.g., group work, role plays, games, exercises, didactic teaching used)?
- Which techniques worked best?

Trainer's style:

- Did the trainer have good teaching skills (e.g., maintained the interest of the group, used a variety of teaching techniques, facilitated discussions, and created a supportive environment for trainees)?
- Was the trainer friendly, personable, approachable?
- Did the trainer know the materials (e.g., could he or she answer questions about the materials confidently)?

**Outputs.** Evaluating outputs can tell us about the immediate benefits of training, including the following:

Change in trainee knowledge: Trainers need to be sure that trainees have understood the course content.

Trainee satisfaction:

- Did the course meet the trainees' expectations?
- What did the trainees like about the course and what didn't they like?

**Methods and tools used to evaluate trainings.**

A number of methods and tools can be used to evaluate trainings. These include evaluation by the following:

**Trainer:**

- A checklist for pre-training evaluation to assess readiness for training, e.g., to check that the necessary equipment, materials, and tools have been prepared and are ready (quantitative);

**Trainees:**

- A training evaluation form, mostly for assessing training processes (quantitative and qualitative measures);
- Pre- and post-course knowledge tests for trainees;
- Assignments or "homework";
- Discussion questions at the end of each session to assess level of knowledge and understanding;



- Problem solving using a case study and information discussed previously; and
- Skill testing through role-play.

### **Training Methodology:**

The training has been designed to be fully interactive on the part of the participants, and to enable them to learn at an optimum level. In order to do this, various methodologies were used including:

- i. Short lectures/ presentations
- ii. Group discussions/work
- iii. Role plays
- iv. Demonstrations
- v. Brain-storming
- vi. Case studies and reports
- vii. Games
- viii. Videos

#### **Short lectures/presentations:**

Short lectures and presentations are used to provide basic information on a particular topic. Visual aids illustrating major points are also used. Trainers/facilitators are encouraged to facilitate full participation from their audience during mini-lecture sessions by:

- Asking questions and encouraging participants to ask questions
- Designating group exercises and presentations
- Brain-storming among the participants
- Problem-solving on case histories

Following group work and presentations from the participants, the facilitator, with the help of the participants, lists the major points and summarizes the topic using these presentations.

#### **Group discussions/work:**

Depending on the number of trainees, it is recommended that groups of four to six people be formed.

Each group should be given a task to carry out. This helps participants become actively involved in problem-solving and more comfortable with sharing their experiences. It also makes for an interesting and a stimulating session, as each member will have to be prepared for a group presentation and be ready to answer questions from other participants. Additionally, this approach allows for the development of personal relationships. Such group work also helps the facilitator evaluate the trainees' existing knowledge on the topic, and their capacity for absorbing the material being taught. This is also useful in designing future training sessions.

#### **Role-plays:**

During a role-play session, the facilitator explains the objectives of the topic being covered (i.e. effective communication or history-taking) and asks the participants to form groups and choose individual roles.



The facilitator then explains the scenario to the group and instructs each individual to play their role as convincingly as possible. Participants forming part of the audience are instructed to observe the scenarios carefully and to provide feedback or comment on what they see once it is completed. The facilitator should be prepared to help or guide the role-play session when necessary, and to encourage observers to comment on the positive and negative aspects of what they witnessed.

### **Demonstrations:**

There are several sessions involving demonstrations in this training manual which are expected to help participants improve their practical skills in NCDs case management, and to develop confidence. The facilitator explains what the demonstration session entails and its objectives. Participants are asked to carefully observe so that skills demonstrated can be included in their practice. After the demonstration, the facilitator interacts with the participants and asks them to provide feedback. The facilitator then provides his own comments, answers any queries the participants might have, and later emphasizes the significant aspects covered in the session.

### **Brain-storming:**

Brain-storming sessions are used to extract knowledge from participants on specific topics. These help participants to engage, allowing them to become attentive and alert which is conducive to effective learning. During the brainstorming sessions the facilitator raises several questions on the topic being studied, and asks participants to respond to them either individually or as a group. The answers are to be written down according to their level of importance on a whiteboard or flip chart, and read aloud.

The facilitator then provides his/her own comments, highlighting the positive aspects of the outcome, and does a follow-up presentation.

### **Case studies:**

Case studies are designed to help participants acquire the management and confidence necessary for dealing with patients experiencing various conditions. The cases presented are real or imaginary, characteristic of problems indicating a particular disease related to major disease include in PEN protocol. The participants are guided on how to locate these characteristics through a number of sequential steps. Case studies can be used to introduce a particular training session or topics, assess participants' knowledge of the disease, or used as a follow-up exercise after the completion of a specific session.

In the latter, the facilitator provides a case history and asks participants about the correct approach for that condition.

### **Audio-visual aids and other equipments:**

Multimedia visual aids (LCD projector, Laptop computer) will be used to facilitate lectures and oral presentations. However, illustrations with pictures, NCDs slides, flow charts, and videos will be incorporated wherever feasible. Similarly white boards, large sheets of papers/newsprints, photographs, posters and other materials will also be used.



**Note:**

Short games can be used to energize the participants during the sessions wherever appropriate.

*Are You Ready, If Yes Lets.....*

**Start UP**

**PEN Training of Service Provider**

START  
UP





# OA-1: Registration and Opening Session



## Time

<b>Service Provider Training</b>	45Minutes
<b>Training of Trainers</b>	90 Minutes



## Objectives of Activity

Trainee and training Management team must

1. Ensure the registration of participants for training
2. Introduction among each other
3. Inaugurate the training under the chairmanship of concerned officials
4. Explain the goal and objectives of the training



## Design of Implementation

### Methods

- Getting everyone to interact and to introduce each other
- Presentation

### Materials needed

- Paper and Pen
- Projector, screen with pointer
- Meta card

### Introduction:

This is a session for the introduction of the training program. Before beginning of the session request chairman of the opening session along with other respected guests & participants to take their allocated seats

Trainers, facilitators & trainees along with the management team are introduced to each other

During the introductory session request everyone to tell their name, designation at the concerned, health facility& their experience in NCD services in their respective turn. After the introduction of all participants and facilitators ask permission with the chairman to officially begin the training sessions.

The facilitator welcomes the participants and briefs them about the training objectives. He/she provides an overview on the roles of the participants, the facilitators, and on the activities the trainees are expected to follow during each session of the training.



This include basic rules participants will follow during the training session. It is designed to help participants gain mutual respect for one another, recognize the importance of the training, and actively participate throughout the entire training period.

Activities	Process	Time
1 Registration of participants for training	<ul style="list-style-type: none"> <li>- In line with session period</li> <li>- Make register sheet and entry their name (Annex 1)</li> </ul>	
2 Introduce each other themselves	<ul style="list-style-type: none"> <li>- Speaking or choose game</li> </ul>	10 min
3 Official opening from officials for authorization of PEN training and speech	<ul style="list-style-type: none"> <li>- Short speech of chief guest and others</li> </ul>	8 min
4 Explain the objectives of the training	<ul style="list-style-type: none"> <li>- Present objectives of training</li> <li>- Make more clear with importance</li> </ul>	8 min
5 Development of ground norms of training for effective implementation of training	<ul style="list-style-type: none"> <li>- Request to tell norms to participant and note down in news print and display where everybody could see</li> <li>- Spell the rule from participates and tell to participants to compliance the rule strictly</li> </ul>	4 min



## Trainer Instruction

### Related to Ice breaking

The main aim is to help both become acquainted & form a team for the exchange of information and ideas. In order to make the sessions interesting, the facilitator may choose to use games or other clever means of breaking the ice to encourage interaction.

### Related to Attention and about objectives

As this short lecture session is the first interaction with the trainees, the facilitator should be able to gain the participants' full attention by greeting them with a warm welcome and present a clear message on the importance of the training, its goals and purpose, how it will be conducted, and the role of trainee. The facilitator should also provide information about the facilitators and the different categories of trainees enrolling in the program.

### Related to Introduction

There are different ways for participants to introduce themselves to one another. The facilitator can choose any method to make it interesting and interactive. One example is



the “lighting” illustrated here. The facilitator provides a match box to all participants and tells to provide all introductory information within the matchstick ends burning.

***Regarding the clearing about contents deliver during the training period***

It is important to convey the importance of each training session to the participants, as it will help them understand how the knowledge gained will benefit them as health professionals. Should make clear about the limitation of content delivery. The mix group of participant in training may be reluctant to some. So, make it clear why the PEN training has such approach so that they be happy and enjoy these 4 days training with high degree of active participation in.

**Possible Ground rules:**

1. Be punctual
2. Maintain regularity, do not miss any sessions
3. Listen to the facilitator’s instructions carefully
4. Follow all instructions
5. Actively participate in each step of the training
6. Always speak at your turn and do not interrupt others
7. Give time to others and respect their contribution
8. Switch off the mobile phones or keep the mobile phones in silent or vibration mode during the session



## OA-2: Pre Testing



### Time

**Service Provider Training** 15 Minutes

**Training of Trainers** 20 Minutes



### Objectives of Activity

Trainee and training Management team aware on

1. Identify the knowledge, information, skills and attitude status of participants
2. Give feedback to the facilitators regarding the depth of knowledge of trainees.
3. Evaluation of training at reaction and learning level during the training period



### Design of Implementation

#### Methods

- Multiple choice question tick
- True or False and Short question

#### Materials needed

- Pretest questionnaire
- Clock

### Introduction:

A pre-test is done to evaluate the existing knowledge of the participants which then helps facilitators gauge the depth of knowledge and information to be delivered during the training. The test involves multiple choice questions (MCQs) or true/false questions to assess basic general knowledge based on the content being studied. It should preferably cover all important chapters to be discussed during the session.



### Trainer Instruction

#### Related to Pre testing

The facilitator explains the objectives of the pre-test and the time given for it. He/she asks the participants to put a symbolic code on the paper instead of their name for anonymity. The facilitator will inform participants that the test objective is to evaluate the overall knowledge of group and the individual. They must also be informed that by doing so, it will assist the trainers/facilitators in determining the groups' depth of knowledge or skills on each of the different topics. Therefore, there is no need for collaborative group work on



the pre-test. After the completion of the test, the facilitator collects them and issues a score. The model questions for the pre-test can be found in **annex 2**.

Keep it separates and compare the marks after the scoring of posttest after the completion of training at 4<sup>th</sup> day.



## *Tea Break (15 Minutes)*

- 10 minutes for tea
- 5 minutes for Physical Exercise



## Theme 1:

# Public Health Approaches to NCDs Prevention and Control

---

नसर्ने रोग रोकथाम तथा नियन्त्रण सम्बन्धि  
जनस्वास्थ्यका अवधारणा





# Session -1.1

## Introduction to NCD and PEN Program



### Time

<b>Service Provider Training</b>	30 Minutes
<b>Training of Trainers</b>	30 Minutes



### Session Objectives

By the end of session, trainee will able to explain

1. Define NCDs & their trend in the world and Nepal
2. Describe
  - Approach and Development of PEN program
  - Vision
  - Objective



### Design of Implementation

#### Methods

- Brain storming
- Presentation
- Group Discussion

#### Materials needed

- Power point slides and presenter's note
- Trainer's guidebook & Trainee's Manual
- Laptop and Projector



### Advanced Preparation

- Classroom Arrangement
- Above mentioned materials/resources preparation

START  
UP



### Start Up Session

Introduce the Session and Session objectives with training methodology and contents to be taught (1 to 2 minutes)



## Activity Instruction



### Activity 1: Brainstorm, by asking the trainee (5 min)

- What do they understand by NCDs?
- How does it differ from Communicable diseases?
- What are the common NCDs they had seen & challenges faced during its management in their Health Facility?



### Activity 2: Discuss and identify the person having disease related to NCDs among participants and their families (5 min)

**Step 1:** List the number and relation of family members

**Step 2:** Disease they have (suffering from disease in the past, currently and is prone or in risk to those disease)

**Step 3:** Discuss whether they are at Risk or not



### Activity 3: Interactive power point presentation on (17 min)

- Introduction of NCDs
- Trends of NCDs related morbidity & mortality ( Note :let trainees know they will have a detailed presentation on preceding session)
- Introduction, vision and Objectives of PEN
- PEN implementation status in Nepal

### Summarize

Session with key messages on why PEN is an important components for the management of NCDs (3 Min)



Praise all the learners for their efforts.



# Session -1.2

## Major NCDs Burden and Common Risk Factors



### Time

Service Provider Training

30 Minutes

Training of Trainers

35 Minutes



### Session Objectives

By the end of session, trainee will able to

1. Describe the current situation and trends of 4 major NCDs
2. Identify risk factors associated with the major 4 NCDs
3. Describe the Iceberg phenomena and Prevention approach



### Design of Implementation

#### Methods

- Brain storming
- Presentation
- Group Discussion

#### Materials needed

- Power point slides and presenter’s note
- Trainer’s guidebook & Trainee’s Manual
- Laptop and Projector
- Markers, Newsprint, Meta-cards



### Advanced Preparation

- Classroom Arrangement
- Above mentioned materials/resources preparation
- Meta card with various types of risk factors written over it

START  
UP



### Start Up Session

Introduce the Session and Session objectives with training methodology and contents to be taught (1 to 2 minutes)



## Activity Instruction



### Activity 1: Brainstorm, by asking the following questions (5 min)

Ask participants to answer following questions by raising their hands as YES.

*Note: the response in a Flip-chart (by any co - trainer)*

In the last 1 year Did they had their

1. Blood pressure measured?
2. Blood Glucose Level measured?
3. Blood cholesterol level measured?
4. Car/Bike Servicing done?

Compare the responses and ask those participants to comment on above responses. *(Emphasis on Negligence on own Regular Medical Check-up by Health Professional themselves)*



### Activity 2: Discuss the following content through interactive power point presentation on (10 min)

- Introduction of 4 major NCDs
- Global & National Burden of NCDs
- Current situation of NCDs in Nepal
- Introduce and situation of major 4 risk factors
- Ice-berg Phenomenon
- Prevention approach of NCDs

#### Summarize

The presentation with Key Messages and address any concerns.



### Activity 3: Risk Factors of 4 major NCDs(10min)

**Step 1:** Distribute Pre- prepared meta-cards with modifiable & non-modifiable risk factors.(Co-trainer must write any one of the risk factors in those meta-cards )

Modifiable Risk	Non-modifiable risk factors
<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>

**Step 2:** Paste a News print with two columns with heading of **Modifiable & Non-modifiable** risk factors.

**Step 3:** Make trainees paste meta cards in concerned column

**Step 4:** Ask them to give reason for their actions & correct them if needed

**Step 5:** *Applaud them for their efforts.*



### Activity 4: Discuss the following content through interactive power point presentation on (5 min)

Now present a **4x4=80** power point slide. **(5min)**

**Emphasis on relation of 4 major risk factors to 4 major diseases & its 80% total disease burden.**

#### Summarize

Session with paraphrasing the participants on their response and emphasis the key messages on 4 Major risk factors & Major 4 NCDs (2-3min)



- Praise all the learners for their efforts.



# Session -1.3

## PEN as a PHC Approach and BEST BUYS



### Time

<b>Service Provider Training</b>	30 Minutes
<b>Training of Trainers</b>	40 Minutes



### Learning Objectives

By the end of session, trainee will able to explain

1. Identify PEN as a PHC approach, its integration and management
2. Introduction to WHO – BEST BUYS and Identify cost effective intervention
3. List functions of comprehensive PHC



### Design of Implementation

#### Methods

- Brain storming
- Presentation
- Group Discussion

#### Materials needed

- Power point slides and presenter’s note
- Trainer’s guidebook & Trainee’s Manual
- Laptop and Projector
- Markers, Newsprint, Meta-cards



### Advanced Preparation

- Classroom Arrangement
- Above mentioned materials/resources preparation

START  
UP



### Start Up Session

Introduce the Session and Session objectives with training methodology and contents to be taught (1 to 2 minutes)



## Activity Instruction



### Activity 1: Brainstorm, on Contribution of PHC approaches to NCD goals (5 min)

Ask few participants randomly about

*Note: Note down the response*

1. Any activities of NCDs (Counseling, screening, check up) integrate with other public health program from trainee's health facility
2. the bottlenecks to implementing essential NCD services in their Health facility Level?



### Activity 2: Continue Discuss the following content through interactive power point presentation on (10 min)

- Introduction of PHC approach
- Nepal PEN pathway
- Comprehensive and integration of NCDs in PHC
- Targets set by Multi- Sectoral Action Plan 2014-2020 regarding NCDs

### Summarize

The presentation with Key Messages and address any concerns.



### Activity 3: Brainstorm, by asking the following questions (5 min)

Ask few participants randomly

*Note: Note down the response*

1. What do they understand by "**BEST BUY**" in general? Any idea



#### Activity 4: Interactive power point presentation on (10 min)

1. Introduction to WHO – **Best Buys**
2. Different **Best Buys** approaches for 4 disease screening and treatment and controlling of 4 risk factors

#### Note:

Let participant's know that different examples of BEST BUYS along with levels of prevention are mentioned in details in theirs Trainee's Manual. Enforce to read the content of manual and discuss next days.

#### Summarize

Session with key messages on BEST BUYS & PEN as PHC approach such a important components in the management of NCDs (2-3min)



- Praise all the learners for their efforts.

### 5 minute Exercise

1. Begin by standing behind a chair with feet slightly apart.
2. Hold onto the chair and lift the right leg out to the side, maintaining a straight back with toes facing forward.
3. Hold the leg out for one second and then slowly lower the leg.
4. Repeat the exercise on the right 10 to 15 times and switch to the left leg and repeat 10 to 15 times.



### Lunch Break

(45 Minutes)

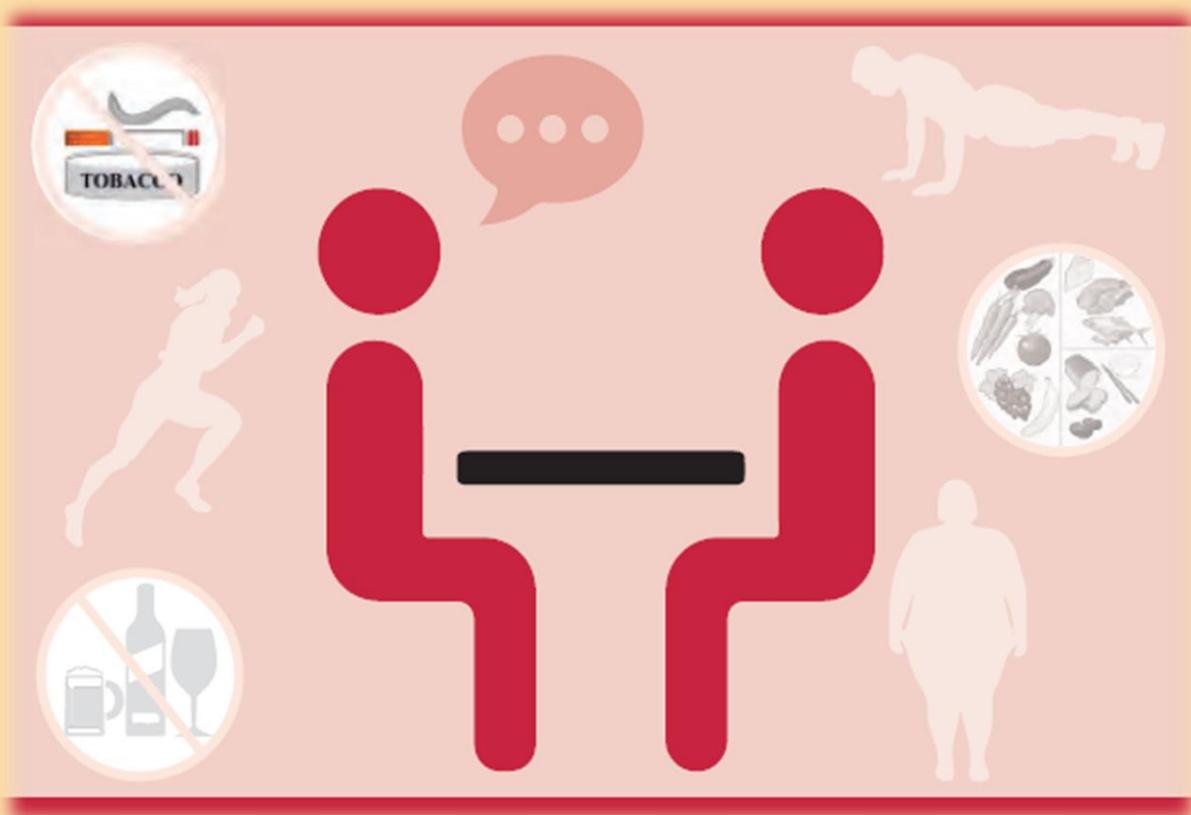


## Theme 2:

# Brief Interventions on Addressing NCD Risk Factors at PHC

---

प्राथमिक स्वास्थ्य सेवामा नसर्ने रोगको जोखिम तत्व न्यूनिकरण तथा रोकथाम सम्बन्धि कार्यहरु





# Session -2.1

## Counseling skills, BCC and process including 5A and 5R



### Time

**Service Provider Training** 45 Minutes

**Training of Trainers** 60 Minutes



### Learning Objectives

By the end of session, trainee will able to

1. Understand the effective communication and counseling
2. Understand the elements that motivate the behavioural change
3. Understand the process and steps of behavioural changes
4. Understand to motivational interviewing in promoting healthy lifestyles in primary health care (PHC).
5. Employ the 5A and 5R techniques to target specific healthy lifestyle modifications.



### Design of Implementation

#### Methods

- Brain storming
- Presentation
- Group Discussion

#### Materials needed

- Power point slides and presenter’s note
- Trainer’s guidebook & Trainee’s Manual
- Laptop and Projector



### Advanced Preparation

- Classroom Arrangement
- Ensure the availability of above mentioned materials/resources preparation
- Study thoroughly the process of counseling, behavioural change and concepts of 5A’s and 5R’s (If necessary take references )



## Start Up Session

Introduce the Session and Session objectives with training methodology and contents to be taught (1 to 2 minutes)



## Activity Instruction



### Activity 1: Positive behavior change that they might have successfully adopted in their personal life. (10 min)

**Step 1.** Ask participants to work in pairs.

**Step 2.** Discuss a positive behaviour change that they have successfully adopted in their life.

Use the following questions as a guide for this exercise:

1. What made them decide that they needed to change this behaviour?
2. How long did they spend thinking about it before they actually started trying to change?
3. Did they manage to change to the extent they had planned or desired?
4. What were some factors that helped them to change?
5. What kind of challenges did they face?
6. How did they overcome those barriers to change?



Further Reading for Trainer

### Trainer's explanatory notes

*Facilitator should emphasis the following key points:*

- *Change is not always due to lack of knowledge or information.*
- *Lack of change is due to a motivational issue.*
- *People are ambivalent about the change and get stuck. This leads to postponing the decision to change.*
- *The delay in the decision to change can be perceived by health care workers as resistance.*



---

## Activity 2: Continue Discussion with the following content through interactive power point presentation on (10 min)

- Definition of healthy communication
- Effective counseling skills & Behaviour change communication
- Motivational elements for Behaviour Change

### Summarize

The presentation with Key Messages and address any concerns.

---



## Activity 3: Patient/client counseling and motivational interviewing: (5 min)

Ask few participants in random

*Note: Note down the response*

**Step 1.** Ask the participants to think of the communication strategies that they use in their interaction with patients/clients. Discuss these skills using the following questions:

- Are there any specific techniques that work well?
- Did they have any negative experiences with patients/clients?
- How did communication factor work in this negatively experienced patient/client?

**Step 2.** Ask participants the following questions.

- Do they employ motivational interviewing techniques in their clinical practice?
- What are some experiences in using motivational interviewing techniques in their clinical practice? Did they find any changes among clients after that?

**Step 3.** Show a short video demonstrating the basics of motivational interviewing.

- Ask the participants to recall the lessons learnt from the video.
-



#### **Activity 4: Interactive power point presentation on (10 min)**

- Principles, Stages & Process of behaviour change
- Principles of motivational interviewing and techniques
- Brief interventions using the 5A's and 5R's models.

#### **Note:**

Include a reflection on personal behavior change in the power point discussion

---

#### **Summarize**

Session with key messages on Use of Effective behavior counseling ( 2-3 min)



- Praise all the learners for their efforts.
-



# Session -2.2

## Brief Intervention on Smoking and Tobacco Cessation and Control at PHC Level



### Time

<b>Service Provider Training</b>	30 Minutes
<b>Training of Trainers</b>	30 Minutes



### Learning Objectives

By the end of session, trainee will able to explain

1. Describe the health, social, economic and environmental impact of tobacco products use and second hand smoke exposure.
2. Describe and deliver brief tobacco cessation interventions using the 5A's and 5R's techniques.



### Design of Implementation

#### Methods

- Brain storming
- Presentation
- Group Discussion

#### Materials needed

- Power point slides and presenter's note
- Trainer's guidebook & Trainee's Manual
- Laptop and Projector



### Advanced Preparation

- Classroom Arrangement
- Ensure the availability of above mentioned materials/resources preparation
- Study thoroughly the process of counseling, behavioural change and concepts of 5A's and 5R's (If necessary take references )



START  
UP



## Start Up Session

Introduce the Session and Session objectives with training methodology and contents to be taught (1 to 2 minutes)



## Activity Instruction



### Activity 1: Ask the participants to briefly respond to the following questions. Write responses on a flip chart/white board: (10 min)

Use the following questions as a guide for this exercise:

1. What are the types and patterns of tobacco use in Nepal?
2. What are the effects and consequences of tobacco use?
3. Is exposure to second-hand smoke common in their community?
4. What are the health effects of exposure to second-hand smoke on adults and children?
5. Are they aware of third-hand smoke?
6. What are benefits of quitting tobacco?



### Activity 2: Continue Discuss the following content through interactive power point presentation on (10 min)

- Types of tobacco use and harmful chemical.
- Health, social, economic and environmental consequences of tobacco
- Adverse impact of exposure to second-hand smoke
- Benefits of quitting

## Summarize

The presentation with Key Messages and address any concerns.



### Activity 3: Again ask the participants to briefly respond to the following questions: (5 min)

Ask with few participants randomly

- Why people smoke or use tobacco?
- Why is it difficult to quit? How to quit any idea or experiences?



#### Activity 4: Review of 5A and 5R(10 min)

Ask the participants to review the 5A's and 5R's brief interventions given in the manual. (this must be done by participants at their residence as Homework)



Further Reading for Trainer

#### **Trainer's explanatory notes**

*As a health professional, you may feel concerned as many tobacco users are resistant to change and you may not know how to reduce their resistance and support them to quit tobacco use. There are effective brief tobacco intervention models to help you talk to patients about quitting tobacco and deliver advice.*

*Generally, brief tobacco interventions are not intended to treat people with high tobacco dependence (heavy tobacco users). The primary purpose of a brief tobacco intervention is to help the patient understand the risks of tobacco use and the benefits of quitting, and to motivate them to make a quit attempt. Brief tobacco interventions can also be used to encourage those heavy tobacco users to seek or accept a referral to more intensive treatments within their community.*

#### **Information must deliver to trainee for implementing 5R's model at the health facility with patients**

- Let the patient do the talking. Don't give lectures!
- If the patient does not want to be a non-tobacco user – focus more time on “Risks” and “Rewards”.
- If the patient does want to be a non-tobacco user but does not think he or she can quit successfully, focus more time on “Roadblocks”.
- Even if patients remain not ready to quit, end positively with an invitation to them to come back to you if they change their minds.

Ask the participants to review if there are ambiguities in the algorithm.

#### **Inform them that they will be referring to the protocol in their subsequent health services**

#### **Summarize**

Session with key messages of tobacco hazards and benefits



Praise all the learners for their efforts.



---

## Session -2.3

### Brief Intervention on Alcohol Cessation and Control at PHC Level



#### Time

<b>Service Provider Training</b>	30 Minutes
<b>Training of Trainers</b>	30 Minutes



#### Learning Objectives

By the end of session, trainee will able to

1. Describe the health, social, economic and environmental impact of alcohol use
2. Use brief intervention techniques to screen and assist individuals with hazardous and harmful drinking habits.
3. Screen and refer individuals with alcohol dependence at an early stage.
4. Use communication skills to motivate drinkers to address their drinking problem



#### Design of Implementation

##### Methods

- Brain storming
- Presentation
- Case study and role play

##### Materials needed

- Power point slides and presenter's note
- Trainer's guidebook & Trainee's Manual
- Laptop and Projector



#### Advanced Preparation

- Arrangement (Class room, role play instruction )



- Ensure the availability of above mentioned materials/resources preparation
  - Study thoroughly the process of counseling, behavioural change and concepts of 5A and 5R (If necessary take references )
- 

START  
UP



### **Start Up Session**

Introduce the Session and Session objectives with training methodology and contents to be taught (1 to 2 minutes)



### **Activity Instruction**

---



**Activity 1: Ask the participants to briefly respond to the following questions. Write responses on a flip chart/white board: (10 min)**

Use the following questions as a guide for this exercise:

1. What are the types of alcoholic drinks available in the country and locality?
  2. Is alcohol use a problem in their surrounding?
  3. What are the effects of harmful use of alcohol on physical, psychological, occupational, financial, familial and legal aspects?
  4. What are their experiences in managing persons with alcohol use disorders in their clinical practice?
- 



**Activity 2: Continue the Discussion with interactive power point presentation on (10 min)**

- Health, social, economic and environmental consequences of alcohol
  - Risks and effects of drinking
  - CAGE Questionnaire
  - Benefits of quitting
- 



**Activity 3: Role play using the 5A's and 5R's brief intervention (15 min)**



**Step 1:** Divide the participants into convenient group and ask them to refer to the case scenario in the power point slide:

**Stet 2:** Presentation of case scenario:

Gyanu Babu is 45-year-old father of three children. He has a government job. After his office hours, he usually goes to a small shop to drink and comes home late in the evening often drunk. He relapsed after attempting to quit many times. He started drinking from day break to stabilize himself at the shop.

**Step 3:** Ask groups to identify two volunteers.

- Volunteer 1 act as Gyanu Babu.
- Volunteer 2 act as the primary health care worker.

**Step 4:** The other participants are the observers while the two volunteers conduct the brief intervention session.

Areas of 5A's	Observations	Areas of 5R's	Observations
Ask		Relevancy	
Advice		Risk	
Assess		Rewards	
Assist		Roadblock	
Arrange		Repetition	

Ask the observers to note the brief intervention session and provide the feedback at the end of the session addressing the following questions:

1. Was the brief intervention appropriate?
2. What micro skills did the primary health care worker use?
3. Were 5A's adequately employed?
4. How could the healthcare worker have improved the brief interventions?

**Using 5R's interventions to improve motivation :**

- Ask volunteer 1 to continue as a client and this time to exhibit low motivation to change the habit.
- Invite the third volunteer to be the healthcare worker and use the 5R's interventions to motivate the patient.
- The other participants are the observers.

Ask the observers to note the intervention session and provide feedback at the end of the session addressing the following questions:

1. Was the brief intervention appropriate?



- 
2. What skills did the healthcare worker use?
  3. Were the 5R's adequately employed?
  4. How could the health worker have improved the skills of motivation

**Ask the participants to review the 5A's and 5R's brief interventions given in the manual.(this must be done by participants at their residence as Homework) page no:**

Ask the participants to review if there are ambiguities in the algorithm. Inform them that they will be referring to the protocol in their subsequent health services

---

### **Summarize**

Session with key messages on Use of Effective Counseling ( 2-3 min)



- Praise all the learners for their efforts.



Further Reading for Trainer

### **Trainer's explanatory notes**

#### **Role of health-care workers (Provide information to trainee's)**

- Routinely ask all adolescents and adults who consult primary health care services for any reasons about their drinking habits.
- Ask patient presenting with disorders such as hypertension and depression about their alcohol consumption.
- Record the drinking history of all patients who consume alcohol regularly.
- Inform regular drinkers of the associated health risks and advise them to cut down.
- Give advice to the patients with a hazardous level of alcohol consumption or early signs of alcohol-related problems, urging them to cut down their consumption to an



agreed, realistic lower level of drinking (which may include abstinence) and follow up on their progress to strengthen motivation.

- Conduct brief interviews, particularly with patients with harmful alcohol consumption and alcohol-related problems, and assist them in changing their behaviour.
- Refer the patients who show signs of dependence or serious physical illness as a result of their alcohol consumption to specialized services.
- Serve yourself as a positive model.
- Screen for and respond to alcohol use disorders and refer appropriately to local services.

### Further Reading for Trainer

#### ICD-10 Criteria for the Alcohol Dependence Syndrome

Three or more of the following manifestations should have occurred together for at least one month or, if persisting for periods of less than one month, should have occurred together repeatedly within a 12-month period:

- A strong desire or sense of compulsion to consume alcohol;
- Impaired capacity to control drinking in terms of its onset, termination, or levels of use, as evidenced by: alcohol being often taken in larger amounts or over a longer period than intended; or by a persistent desire to or unsuccessful efforts to reduce or control alcohol use;
- A physiological withdrawal state when alcohol use is reduced or ceased, as evidenced by the characteristic withdrawal syndrome for alcohol, or by use of the same (or closely related) substance with the intention of relieving or avoiding withdrawal symptoms;
- Evidence of tolerance to the effects of alcohol, such that there is a need for significantly increased amounts of alcohol to achieve intoxication or the desired effect, or a markedly diminished effect with continued use of the same amount of alcohol;
- Preoccupation with alcohol, as manifested by important alternative pleasures or interests being given up or reduced because of drinking; or a great deal of time being spent in activities necessary to obtain, take, or recover from the effects of alcohol; and
- Persistent alcohol use despite clear evidence of harmful consequences, as evidenced by continued use when the individual is actually aware, or may be expected to be aware, of the nature and extent of harm.



# Session -2.4

## Brief Intervention on Healthy Diet at PHC Level



### Time

<b>Service Provider Training</b>	45 Minutes
<b>Training of Trainers</b>	45 Minutes



### Learning Objectives

By the end of session, trainee will able to

1. Explain the healthy and unhealthy foods
2. Explain and identify the local available food, nature, quantity as per essential of patient
3. Food need for Diabetes patients and analysis of glycemic index
4. Provide dietary advice using the 5A's and 5R's to assist the patients to adopt healthier dietary practices based on eating patterns, locally available foods and their health status



### Design of Implementation

#### Methods

- Brain storming
- Presentation
- Group discussion

#### Materials needed

- Power point slides and presenter's note
- Trainer's guidebook & Trainee's Manual
- Laptop and Projector, food pyramid



### Advanced Preparation

- Arrangement (Class room, group discussion instruction)
- Ensure the availability of above mentioned materials/resources preparation
- Study thoroughly the process of counseling, behavioural change and concepts of 5A's and 5R's (If necessary take references )



START  
UP



## Start Up Session

Introduce the Session and Session objectives with training methodology and contents to be taught (1 to 2 minutes)



## Activity Instruction



**Activity 1: Ask the participants to briefly respond to the following questions. Write responses on a flip chart/white board: (10 min)**

**Step 1:** Divide the participants into 6 convenient group

**Step 2:** provide 1 question to 1 group by lottery

**Step 3:** Ask them to response on a flipchart & present.(10min)

1. What constitutes a healthy diet?
2. List commonly used food products that are high in salt, fat and sugar.
3. What are the general dietary recommendations in context of non-communicable diseases?
4. What can primary health care workers do to promote healthier diets in communities and among patients?
5. Do you know any myths about Health Diet?
6. Identify the population wide interventions recommended to promote healthy diets. note down population-level intervention.



**Activity 2: Continue Discuss the following content through interactive power point presentation on (18 min)**

- Definition of healthy and unhealthy food and types
- Food guide pyramid/or food plate
- Effects of diets high in salt, fat and sugar
- Glycemic Index
- General recommendations for a healthy diet.
- Myths & reality of Health Diet
- Diabetes and diet



---

**Activity 3: Ask the participants to share the good practices and suggestions for improvement. (5 min)**

**Ensure with the health workers that they are asking and provide counseling on following questions**

- How many portions of fruits and vegetables do you eat each day?
- Do you usually add salt or salty flavourings (e.g. stock cubes, soy sauce, pickle) to your food when eating or during cooking?
- Some foods contain hidden salt. How often do you eat any of the following? (provide local examples)
- What kind of fat or oil do you usually use for cooking and frying?
- Some foods contain a lot of fat or oil. How often do you eat any of the following? (provide local examples)
- Some drinks and snacks contain a lot of sugars. How often do you have any of the following? (provide local examples)



---

**Activity 3: Review of 5A and 5R ( 8 min)**

**Ask the participants to review the 5A's and 5R's brief interventions given in the manual.(this must be done by participants at their residence as Homework) page no:**

Ask the participants to review if there are ambiguities in the algorithm. Inform them that they will be referring to the protocol in their subsequent health services

---

**Summarize**

Session with key messages on Use of Effective Counseling ( 2-3 min)



- Praise all the learners for their efforts.
-



Further Reading for Trainer

## Trainer's explanatory notes

### Potential messages of question no 6 from the group work

- Regulate the marketing of unhealthy food
- Regulate unhealthy food using and selling around the surroundings at school level
- Nutritional labeling
- Taxation on sugar-sweetened beverages
- Exclusive breastfeeding and healthy-feeding options for infants and young children
- Promote healthy food, local exhibition of healthy food (Identification, production, preservation, using, cooking etc)



*Tea Break*

*(15 Minutes)*



# Session -2.5 and Session 2.6

## Brief Intervention on Obesity & Promotion of Physical Activity at PHC Level



### Time

<b>Service Provider Training</b>	30 Minutes
<b>Training of Trainers</b>	45 Minutes



### Learning Objectives

By the end of session, trainee will able to

1. Explain about physical activity and obesity
2. Explain to patients the recommended levels of physical activity that are beneficial to health.
3. Employ the 5A's and 5R's brief interventions to promote health-beneficial physical activity appropriate to the individual's age, lifestyle and health conditions, and cultural background
4. Describe the environmental and lifestyle drivers and classification of overweight and obesity & its prevention & management



### Design of Implementation

#### Methods

- Brain storming
- Presentation
- Group discussion

#### Materials needed

- Power point slides and presenter's note
- Trainer's guidebook & Trainee's Manual
- Laptop and Projector, food pyramid



### Advanced Preparation

- Arrangement (Class room, group discussion instruction)
- Ensure the availability of above mentioned materials/resources preparation
- Study thoroughly the process of counseling, behavioural change and concepts of 5A's and 5R's (If necessary take references )



## Start Up Session

Introduce the Session and Session objectives with training methodology and contents to be taught (1 to 2 minutes)



## Activity Instruction

---



### Activity 1: Basics of physical activity:(10 min)

**Step 1:** Ask the participants to stand up

**Step 2:** Invite participants to demonstrate a physical activity of their choice.

**Step 3:** Ask participants to briefly answer the following questions. Write the responses on a flipchart/whiteboard:

- What happened to the breathing and heart rates?
  - Which groups of muscles or parts of the body were used?
  - What is your understanding by:
    - Physical activity
    - Physical inactivity
    - Exercise.
    - What are the global recommendations for physical activity?
- 



### Activity 2: Continue Discuss the following content through interactive power point presentation on (10 min)

- Definition of physical activity and exercise
- Benefits of physical activity
- Recommendations of physical activity for various age groups
- Types of activities for various levels of physical activity
- Role of primary health care providers in promoting physical activity.



**Tell participants to carefully go through the brief intervention in their manual (at their home) . If there are any points for clarification then review next day on review session. Add page no from trainees book**

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### **Activity 3 Brain storming on Environmental and lifestyle drivers of overweight and obesity. (5 min)**

Ask participants the following questions and write the responses on the flipchart or whiteboard.

- What factors are responsible for the rise in overweight and obesity in the population?
  - What are the problems related to overweight and obesity?
  - What can be done to combat overweight and obesity in the population?
- 



### **Activity 2: Continue Discuss the following content through interactive power point presentation on (10 min)**

- Definition of overweight and obesity & its classification
- Their burden, causes and child obesities
- Body mass index and Waist Circumference



**Tell participants to carefully go through the brief intervention in their manual(at their home) .If there are any points for clarification then review next day on review session. Add page no from book**

---

### **Summarize**

Session with key messages on Promotion for Physical Activity & control of Obesity & Over weight( 2-3 min)



- Praise all the learners for their efforts.
-



## Trainer's explanatory notes

Further Reading for Trainer

### Related to Physical Exercise

During the counseling and discussion with trainee and patients at training session or with patient at the time of examination and counseling at health facility

*Challenge Statements (CS) may arise: The possible answer of that challenging questions*

**(CS: 1) A little bit of exercise is not enough.**

As little as 30 minutes a day on most days of the week is good for your health. Any exercise is better than none. For example, regular walking has been shown to reduce the risk of heart disease.

**(CS: 2) Exercise makes you tired.**

Although you may feel somewhat tired during an exercise session, when you're done you usually feel more invigorated. Doing any regular physical activity is guaranteed to raise your overall energy levels and make you able to better handle everything you have to undertake during the day. If you're having trouble concentrating at work or getting too stressed, the best remedy is a short walk or any other physical activity to clear your mind, bump up your energy levels, and decrease your mental stress. Doing regular physical activity also helps you sleep better at night, leaving you more refreshed and energetic during the day.

**(CS: 3) I don't need to lose weight so I don't need to be physically active.**

Physical activity has benefits for everyone, regardless of your shape or size. A full-body workout that includes all of the major muscle groups, cardiovascular activity and flexibility will help you manage stress, give you more energy, and improve blood pressure and cholesterol levels. Improvements to your overall health are likely to happen before you notice any significant changes to your physical appearance. It takes equipment, special shoes and clothes... and sometimes you even have to pay to use sports facilities.

**(CS: 4) Being physically active is too expensive**

**It only takes 30 minutes of moderate-intensity physical activity five days per week to improve and maintain your health.**



**Challenge Statements (CS) may arise: The possible answer of that challenging questions**

However, this does not mean that physical activity must always be performed for 30 minutes at a time. The activity can be accumulated over the course of the day: a 10-minute brisk walk three times a day; or 20 minutes in the morning and 10 minutes later in the day.

These activities can be incorporated into your daily routine – at work, school, home or play. Simple things like taking the stairs, riding a bike to work or getting off the bus two stops before your final destination and then walking the rest of the way can accumulate over the day and can form an important part of your regular daily activities. Even if you are very busy, you can still fit in 30 minutes of physical activity into your daily routine to improve your health

**(CS: 5) I'm very busy. Physical activity takes too much time.**

Physical activity can be done almost anywhere and does not necessarily require equipment. Carrying groceries, wood, books or children are good complementary physical activities, as is climbing the stairs instead of using the elevator. Walking is perhaps the most practiced and most highly recommended physical activity and is absolutely free. Some urban areas have parks, open ground or other pedestrian areas that are ideal for walking, running or playing. It is not imperative to go to a gym, pool or other special sports facility to be physically active.

**(CS: 6) Children by nature have so much energy. They hardly sit still. There's no need to spend time or energy teaching them about physical activity. They are already so active.**

Each day children and youth aged 5–17 years should accumulate at least 60 minutes of moderate- to vigorous-intensity physical activity to ensure healthy development. However, physical activity levels are decreasing among young people in countries around the world, especially in poor urban areas.

This decline is largely due to increasingly common sedentary ways of life. For example, fewer children walk or cycle to school and excessive time is devoted to watching television, playing computer games, and using computers and mobile devices, often at the expense of time and opportunities for physical activity and sports. Physical education and other school-based physical activities have also been decreasing.

Importantly, patterns of physical activity and healthy lifestyles acquired during childhood and adolescence are more likely to be maintained throughout the lifespan. Consequently, improving physical activity levels in young people is imperative for the future health of all populations.



**Challenge Statements (CS) may arise: The possible answer of that challenging questions**

**(CS: 7) Physical activity is for people in the “prime of life”. At my age, I don’t need to be concerned with it.**

Regular physical activity has been shown to improve the functional status and quality of life of older adults. It is recommended that adults aged 65 years and above do at least 150 minutes of moderate-intensity aerobic physical activity throughout the week.

Many non-communicable diseases (NCDs: cardiovascular disease, osteoarthritis, osteoporosis, hypertension, falls) prevalent in older adults can benefit from participation in regular physical activity. Physical activity has also been shown to improve mental health and cognitive function in older adults and has been found to contribute to the management of disorders such as depression and anxiety. Active lifestyles often provide older persons with regular occasions to make new friends maintain social networks and interact with other people of all ages.

**(CS: 8) Physical activity is needed only in industrialized countries. Developing countries have other problems.**

Physical inactivity is now identified as the fourth leading risk factor for global mortality. Importantly, 80% of deaths from common NCDs occur in countries like our. Therefore, NCDs associated with physical inactivity are a significant public health problem in most countries around the world.

Levels of inactivity are high in virtually all developed and developing countries. In rapidly growing large cities of the developing world, physical inactivity is an even greater problem. Urbanization has resulted in several environmental factors that discourage participation in physical activity, particularly in the transport and occupational domains. In rural areas of developing countries, sedentary pastimes (e.g. watching television) are also becoming increasingly popular.

## **Related to Obesity and Overweight**

### **1. Nepal facing a Triple Burden of disease**

Nepal now facing a “triple burden” of disease.

- Still we are dealing with the problems of infectious diseases. Additionally Nepal facing nutrition problems (mal nutrition and poverty hunger). In the meantime critically increase of epidemic of NCD in Nepal and also experiencing a rapid upsurge in NCD risk factors such as obesity and overweight, particularly in urban settings. It is not uncommon to find under nutrition and obesity coexisting within the same country, the same community and the same household.



Children in Nepal, still are more vulnerable to inadequate prenatal, infant and young child nutrition. At the same time, these children are exposed to high-fat, high-sugar, high-salt, energy-dense and micronutrient-poor foods, which tend to be lower in cost but are also lower in nutrient quality. These dietary patterns, in conjunction with lower levels of physical activity, result in sharp increases in childhood obesity while under nutrition issues remain unsolved in near future.

## **2. Obesity is ultimate metabolic effect of unhealthy behavior (Physical inactivity, Alcohol and beverage intake, unhealthy food (Sweetened, fried, junk, high fat etc.)**

Obesity is the end result of the intricate interactions of biology, behaviour and environment. Recent hypotheses by the scientific community suggest that the current obesity epidemic is being driven largely by environmental factors (e.g. high-energy/high-fat foods, fast food consumption, watching television (sedentary lifestyle), eating “super-sized” portions, alcohol and cold drink beverage intake etc.) rather than biological ones. Individuals are bombarded with images and offers of high-fat, high-calorie, highly palatable, convenient and inexpensive foods.

Furthermore, the physical demands of our society have changed, resulting in an imbalance between energy intake and expenditure. Today’s stressful lifestyles compound the effects of environmental factors by impairing weight loss efforts and promoting fat storage. Combating the obesity epidemic demands environmental and social policy changes, particularly in the areas of portion size, reduced accessibility to low-cost foods that are high in fat, salt and sugar, and availability of healthy foods, and promotion of physical activity.



## OA-3: Summary of Day



### Time

Service Provider Training 15 Minutes

Training of Trainers 15 Minutes



### Objectives of Activity

Ensure that the trainee are

1. Learn the contents of first day and remind for next day activities



### Design of Implementation

#### Methods

- Summary telling from reporter of day

#### Materials needed

- Not specific

### Introduction:

Summary is done to evaluate the acquiring knowledge of the participants which then helps facilitators gauge the process, way and modalities to be changed or improved for next day for improving interest or continuation of trainee's willingness to learn. If any confusion then immediately could revise, retelling and give more emphasis to recall in next day review session. It should cover all important chapters to be discussed during the session.



### Trainer Instruction

#### Related to Summary

1. Trainer already (Before starting of session of 1<sup>st</sup> day) nominate the reporter of day or could choose randomly for telling the summary of learning (must to know rather than good to know). Trainer should facilitate to summary session only based on content not the name of trainer, opening, objectives process, refreshment time etc.
2. If still any confusion, ask participants to read the Trainee's book

**Ask the participants to review all those 5A's and 5R's brief interventions given in the manual.(this must be done by participants at their residence as Homework) pa**

Ask the participants to review if there are ambiguities in the algorithm. Inform them that they will be referring to the protocol in their subsequent health services



**Instruct clearly** to participants the activities, or any reading for next day



## Theme 3:

# Review of Management of Major NCDs

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प्रमुख नसर्ने रोग व्यवस्थापन सम्बन्धि  
पुनरावलोकन





## Day Two

### OA-4: Recap of 1<sup>st</sup> Day



#### Time

<b>Service Provider Training</b>	30 Minutes
<b>Training of Trainers</b>	30 Minutes



#### Objectives of Activity

Enforce trainee about the recalling of content deliver previous day

1. Status Learn the contents of first day
2. Review, recall and reinforce of content delivered previous day



#### Design of Implementation

##### Methods

- Question answer and quiz
- True or False and Short question

##### Materials needed

- Questionnaire sheet
- Clock



#### Introduction:

A review is done to evaluate the existing knowledge of the participants which then helps facilitators gauge the depth of knowledge and information to be delivered during the training. The test involves quiz type question answer and short question as necessary or true/false questions to assess basic knowledge that must to know based on the content delivered previous day. It should preferably cover all important chapters to be discussed during the session.



#### Trainer Instruction

##### Related to Summary

1. Trainer already nominate person or trainer his/her self could ask the question.
2. Trainer should facilitate to recall summary in case of wrong answer, confusion or anything about unclear
3. Use the review question of 1<sup>st</sup> day review from annex



# Session -3.1

## Prevention and Management of CVD in PHC Setting



### Time

**Service Provider Training** 75 Minutes

**Training of Trainers** 90 Minutes



### Learning Objectives

By the end of session, trainee will able to explain

1. Identify Hypertension and describe its management
2. Identify Coronary disease, Stroke and other CVD and describe its management (identification preliminary sign and symptoms, screening, diagnosis, prevention and emergency management)



### Design of Implementation

#### Methods

- Brain storming
- Presentation with mini lecture
- Group discussion
- Question answer

#### Materials needed

- Power point slides and presenter's note
- Trainer's guidebook & Trainee's Manual
- Video clips, job aids
- Meta cards, newsprint
- Laptop and Projector,



### Advanced Preparation

- Arrangement (Class room, group discussion instruction)
- Ensure the availability of above mentioned materials/resources preparation
- Ensure speaker and software that addressed your video clips.

START  
UP



### Start Up Session

Introduce the Session and Session objectives with training methodology and contents to be taught (1 to 2 minutes)



## Activity Instruction



### Activity 1: Brain storming and discussion about CVD and hypertension : (10 min)

**Step 1:** Ask the participants whether

- Any of them or their family members is/was hypertensive

**Step 2:** Ask 1 or 2 of them to share their experience with prior consent

*(Share their experience on what clinical features they had, what lifestyle modifications they are following, what drugs they are taking and what complications they had or they could face. Ask other learners to assist them.)*

- Ask one of the facilitators to write what the participants have answered on a Flip chart.



### Activity 2: Continue Discuss the following content through interactive power point presentation on Hypertension (20 min)

- Case scenario (mentioned in the PPT)
- Definition of HTN
- Basic Pathophysiology  (video no 3.1 'a')
- Clinical features
- Diagnosis
- Treatment modalities
- Complications
- Hypertension with special condition.
- Cholesterol  (video no 3.1 'b')

**Note:**

- (During the presentation paraphrase on what the learners had answered earlier on a flipchart.)
- Discuss about the case scenario. (Paraphrase on the points mentioned earlier by the learners.)
- Ask questions (mentioned in the PPT and handbook) on the basis of the case scenario.

Summarize the key messages and address any concerns the participants may have



**Tell participants to carefully read the content in Trainee's manual. If there are need any points for clarification.**

---



### **Activity 3: Brain storming and discussion about CVD and hypertension : (10 min)**

**Step 1:** Ask the participants whether

- They have come across CVDs at home or in health facilities.
- What types of CVDs they have seen in their settings
- Could share how they manage

**Step 1:** Co-Trainer to write down what the participants have said on a flip chart and related answer during the presentation

---



### **Activity 4: Continue Discuss the following content through interactive power point presentation on (30 min)**

- Definition of CHD (MI) & Stroke
- Clinical features and Complications
- Diagnosis
- Emergency management of Complications (MI, Stroke, Hypertensive urgency/emergency)

**Note:**

- (During the presentation paraphrase on what the learners had answered earlier on a flipchart.)
- Discuss about the case scenario. (Paraphrase on the points mentioned earlier by the learners.)
- Ask questions (based on PPT) on the basis of the case scenario.



**Tell participants to carefully read the content in Trainee's manual. If there are need any points for clarification.**

---

### **Summarize**

Session with key messages on CVD, hypertension, MI and Stroke



- Praise all the learners for their efforts.
-



## *Refreshment (Time: 15 min)*

### **5 minute Exercise**

#### **Name of Exercise: Calf raises**

1. Stand with feet shoulder width apart behind the back of the chair, placing the hand on the chair for stability.
2. Raise heels off the ground, placing weight on the big toes.
3. Hold this stance for five to 10 seconds.
4. Finish by returning your feet flat to the ground.
5. Repeat this exercise five to 10 times.



**Start tea after completing exercise**



*Tea Break*

*(10 Minutes)*



## Session -3.2

### Prevention and Management of Diabetes in PHC Setting



#### Time

**Service Provider Training** 75 Minutes

**Training of Trainers** 90 Minutes

---



#### Learning Objectives

By the end of session, trainee will able to explain

1. Identify the diabetes and its management (identification preliminary sign and symptoms, screening, diagnosis, prevention and emergency management)
  2. Assessment and take care of food of diabetic patients
- 



#### Design of Implementation

##### Methods

- Brain storming
- Presentation with mini lecture
- Group discussion
- Question answer

##### Materials needed

- Power point slides and presenter's note
  - Trainer's guidebook & Trainee's Manual
  - Video clips, job aids
  - Meta cards, newsprint
  - Laptop and Projector,
- 



#### Advanced Preparation

- Arrangement (Class room, group discussion instruction)
  - Ensure the availability of above mentioned materials/resources preparation
  - Ensure speaker and software that addressed your video clips.
-



START  
UP



## Start Up Session

Introduce the Session and Session objectives with training methodology and contents to be taught (1 to 2 minutes)



## Activity Instruction



### Activity 1: Brain storming and discussion diabetes : (10 min)

**Step 1:** Ask the participants whether

- Any of them or their family members is/was diabetic or pre diabetic

**Step 2:** Ask 1 or 2 of them to share their experience with prior consent

*(Share their experience on what clinical features they had, what lifestyle modifications they are following, what drugs they are taking and what complications they had or they could face. Ask other learners to assist them.)*

- Ask one of the facilitators to write what the participants have answered on a Flip chart.

### Activity 2: Continue Discuss the following content through interactive power point presentation on (20 min)



**Step 1:** Case scenario (mentioned in the PPT)-**Interactive Discussion**

- If you were the health-care provider, what would you do to establish her diagnosis?
- If the same patient lived and presented at the nearest hospital, would the steps for confirming the diagnosis differ? Explain.



**Step 1:** Followed by presentation with Interactive Dissuasion

- Definition and pathophysiology of Diabetes  (Video no 3.2 'a')
- Types
- Risk Factors
- Clinical features



- Complications
- Co-morbid condition
- Diagnosis
- Foot care  (Video no 3.2 'b')
- Prevention, Control and Treatment modalities

**Note:**

- (During the presentation paraphrase on what the learners had answered earlier on a flipchart.)
- Discuss about the case scenario. (Paraphrase on the points mentioned earlier by the learners.)
- Ask questions (mentioned in the PPT and handbook) on the basis of the case scenario.



**Tell participants to carefully read the content in Trainee's manual. If there are need any points for clarification.**

---

**Summarize**

Session with key messages on CVD, hypertension, MI and Stroke



- Praise all the learners for their efforts.
-



## Session -3.3

### Management of Hypertension, CVD and Diabetes through CVD Risk Estimation at PHC Setting



#### Time

**Service Provider Training** 60 Minutes

**Training of Trainers** 60 Minutes



#### Learning Objectives

By the end of session, trainee will able to explain

1. Describe the rational of using the **WHO/ISH risk prediction charts** for CVD risk assessment
2. Estimate CVD risk assessment using WHO/ISH risk prediction chart
3. Interpret the meaning of a “**10 YEAR RISK**” of a cardiovascular event.



#### Design of Implementation

##### Methods

- Brain storming
- Presentation with mini lecture
- Group discussion
- Question answer

##### Materials needed

- Power point slides and presenter’s note
- Trainer’s guidebook & Trainee’s Manual
- WHO/ISH risk chart
- Newsprint
- Laptop and Projector,



#### Advanced Preparation

- Arrangement (Class room, group discussion instruction)
- Ensure the availability of above mentioned materials/resources preparation
- Ensure availability of risk prediction chart (Colour) and using flow algorithm



START  
UP



## Start Up Session

Introduce the Session and Session objectives with training methodology and contents to be taught (1 to 2 minutes)



## Activity Instruction

---



### Activity 1: Brain storming and discussion about WHO/ISH CVD risk prediction chart : (10 min)

**Step 1:** Ask the participants whether

- Ask the participants if any of them is familiar with CVD risk assessment

**Step 2:** questioning

- Present 2 case scenarios (In PPT slide)
- Allow participants to read the scenario. Now, ask them that they have the resources to manage only one of the scenarios. Which one would they choose and why?

**Step 3:** Record responses on the Newsprint.

- Tell the learners that there would be discussion about these two case scenarios after the presentation on how to use the WHO/ISH Risk scoring chart.

**Step 4:** Distribute the Risk prediction charts and flow charts to each learner.

---



### Activity 2: Tell the participants they will be having an Interactive presentation to learn about the total risk approach on the basis of risk prediction chart. The Power Point will have following contents: (20 min)

- Types of charts
  - Parameters used for plotting on the chart
  - Process of using chart
  - When to use the chart.
  - When not to use the chart.
-



- Limitations of the chart

**Note:**

- Discuss about the case scenario. (Paraphrase on the points mentioned earlier by the learners.)
- Ask questions (mentioned in the PPT and handbook) on the basis of the case scenario. Make more clear about any confusion

**Summarize the key messages and address any concerns the participants may have.**



---

**Activity 3 : Estimate CVD risk assessment using WHO/ISH risk prediction chart: (30 min)**

**Step 1:** Divide the participants in 5 groups; Assign one facilitator to each group.

**Step 2:** Make sure every participant has the Flow chart and the WHO /ISH risk prediction chart.

**Step 3:** Take the learners back to the two scenarios discussed earlier. (Session 3.3 Trainee's manual). Project the slide with those case scenarios.

**Step 4:** The facilitators will now plot those cases in the risk prediction chart. The learners will follow the facilitators with the help of given flowchart. Repeat the activity again.

**Step 5:** Now ask the learners to decide whether their previous decision was correct or not. Provide them a message that we need a total risk based approach on the basis of prediction charts while making a clinical decision.

**Step 6:** Exercise based on cases



- Tell the learners to turn (Session 3.3 Trainee's manual) and tell them to practice on those cases. The learners will practice these cases under the guidance of facilitators. Remind them about using the flowchart.
- Make sure every participant is able to use the chart correctly. If anyone is having any confusion, assist them.



---

**Step 7:** Ask the learners to turn on page.....of the handbook and discuss about the limitations of the prediction chart. In spite of having limitations, emphasize again on the importance of prediction chart for total risk estimation.

**Note:**

Tell the participants that risk estimation is most important for managing the patients as per PEN protocol 1.

Make sure all the learners are able to use the risk prediction charts correctly. If anyone having confusion about the risk charts, clarify it



**Tell participants to carefully read the content in Trainee's manual. If there are need any points for clarification on risk prediction chart.**

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**Activity 3: Estimate Ask the participants what does '10 year risk' of a cardiovascular event mean. (10 min)**

**Step 1:** Discuss based on the answer of the participants, for interpreting the meaning of a 10 year risk of a Cardiovascular event, tell the participants that they will learn how to interpret the meaning of risk percentage as obtained from the chart. Use example of the case done earlier and explain the meaning of 10 year risk.

**Step 2:** Repeat the interpretation as per the learners' needs.



- Ask learners to revise the cases done earlier (handbook page no...)
- Provide them time for interpretation of the meaning of risk percentage.

**Step 3:** Choose 2 learners to come forward from each group. Ask them to interpret the meaning individually. The Trainer should be sure that the learner is not missing any key messages.

- Ask the audience to give feedback about the interpretations.

**Note:**

Make sure each participant is able to interpret CVD risk correctly. If anyone is having any confusion, assist them.

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**Summarize**

Session with key messages on CVD risk meaning, importance, estimation and interpretation.

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Praise all the learners for their efforts.

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## Case Studies

१. ५० वर्षकी कल्पना (स्त्री), चुरोट नखाने, मधुमेह नभएकी जसको SBP 170 mm Hg र Blood Cholesterol 6.5 mmol/l छ, उनको लागि कुन Risk prediction chart प्रयोग गर्नु हुन्छ ? उनको fatal or non fatal heart attack or stroke ज्यान जान सक्ने खालको (हृदयघात वा मस्तिष्कघात) हुन सक्ने जोखिम कति छ ?
२. ७२ वर्षको कृष्ण (पुरुष) लाई ५ वर्ष अगाडि मस्तिष्कघात भएको थियो तर अहिले सामान्य दिनचर्चा विताउँदै छन् ? उनलाई Cardiovascular event को जोखिम कति छ ? के हामीले उनको जोखिम निर्धारण गर्न Risk prediction chart प्रयोग गर्नु पर्दछ ?
३. विगत १५ वर्षदेखि नियमित धुम्रपान गर्ने ४५ वर्षको पुरुष जसको SBP 132/76 mmHg र Blood sugar 88 mg/dl छ । उनको fatal or non fatal heart attack or stroke ज्यान जान सक्ने खालको (हृदयघात वा मस्तिष्कघात) हुन सक्ने जोखिम कति छ ?
४. ५६ वर्षीय महिला जो स्वास्थ्य संस्थामा आउंदा SBP 150/110 mm Kg र Blood sugar 80mg/dl छ । उनको fatal or non fatal heart attack or stroke ज्यान जान सक्ने खालको (हृदयघात वा मस्तिष्कघात) हुन सक्ने जोखिम कति छ ?
५. विगत ३ वर्ष देखि मधुमेहको उपचार गराई रहेका ३७ वर्षीय पुरुष जसको कम्मरको मोटाई ११० से.मि. छ । उनको fatal or non fatal heart attack or stroke ज्यान जान सक्ने खालको (हृदयघात वा मस्तिष्कघात) हुन सक्ने जोखिम कति छ ?
६. विगतमा धुम्रपान गर्ने ६५ वर्षीय पुरुष जसलाई मधुमेह र उच्च रक्तचाप छैन । उनको fatal or non fatal heart attack or stroke ज्यान जान सक्ने खालको (हृदयघात वा मस्तिष्कघात) हुन सक्ने जोखिम कति छ ?



## Trainer's explanatory notes

Further Reading for Trainer

### Related to CVD Risk estimation

#### (A) Special Instruction while taking session on CVD estimation

1. What could do if the patients has cholesterol report before 4 to 5 month, but he could not tested currently due to unavailability of lab services

Use cholesterol reading if	Not use that readings (Use 5.2 mmol)
<ol style="list-style-type: none"> <li>1. If he has not taken any cholesterol lowering drug</li> <li>2. If he/she did not positively change his life style behaviour (i.e. remain same risk behavior)</li> <li>3. If he/she has suffered from established DM or other CVD (Like stroke, MI or kidney disease/nephropathy)</li> <li>4. If patient is direct supervise or under follow up with consultant cardiologist or physician</li> </ol>	<ol style="list-style-type: none"> <li>1. If patient taking the medicine like statin</li> <li>2. If patients seriously modification his life style and feeding behavior (i.e. remarkably decrease risk behavior)</li> <li>3. If he/she has not any established DM with nephropathy and CVD disease like stroke/MI/kidney disease/</li> </ol>

**Note:** Refer or strongly recommendation for further laboratory check cholesterol and then again call for CVD risk estimation

2. What could do if the patients have borderline BP during measurement as per instruction of BP check to identify the hypertension

Use upper limit if he has high risk behavior and other risk indicator (age, 1<sup>st</sup> generation CVD history or established DM or CVD disease like stroke/MI or kidney disease) otherwise take lower limit

**Note:** Be ensure the validity and reliability of BP measurement



## **(B) Frequently asked questions on use of country-specific WHO CVD risk charts**

### **1. What are CVD risk prediction charts?**

The risk of an individual having a heart attack or a stroke depends on risk factors such as age, sex, smoking status and levels of blood pressure, blood cholesterol and blood glucose. The risk prediction charts provide a simple way of calculating the approximate combined risk due to all these risk factors. It is expressed as a 10-year risk of developing a heart attack or stroke.

### **2. How were the WHO CVD risk prediction charts developed?**

The charts were developed by developing country-specific risk equations based on the average risk factor profile (average rates of blood pressure, blood cholesterol etc.) and rates of cardiovascular events (average rates of heart attacks and strokes) in the population. The risks of non-fatal and fatal heart attack and non-fatal and fatal stroke were modelled and combined to predict individual risk.

### **3. How can these charts be used to improve the effectiveness of CVD risk management?**

Using these risk prediction charts, an individual can be classified as being at high, intermediate or low risk for heart attack or stroke in the following 10 years. If an individual has high CVD risk, the guidelines recommend more intensive counseling and treatment, often including medications. This is because it is urgent to lower the individual's risk in order to prevent a heart attack or stroke. On the other hand, if risk is low, interventions may be less intensive, such as general counseling for healthy lifestyle.

### **4. Why were the charts updated?**

Data on risk factor prevalence and cardiovascular mortality changes over time. Thus, if the charts are not updated, they may no longer reflect a country's current risk status. Furthermore, given the country-to-country variation within each of the 14 WHO epidemiological sub-regions on the previous set of charts used, 4 country-specific rather than regional charts were developed in the update in order to increase accuracy.

### **5. How will these guidelines and charts help low- and middle-income countries in particular?**

The main problem in low- and middle-income countries is the shortage of health care resources. Nonetheless, even with limited resources, effective action can be taken to prevent heart attacks and strokes if resources are used for population-wide, cost-effective interventions, targeting those who are in imminent danger of heart attack or stroke.



## **6. Why is treating risk factors such as raised blood pressure and blood lipids cost effective for low-and middle-income countries but only if interventions target high-risk individuals?**

Currently, individuals are often treated based on the presence or absence of a single CVD risk factor such as high blood pressure or high blood lipids. This approach works when these risk factors are markedly elevated. Otherwise, although the approach appears simple, it can result in committing a patient with only a small CVD risk to many years of drug therapy or, conversely, neglecting to treat those with an overall higher risk. Further, the single risk factor approach does not take into account the continuous relationship between blood pressure, blood glucose, blood cholesterol and CVD risk.

The single risk factor approach is not cost effective or affordable for many low- and middle-income countries, and patients from lower socioeconomic categories. For example, in a hypothetical population of 1 billion (about 500 million adults) with a 20% prevalence of hypertension, about 100 million people will require treatment. If the annual cost of providing treatment is a modest US\$ 20 per person per year, about US\$ 2 billion will be required annually to provide medicines for hypertension alone. In reality, the prevalence of hypertension as well as the cost of drugs to treat it is often even higher.

## **7. What are the limitations of these charts?**

Due to paucity of data, estimates from several cohort studies have been used to determine CVD incidence and mortality. Thus it is possible that in some areas, CVD risk may be over- or underestimated.

## **8. Are the alternative BMI charts only for use when cholesterol cannot be measured?**

The alternative BMI charts are meant to be used only in settings where assay of cholesterol is not possible. These charts are less accurate than those used when information about a patient's cholesterol is available. Nonetheless, they provide an option for classifying a patient based on their risk of having a heart attack or stroke. The charts can be used as a screening tool for identifying individuals who require further investigations.

## **9. If the charts are not perfect, is it safe to use them?**

While the charts are not perfect because of the paucity (quantity and quality) of data available, they are safe to use for the purpose of broad risk stratification that will guide risk management.

## **10. When can treatment decisions be made without the charts?**

These charts may underestimate the risk in certain patients such as those with:



- persistently raised blood pressure  $\geq 160/100$  mmHg; or
- blood cholesterol  $\geq 8$  mmol/l; or
- established ischemic heart disease; or
- Diabetes with renal disease.

All patients in these categories need intensive lifestyle interventions and appropriate drug therapy. They do not need risk stratification using charts for treatment decisions.

### **11. What are WHO's recommendations for individuals who want to decrease their risk of CVD?**

Stop tobacco use. Maintain a healthy body weight through daily physical activity and a healthy diet, including a regular intake of fruits and vegetables. Maintain healthy blood pressure, blood glucose and blood cholesterol levels according to medical advice. If medicines have been recommended, take them as prescribed by a health-care worker.

#### **Additional reading resources**

*Prevention of cardiovascular disease: guidelines for assessment and management of total cardiovascular risk. World Health Organization, 2007.*

## **Refreshment (Time: 45 min)**

### **5 minute Exercise**

#### **Name of Exercise: Tree pose**

1. Begin by standing with arms at the sides.
2. Shift your weight onto the left leg, and put the sole of the right foot on the left thigh.
3. Keep the hips forward and bring the hands to the front into a prayer position with the palms together.
4. Slowly extend the arms above the shoulders, keeping the palms separate and facing one another.
5. Stay in the pose for 30 seconds, lower the arms and right leg, and repeat on the other side.



**Start lunch after completing exercise**



*Lunch Break (40 Minutes)*

## Session -3.4 Nepal PEN Protocol 1

Prevention of Heart Attack, Strokes and Kidney Disease through Integrated Management of Diabetes and Hypertension



**Time**

**Service Provider Training** 60 Minutes

**Training of Trainers** 60 Minutes



### Learning Objectives

By the end of session, trainee will able to

1. Use PEN Protocol-I for integrated management of Hypertension (HTN)& Diabetes (DM) at primary health care setting



### Design of Implementation

#### Methods

- Brain storming
- Presentation with mini lecture
- Group discussion
- Question answer

#### Materials needed

- Power point slides and presenter's note
- Trainer's guide & Trainee's Manual
- Newsprint
- Laptop and Projector,



### Advanced Preparation

- Arrangement (Class room, group discussion instruction)
- Ensure the availability of above mentioned materials/resources preparation
- Ensure availability of Nepal PEN Protocol 1



## Start Up Session

Introduce the Session and Session objectives with training methodology and contents to be taught (1 to 2 minutes)



## Activity Instruction

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### Activity 1: Brain storming and discussion about WHO/ISH CVD risk prediction chart : (10 min)

**Step 1:** Ask the participants to share

- Their experience of managing hypertension, CVD, Stroke and other diseases in their health facility.

**Step 2:** Tell the learners that they are going to learn about PEN Protocol Present 1 and when it could be used (In PPT slide)

---



### Activity 2: Tell the participants to open their Handbook and follow the Facilitator step by step. Clarify that they must go from Action 1 to Action 5 step by step

Facilitate by trainer to learn effectively PEN Protocol 1 with an Interactive presentation. The Power Point will have following contents: (20 min)

- Protocol 1

**Note:**

- Discuss about the case scenario. (Paraphrase on the points mentioned earlier by the learners.)

**For Protocol (Health Post level along with session while for PHCC level in annex 1 of trainee's manual)**

#### **ACTION 1: ASK ABOUT**

1. Tell learners that they will open their handbook and turn the Protocol 1
-



2. Clarify the learners that they must ask all the questions to their clients as per ACTION:1 of PEN Protocol- I
3. Discuss the steps of Box 1 PEN protocol 1
4. Clarify any doubts the learners may have.

## **ACTION 2: ASSESS**

1. Tell the learners that they will now learn about how to assess their clients. (box 2)
  2. Tell your learners while assessing the clients, following parameters should be measured in order: Waist circumference, Blood pressure, Urine sugar, Blood sugar and urinary proteins.
  3. Ask the learners to turn the PEN protocol 1 for Health post.
  4. Ask the learners to read out the points in Assess Box turn by turn.
  5. Now step by step discuss about the parameters that are to be measured:
    - a. **Waist circumference:** Ask the learners to recall their session on measurement and significance waist circumference. Clarify any queries.
    - b. **Blood pressure:** Ask the learners to recall their session on Blood pressure. Ask the learners if they are confident on measuring BP correctly. Clarify any queries.
    - c. **Urine sugar:** Ask the learners to recall their session on using dipsticks to measure Urine sugar. Ask them whether they can correctly use dipsticks.
    - d. **Blood sugar:** Ask the learners to recall their session on using glucometer to measure Blood sugar. Ask them to read out the point no. 4 and 5 about the criteria when to measure blood sugar with glucometer.
    - e. **Urine Protein:** Ask the learners to recall their session on using dipsticks to measure Urine Protein. Ask them whether they can correctly use dipsticks.
  6. Now tell the learners to recall their session on DM. Ask them about the diagnostic criteria of DM. tell them to read point no. 7 of Assess box.
  7. Tell the learners to recall about foot complications and foot care in a case of DM.
  8. Tell them that in established DM cases, always examine the pulsations, sensations and any ulcerations in the foot. Recall the methods of foot examination from earlier session (3.2).
  9. If the learners have queries about any skill, use the videos (3.2'b') used in session 3.2 to clarify the queries.
-



10. Tell the learners that although the protocol seems difficult initially, after repeated use of protocols in their settings, they will be confident.
11. Also tell them that they do not need to memorize the protocols. They will be provided with flip charts of the protocols in their OPDs. Show them the Flipchart that will be provided in their OPDs.

**Summarize with key message that each and every steps should be followed one by one of this box**

### **ACTION 3: ESTIMATE THE CARDIOVASCULAR RISK**

1. After assessment of the patients, tell learners that they will have to use the WHO/ISH risk prediction chart for estimation of risk.
2. Recall the session 3.3 on the steps to use the prediction chart.
3. Ask the participants about the parameters used in the prediction chart
4. Tell them to read the flowchart about how to use the chart.
5. Recall from session 3.3 about the conditions where the chart is not used.
6. Clarify any queries the learners may have.

### **ACTION 4: REFERRAL CRITERIA FOR ALL VISITS**

1. Tell the learners now based on the assessment and estimation of risk above, we will be learning about different referral criteria.
2. Ask the learners to turn the page no..... of handbook. Ask the learners to read out the different referral criteria mentioned in box no. 4.
3. Clarify them that PEN does not addresses emergency conditions.
4. Recall the previous session about emergency management of complications of HTN and DM (session 3.1 and 3.2)
5. Again emphasize that they need to remember only the urgent referral criteria Box no. 4 point 1. They don't need to memorize other referral criteria. They will be provided with flip charts of the protocols and referral criteria in their OPDs. Show them the Flipchart that will be provided in their OPDs.

**Summarize the sessions with the key messages and clarify any queries learners may have.**

6. After the end of Action 4, tell the participants from health posts that they are not the final prescribers. They have right immediate management and prescription of first line drug of HTN and DM.

**Note:**

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Before prescribing, the patient needs laboratory assessment (cholesterol, Renal functions tests, and Liver functions tests) and other physical examinations from a doctor,

- So the patients should be referred as recommended by protocol 1 for HP to a nearby PHC/District hospital.
- While for PHCC also manage as per protocol recommended

### **ACTION : 5 COUNSEL**

- Tell the learners that they are going to the most important part of the action sequence.
- Tell the learners to follow the steps as per the protocol
- Ask the learners to recall the CVD risk grading and management/treatment as per CVD risk grading
- Manage the diabetes patients additionally (Additional actions)
- Tell the learners about counseling on especial diet give enforce to diabetic patients and they must give advice about it to their clients and their family members.
- Tell the learners about advise to be given to under the general advise and clinical advise

### **Note:**

Tell the participants to do repeat every steps/activities in successive visit of that patients as per follow up period.



**Tell participants to carefully read the content in Trainee's manual. If there are need any points for clarification.**

---

### **Summarize**

Session with key messages on Protocol 1



Praise all the learners for their efforts.

---



# Session -3.5

## Nepal PEN Protocol 2

Prevention of Heart Attack, Strokes and Kidney Disease through Integrated Management of Diabetes and Hypertension



### Time

<b>Service Provider Training</b>	60 Minutes
<b>Training of Trainers</b>	60 Minutes



### Learning Objectives

By the end of session, trainee will able to

2. Use PEN Protocol-I for integrated management of Hypertension (HTN)& Diabetes (DM) at primary health care setting



### Design of Implementation

#### Methods

- Brain storming
- Presentation with mini lecture
- Group discussion
- Question answer

#### Materials needed

- Power point slides and presenter's note
- Trainer's guide & Trainee's Manual
- Newsprint
- Laptop and Projector,



### Advanced Preparation

- Arrangement (Class room, group discussion instruction)
- Ensure the availability of above mentioned materials/resources preparation
- Ensure availability of Nepal PEN Protocol 1

START  
UP



### Start Up Session

Introduce the Session and Session objectives with training methodology and contents to be taught (1 to 2 minutes)



## Activity Instruction

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### Activity 1: Brain storming and discussion (10 min)

**Step 1:** Ask any participants in random about

1. What do they understand by Healthy Behaviours in general? List some of them.
2. Is Health Education & Health Counseling same or different? How?

**Step 2:** Tell the participants that they are going to learn about PEN Protocol II unlike other protocols being disease & patient oriented. it is rather patient as well as community oriented.

1. Paraphrase them the importance of Health Education & Counseling
2. Make them clear that it must be followed in other aspects of our treatment
3. Tell participants that they must be crystal clear about the messages they convey regarding Healthy Behaviour

#### Note:

Trainers must prepare a long message and whisper in the ear of any one participants. The same participants whisper in other ear & the whole chain continues at last the remaining participant will tell loud the message in front of everyone. Ask that participants who started this chain message whether it matches the message or not compare.



### Activity 2: Brain storming and discussion (10 min)

**Now tell participants that they will follow the 5 Blocks of Protocol II stepwise given in their manual page no.....**

#### 1<sup>st</sup> Block : Take Regular Physical Activity

1. Ask the learners to recall their session on Physical Activity.
  2. Ask them about WHO recommended criteria for physical activity.
  3. Paraphrase them with the core content of the block:
  4. Clarify any queries
-



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## 2<sup>nd</sup> Block : Eat a “ Heart Healthy” Diet

1. Ask the learners to recall their session on Healthy Diet.
2. Ask them about WHO recommended criteria for Healthy Diet.
3. Paraphrase them with the core content of the block.
4. For salt quantity calculation:
  - Ask them about WHO recommendation.
  - Then ask them about the numbers of members in their family.
  - Calculate daily consumption : WHO recommended(5 gm) X no. of family members
  - 1 standard packet of iodized salt is of 1000gm divide this with the daily consumption of the family
  - Tell them that a 1000gm of iodized salt must run for that much day, not more or less
5. Also tell the participants home grown and locally available fruits must be given preference
6. Fish is better than meat but it should be made by using less oil & spices
7. Emphasis on Avoidance of junk foods
8. Avoid products made from trans-fat as much as possible
9. Clarify any queries

## 3<sup>rd</sup> Block: Stop Tobacco and Avoid Use of Alcohol

1. Ask the learners to recall their session on Cessation of Tobacco Products & Avoidance of Alcohol Use
2. Encourage all non-smokers not to start smoking and other forms of tobacco & People should not be advised to start taking alcohol for health reasons
3. Ask any participants to read the content
4. Paraphrase the content of the block.
5. Clarify any query

## 4<sup>th</sup> Block: Adherence to Treatment

### Icebreaking the participants:

1. Ask participants to reply by raising their hands.
-



- 
- How many of them have taken a full course of medicine for any common disease like diarrhea / UTI etc?
  - Ask them what made them to complete or halt their treatment regimen?
  - Make a statement: they themselves being Medical Professionals could not follow the regimen how can we expect the patients to follow the regimen.
  - Ask them what may be reason
  - Emphasis on poor counseling given during their medication distribution

**Note:**

These NCDs need lifelong medications so they must be given ample time & counseling on why they should not stop taking medication. Also emphasis that they cannot stop taking medication just they feel alright and on advice of any other health professionals who may not know their medical profile

Give examples of ATT regimen & ALT regimen as patients follow them without any doubt because they are counseled well and given ample amount of time. Thus similar approach must be applied during the NCDs Health education & counseling

Clarify if any query

**5th Block : Attend Regular Medical Follow-up**

1. Ice breaking: Ask participants in random:
  - How many patients come for medical Follow-up on their allocated time?
  - Ask them for their shortcomings?
  - Ask them to compare this trends with the patients on ART or ATT.
2. Emphasis them the importance of regular medical follow up is as important in the NCDs as in other diseases like ART or ATT.
  - Ask one participants to read the content of the block
  - Paraphrase the contents
  - Clarify any query
3. Emphasis importance on Adherence to Treatment & Regular Medical Follow-up
4. Clear any raised confusion and applaud the participants

**Note:**

Motivate participants to share this information (Protocol II) to other families member, relatives, neighbors, friends and other community members about healthy diet, healthy life style behavior and early screening and treatment.

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### Summarize

Session with key messages on Protocol 2



Praise all the learners for their efforts.

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## OA-5: Summary of Day



### Time

<b>Service Provider Training</b>	15 Minutes
<b>Training of Trainers</b>	15 Minutes

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### Objectives of Activity

Ensure that the trainee are

1. Learn the contents of second day and remind for next day activities
- 



### Design of Implementation

#### Methods

- Summary telling from reporter of day

#### Materials needed

- Not specific
- 

### Introduction:

Summary is done to evaluate the acquiring knowledge of the participants which then helps facilitators gauge the process, way and modalities to be changed or improved for next day for improving interest or continuation of trainee's willingness to learn. If any confusion then immediately could revise, retelling and give more emphasis to recall in next day review session. It should cover all important chapters to be discussed during the session.



### Trainer Instruction

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### Related to Summary

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1. Trainer already (Before starting of session of 1<sup>st</sup> day) nominate the reporter of day or could choose randomly for telling the summary of learning (must to know rather than good to know). Trainer should facilitate to summary session only based on content not the name of trainer, objectives process, refreshment time etc.
2. If still any confusion, tell to participants to read the Trainee's book and make more clear on day 3 at review session



**Instruct clearly** to participants the activities, or any reading for next day

## Day Three

### OA-6: Recap of 2<sup>nd</sup> Day



#### Time

<b>Service Provider Training</b>	30 Minutes
<b>Training of Trainers</b>	30 Minutes



#### Objectives of Activity

Enforce trainee about the recalling of content deliver previous day

3. Status Learn the contents of first day
4. Review, recall and reinforce of content delivered previous day



#### Design of Implementation

##### Methods

- Question answer and quiz
- True or False and Short question

##### Materials needed

- Questionnaire sheet
- Clock



#### Introduction:

A review is done to evaluate the existing knowledge of the participants which then helps facilitators gauge the depth of knowledge and information to be delivered during the training. The test involves quiz type question answer and short question as necessary or true/false questions to assess basic knowledge that must to know based on the content delivered previous day. It should preferably cover all important chapters to be discussed during the session.



## Trainer Instruction

### Related to Summary

4. Trainer already nominate person or trainer his/her self could ask the question.
5. Trainer should facilitate to recall summary in case of wrong answer, confusion or anything about unclear
6. Use the review question of 2<sup>nd</sup> day review from annex

# Session -3.6

## Instrumentation based on PEN Protocol 1



### Time

**Service Provider  
Training**

60 Minutes

**Training of Trainers**

60 Minutes



### Learning Objectives

By the end of session, trainee will able to

1. Use instruments related to PEN Protocol-I for integrated management of Hypertension (HTN)& Diabetes (DM) at primary health care setting



### Design of Implementation

#### Methods

- Brain storming
- Presentation with mini lecture
- Group discussion
- Question answer

#### Materials needed

- Power point slides and presenter's note
- Trainer's guidebook & Trainee's Manual
- Laptop and Projector,
- Audio-Visual Aids
- BP instrument(set)
- Non-tensile, non-elastic measuring tape



- Stadiometer
- Weighing scale
- Glucometer set with glucose strips
- BMI charts
- Instrument Checklists (printed)
- Printed form (to write their results from stations)
- Markers, newsprint, Meta-cards/sticky note



## Advanced Preparation

### Advance Presentation:

- Stations( facilitator must create 5 stations)
  - 5 tables must be kept at the proper distance from each other's
    - Station 1:** BP station
    - Station 2 :** Glucometer station
    - Station 3:** Waist circumference station
    - Station 4:** BMI station
    - Station 5 :** Urine dip stick test station
  - Appoint a facilitator for each stations
- Print checklist given at trainer's guide and paste them corresponding to their stations
- Disposable box must be kept
- Print the below given form & distribute among participants and ask them to fill these forms & submit after completion to the facilitators:

Age:	Sex:	Weight (kg) :
Blood pressure(mmhg ) :		Height (m) :
Waist Circumference(cm) :		BMI(kg/m <sup>2</sup> ) :
Blood Glucose level(mg/dl) :		10 yrs. CVD risk estimation
Urine protein :		(use WHO/ISH chart) :
Urine ketone :		

- Ensure above mentioned materials/resources preparation under design of implementation



### **Start Up Session**

Introduce the Session and Session objectives with training methodology and contents to be taught (1 to 2 minutes)



### **Activity Instruction**



#### **Activity 1: Brainstorm, by asking the trainee (5 min)**

- What are the important instruments & diagnostics tools that are used to diagnose the CVDs & DM?
- Among them what tools are available at their HFs?

#### **Note :**

Request to responses on a flip chart.

Present the slides containing list of important instruments & diagnostics tools that are used to diagnose the CVDs & DM at PHC level



#### **Activity 2: Presentation and Instruction**

**Step 1:** Show them AV aids about the all instruments

- a. Video 3.6 'a' about BP measurement



- 
- b. Video 3.6 'b' about Glucometer test
  - c. Video 3.6 'c' about Urine protein and urine ketone
  - d. Video 3.6 'd' about waist circumference

**Step 2:** Divide the trainees into 5 groups & assign them a station

**Step 3:** Tell them that after their completion at the stations they must approach another station

**Step 4:** Facilitator assigned to each station will look after their trainees

1. Trainees must follow the checklist given at their trainees book as task assigned at their station
2. Facilitator must dictate all the steps of the station wise checklist before the beginning of the practicum
3. All the participants must follow those checklist step wise they all must do those exercise & observe others to correct and gain more experience
4. They must not put their individual findings in their given form

**After each participants had completed the task**

1. Praise all the learners for their efforts.
2. And ask them to move to next stations and the facilitators must welcome another group
3. Continue this process till all the trainees had been through all those stations
4. Clear any doubt & make sure they have perfect knowledge about the use of these instruments
5. Follow these instructions at all stations:



## **Station1: BP Station**

1. Tell trainees to open the checklist section given in their book
  2. Trainer must dictate the BP measuring checklist and clarify and confusions
  3. Now a trainer will demonstrate the correct way of measuring BP on any one trainee. Ask other trainee to follow their checklist and note the missing steps and later on compare the results with the checklist.
  4. Divide the trainees into pairs. Ask the trainees to perform the procedure with their pair as per the checklist. The other pairs will monitor & evaluate whether checklist is being followed or not.
-



5. After completion of each pair ask other pairs for feedbacks whether any steps were missed or not.
6. Make sure every trainee is able to correctly measure BP.
7. Repeat the activity if necessary.
8. Make them note their measurement in given form.
9. Summary the key points clarify any queries the learners may have.
10. Praises the trainees for their efforts



## Station 2 : Glucometer Station

1. Tell the trainees they will follow the steps as shown in the AV aid and will follow the checklist
2. Tell trainees to open the checklist section given in their book
3. Trainer must dictate the Glucometer using checklist and clarify any confusion
4. Tell the learners that this is an invasive procedure.
5. Now a trainer will demonstrate the correct way of using glucometer on any one trainee. Ask other trainee to follow their checklist and note the missing steps and later on compare the results with the checklist.
6. Divide the trainees into pairs. Ask the trainees to perform the procedure with their pair per the checklist. The other pairs will monitor & evaluate whether checklist is being followed or not.
7. After completion of each pair ask other pairs for feedbacks whether any steps were missed or not.
8. Make sure every trainee is able to correctly use Glucometer
9. Repeat the activity if necessary.
10. Keep precautions on the aseptic condition.
11. Make them note their measurement in given form.
12. Summary the key points clarify any queries the learners may have.
13. Praises the trainees for their efforts

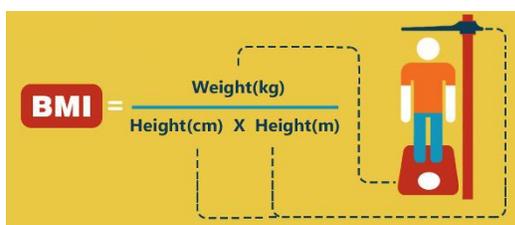


## Station 3: Waist Circumference

1. Tell trainers to recall the slide presentation on Waist- circumference



2. Ask them to recall the measurement level.
3. Tell trainees to open the checklist section given in their book
4. Trainer must dictate the Waist circumference measuring checklist and clarify and confusions
5. Now a trainer will demonstrate the correct way to measure Waist circumference on any one trainee. Ask other trainee to follow their checklist and note the missing steps and later on compare the results with the checklist.
6. Divide the trainees into pairs. Ask the trainees to perform the procedure with their pair per the checklist. The other pairs will monitor & evaluate whether checklist is being followed or not.
7. After completion of each pair ask other pairs for feedbacks whether any steps were missed or not.
8. Make sure every trainee is able to correctly measure Waist Circumference.
9. Repeat the activity if necessary.
10. Make them note their measurement in given form.
11. Summary the key points clarify any queries the learners may have.
12. Praises the trainees for their efforts



## Station 4 : BMI

1. Tell trainers to recall the slide presentation on BMI
2. Tell them to recall the formula
3. Ask them to recall the BMI level.
4. Place the Weighing machine and stadiometer in the front.
5. Teach the learners how to fix the stadiometer on the wall.(if wall fixation given)
6. Tell trainees to open the checklist section given in their book
7. Trainer must dictate the BMI measuring checklist and clarify and confusions
8. Now a trainer will demonstrate the correct way to measure BMI on any one trainee. Ask other trainee to follow their checklist and note the missing steps and later on compare the results with the checklist.
9. Divide the trainees into pairs. Ask the trainees to perform the procedure with their pair per the checklist. The other pairs will monitor & evaluate whether checklist is being followed or not.



- 
10. After completion of each pair ask other pairs for feedbacks whether any steps were missed or not.
  11. Make sure every trainee is able to correctly measure BMI.
  12. Repeat the activity if necessary.
  13. Make them note their measurement in given form.
  14. Summary the key points. Clarify any queries the learners may have.
  15. Praises the trainees for their efforts
-



## Station 5 : Urine Station

1. Ask trainees about the different types of Urinary Dipsticks
2. Tell the learners they will now be learning the use of Urinary dipsticks in Diagnosing of NCDs
3. Trainer must dictate the Urine dipsticks checklist and clarify any confusions
4. Ask to collect fresh urine from any trainee(with consent)
5. Maintain Aseptic condition
6. Now a trainer will demonstrate the correct way to use Urine dipstick on the urine sample. Ask other trainee to follow their checklist and note the missing steps and later on compare the results with the checklist.
7. Divide the trainees into pairs. Ask the trainees to perform the procedure with their pair as per the checklist. The other pairs will monitor & evaluate whether checklist is being followed or not.
8. After completion of each pair ask other pairs for feedbacks whether any steps were missed or not.
9. Make sure every trainee is able to use Urine Dipstick. Repeat the activity if necessary.
10. Make them note their measurement in given form.
11. Summary the key points.
12. Clarify any queries the learners may have.
13. Praises the trainees for their efforts

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### Summarize

Session with key messages on Protocol 1 related instrumentation



Praise all the learners for their efforts.

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# Session -3.7

## Case Management using PEN Protocol 1 & 2



### Time

<b>Service Provider Training</b>	60 Minutes
<b>Training of Trainers</b>	60 Minutes



### Learning Objectives

By the end of session, trainee will able to

1. Use PEN Protocol-I for integrated management of Hypertension (HTN)& Diabetes (DM) at primary health care setting through different case studies



### Design of Implementation

#### Methods

- Brain storming
- Presentation with mini lecture
- Group discussion
- Question answer

#### Materials needed

- Power point slides and presenter’s note
- Trainer’s guidebook & Trainee’s Manual
- Markers, newsprint, Meta-cards/sticky note



### Advanced Preparation

- Arrangement (Class room, group discussion instruction)
  - Ensure the availability of above mentioned materials/resources preparation
- Ensure availability of Nepal PEN Protocol 1

START  
UP



### Start Up Session

Introduce the Session and Session objectives with training methodology and contents to be taught (1 to 2 minutes)



## Activity Instruction



### Activity 1: Case studies



Brain Storming



Discussion and



Presentation

**Step 1:** Formation of 5 groups

**Step 2:** Provide different cases to them (2 cases for 1 group)

**Step 3:** Assist by trainer (Not provide any answer but support the way of presenting)

**Step 4:** Presentation of cases as per protocol standard

**Step 5 ;** Larger group discussion whether that have missed any steps direct by protocol

**Step 5:** Provide necessary feedback and Again phrasing the main activities regarding the management of cases

#### Case 1.

57 years old Bal Bahadur who is under medication for Diabetes since 2 years is on regular follow up in your health facility. Now his blood sugar is 210 mg/dl and BP is 168/100. He never smoked and quit alcohol 5 years back and he is also obese. please workup on this case on basis of

- History, Examination, Calculation of risk for cardiac event
- Medical prescription, Advice on lifestyle management and follow up.

#### Case 2.

A 45 years old man comes to the clinic for screening. He is smoker with no history of hypertension or diabetes. His BP measured for the first time is 145/80 mmHg.

Q1. Is he hypertensive?

Q2. What is your next management plan?

#### Case 3.

A 50 years old man comes to the clinic for screening. He is a smoker with no known history of HTN and Diabetes.

BP=145/90 mmHg (1st time measurement)



---

BP=150/90 mmHg (2nd time measurement)

- Q1. Is he hypertensive?
- Q2. What is your next management plan?

#### **Case 4.**

A 55 years old lady, known Hypertensive for 5 years reports taking Amlodipine 5mg daily regularly. Clinic BP 170/100 mmHg.

- Q1. What can be the cause for uncontrolled Hypertension in this pts.?
- Q2. What is your suggested management plan based on the guideline?
- Q3. Provide justification for suggested management plan?

#### **Case 5.**

A 65 years old man, known Hypertensive for 5 years takes amlodipine 15mg/enalapril 5 mg daily. He is a chronic smoker but has no history of Diabetes. Now he suffers from left sided chest pain on exertion. BP is 150/100 mmHg. What is your next management plan?

#### **Case 6.**

57 years old female came to your health facility with history of trauma in foot, she went home after dressing. After some days she had pain in her foot but her family ignored her symptoms. Recently she noticed blackish discolouration of foot and her family members bring her to your health facility?

How will you manage this case?

#### **Case 7.**

52 years old male brought to emergency department with complaints of sudden trouble speaking, difficulty in movement of right arm and leg with drooping of right side of face since 1 hour. He is known case of hypertension and Diabetes but under irregular medication. On examination:

BP=180/100 mmHg Pulse 98/min

left sided weakness and facial drooping, slurring of speech.

- Q1.what is your diagnosis?
- Q2.How will you manage this case?

### **Answers**

#### **Case 2-Answer.**

1. No .Need to check BP after 5 minutes of resting. Need to visit 1-4 weeks to confirm hypertension.
-



- 
2. At the moment one time BP measurement is not an indication for treatment. If second time BP measurement >140/90 mmHg, You can start antihypertensive medication.
  3. Ask about smoking and his perception of smoking and willingness to quit smoking. Other risk can be assessed, such as waist circumference and body mass index (BMI).

### **Case 3-Answer.**

1. Yes
2. Use the treatment protocol.
  - You can give first line drug based on protocol.
  - Ask about general health and illness.
  - Ask about smoking: the amount and willingness to quit
  - Check also the other risk factors such as BMI and waist circumference.
  - Plan for life style modification.

### **Case 4-Answer.**

1. The underlying cause/s can be: non adherence to medicines, high dietary salt intake, any recent stress, overweight and obesity, cardiac disease and kidney disorder.
2. Assess drug adherence, target organ damage and complication. Refer to evidence based guidelines to develop a management plan for this patient.
3. Possible justification points:
  - If the patient is adherent to medicines, increase the dose of amlodipine to 10 mg and or add enalapril 5mg (once daily) in the evening and follow up after one month.
  - In case she has other underlying causes, evaluate, counsel on lifestyle modifications and refer if needed.

### **Case 5-Answer.**

1. Assess medication adherence. If he is taking medicine regularly increase the dose of calcium channel blocker Amlodipine to 10 mg daily or ACE inhibitor enalapril to 10 mg daily.
  2. Calculate the 10 year cardiovascular risk using WHO/ISH risk prediction chart. If more than 30% add atorvastatin and aspirin.
  3. Advise smoking cessation.
  4. If the patient complains of chronic cough, change enalapril to ARBs(losartan/telmisartan)
-



5. Refer for further assessment and treatment of chest pain (e.g. ECG) and follow up the case after referral.

### **Case 7-Answer.**

1. Diagnosis:  
Acute stroke: right hemiplegia (face, arm and leg weakness) with dysarthria.
2. Management:  
Call ambulance service and transfer the patient to hospital with CT scan facility or a stroke centre with facility for thrombolysis treatment. In PHC apart from the BP measurement a quick blood sugar test can be done to exclude hypoglycemia which can present like stroke.
3. Explanation:  
The patient's clinical symptoms are right facial droop, paralysis of right side of body and dysarthria. The acronym "FAST" (F-face, A-arm, S-speech, T-time) is a simple test to find out whether a patient has a stroke or not. This is the most common presentation of stroke

## **Other Cases for discussion**

### **Case 8**

४४ वर्षीया विमलालाई ३ वर्ष अगाडि उच्च रक्तचापको Diagnosis गरिएको थियो । ६ महिना यता उनले उच्च रक्तचापको औषधी लिएकी छैनन् । स्वास्थ्य संस्थामा औषधी Refill गर्न जान नभ्याएकाले उनले औषधी नलिएको हुन् ।

अहिले BP 220/128 mmHg छ

वहाँको विस्तृत Patient work-up गर्नुहोस् जसमा निम्नलिखित कुराहरु उल्लेख गर्नुहोस् ।

- History, Examination, Calculation of risk for Cardiac event
- Medical prescription , Advice on lifestyle management and Follow-up advice

### **Case 9**

अत्याधिक मोटोपना भएकी ४७ वर्षीया राधिका तपाईंको स्वास्थ्य संस्थामा गर्भनिरोधक गोली लिन आएकी छन् । तपाईंको स्वास्थ्य संस्थामा PEN लागु भएपछि उनलाई कसरी सहयोग गर्नुहुन्छ ? छलफल गर्नुहोस

### **Case 10**

३५ वर्षीय धुम्रापान गर्ने र मादकपदार्थ सेवन गर्ने पुरुष तपाईंको स्वास्थ्य चौकीमा यौन इच्छा मा कमी हुने, कमजोरी र थकान महसुस हुने समस्या लिएर आउनुभएको छ ।  
जाँच गर्दा :



- wt= 98kg, waist circumference = 114 cm BP = 109/97, RBS = 280Mg /dl
- PEN Protocol अनुसार यो case लाई व्यवस्थापन गर्नुहोस् ।

### **Case 11**

३२ वर्षीय धूम्रपान सेवन गर्ने, अत्याधिक मदिरा सेवन गर्ने र विलासी जिवन यापन गर्ने पुरुष जसको बुबा Diabetic Nephropathy/Hypertension औषधि सेवन गर्नुहुन्छ र आमालाई central obesity रहेको छ । Facebook मा केही पढेर उहाँ तपाईंको स्वास्थ्य चौकी आउनु भएको छ । जाँच गर्दा महत्वपूर्ण जानकारी भेटिएन ।

- यो case लाई कसरी व्यवस्थापन गर्नुपर्दछ ।

### **Case 12**

चार वर्ष देखि उच्चरक्तचापको लागि Amlodipine र losartan खाइरहनु भएको महिला तपाईंको स्वास्थ्य चौकीमा निशुल्क औषधि पाइन्छ भन्ने जानकारी पाएर आउनुभएको छ ।

- यो case लाई कसरी व्यवस्थापन गर्नुपर्दछ

### **Case 13**

४२ वर्षीय धूम्रपान नगर्ने, मदिरासेवन नगर्ने र मोटोपना भएको पुरुष तपाईंको स्वास्थ्य चौकीमा २ दिन देखि पातलो दिसा हुने समस्या लिएर तपाईंको स्वास्थ्य चौकीमा आउनुभएको छ ।

- यो case लाई कसरी व्यवस्थापन गर्नुपर्दछ

### **Case 14**

५५ वर्षीया मदिरा सेवन नगर्ने तर दिर्घ रुपमा सुति सेवन गर्दै आउनुभएको पुरुष आफ्नो नातिनी लाई तपाईंको स्वास्थ्य चौकीमा आफ्नो खोप लगाउन आउनुभएको छ । उहाँले आफ्नो BP जाँच गर्न आग्रह गर्नुभयो र जाँच गर्दा उहाँको BP= 180/130 mmHg रहेछ ।

- यो case लाई कसरी व्यवस्थापन गर्नुपर्दछ

### **Case 15**

धूम्रपान गर्ने तर उच्च रक्तचाप नभएका ४५ वर्षीय पुरुष तपाईंको स्वास्थ्यचौकीमा blood pressure नाप्न को लागि आउनुभएको छ । उहाँको blood pressure पहिलो पटक नाप्दा 145/80 mmhg छ ।

- के उहाँलाई उच्च रक्तचाप छ ?
- तपाईंको अबको व्यवस्थापन योजना के हुनेछ ?
- मधुमेह तथा उच्चरक्तचाप नभएको ???



### **Case 13**

विगत ५ वर्ष देखि उच्च रक्तचापको उपचार गराइरहेकी Tab Amlo dipine 5mg OD ५५ वर्षीया महिला Blood pressure नाप्नको लागि तपाईंको संस्थामा आउनुभएको छ । उहाँको Blood pressure 160/100 mmhg पाउनुभयो ।

- उक्त विरामीमा अनियन्त्रित उच्च रक्तचापको कारणहरु के के हुन सक्छन् ?
- PEN protocol अनुसार व्यवस्थापनको योजना बनाउनुहोस् । आफ्नो योजनालाई प्रसङ्गसहित व्याख्या गर्नुहोस ।

### **Case 14**

५० वर्षको पुरुष, १ वर्षदेखि मधुमेह भएको ,तपाईंको स्वास्थ्य संस्थामा Fasting blood sugar ( 150 mg / dl )को रिपोर्ट लिएर आउनुभएको छ । उहाँले विगत १ वर्षदेखि Metformin ( 500) दिनको दुइपटक सेवन गरिरहनुभएको छ ।

- अनियन्त्रित मधुमेहको सम्भावित कारण बारे छलफल गर्नुहोस् ।
- PEN Protocol को प्रयोग गरि उक्त विरामीको व्यवस्थापन गर्नुहोस् ।

### **Case 15**

विगत ३ वर्षदेखि मधुमेह भएकी ६८ वर्षीय महिला तपाईंको स्वास्थ्य संस्थामा , fasting blood sugar रिपोर्ट 50Mg / dl तथा चक्करलाग्ने पसिना आउने समस्या लिएर आउनुभएको छ।

- माथिको case को निदान तथा व्यवस्थापनको लागि छलफल गर्नुहोस् ।

### **Case 15**

५२ वर्षीय पुरुषलाई उहाँको परिवारले, आकस्मिक रूपमा देखिएको बोल्ल गाह्रो दायाँ हात र खुट्टा चलाउन गाह्रो तथा अनुहारको मांशपेशी कमजोरी (Facial drooping )को कारण तपाईंको स्वास्थ्य संस्थामा ल्याउनुभएको छ । उहाँहरुको अनुसार करिव १ घण्टा अगाडि उक्त लक्षणहरुको सुरुवात भएको थियो। उहाँ उच्च रक्तचाप मधुमेहको विरामी हुनु हुन्छ तर औषधिको नियमित प्रयोग गर्नुभएको छैन ।

परिक्षण ( Examination )

- रक्तचाप १८०/१०० mmHg मुटुको चाल 98/min
- अनुहारको दायाँपट्टि को भाग कमजोर तथा केहितल भरेको तथा मुख देब्रेतिर वाङ्गिएको
- दाया हात र खुट्टा चलाउन असक्षम
- बोली प्रष्ट नभएको ।

प्रश्न

- रोगको निदान गर्नुहोस ।
- व्यवस्थापनको वारेमा छलफल गर्नुहोस् ।



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### Summarize

Session with key messages on Protocol 1 related instrumentation



Praise all the learners for their efforts.

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*Tea Break*

*(15 Minutes)*



# Session -3.8

## Management of COPD and Asthma at Primary Health Care Level



### Time

<b>Service Provider Training</b>	45 Minutes
<b>Training of Trainers</b>	60 Minutes



### Learning Objectives

By the end of session, trainee will able to explain

1. Define COPD including its clinical features, risk factors, diagnosis, Prevention, treatment modalities management and complications
2. Define Bronchial Asthma including its clinical features, risk factors, diagnosis, Prevention, treatment modalities and complications



### Design of Implementation

#### Methods

- Brain storming
- Presentation with mini lecture
- Group discussion
- Question answer

#### Materials needed

- Power point slides and presenter’s note
- Trainer’s guidebook & Trainee’s Manual
- Video clips, job aids (flip chart)
- Meta cards, newsprint
- Laptop and Projector,



### Advanced Preparation

- Arrangement (Class room, group discussion instruction)
- Ensure the availability of above mentioned materials/resources preparation
- Ensure speaker and software that addressed your video clips.



START  
UP



## Start Up Session

Introduce the Session and Session objectives with training methodology and contents to be taught (1 to 2 minutes)



## Activity Instruction



### Activity 1: Brain storming and discussion about COPD:

**Step 1:** Ask the participants whether they have seen cases of COPD in their settings.

- Were they exposed to any risk factors?
- What were the clinical features of those patients presented with?
- Had they been doing any investigations to the patients presented with the previous complaints?

**Step 2:** Ask 1 or 2 of them to share their experience with prior consent

*(Share their experience on what clinical features they had, what lifestyle modifications they are following, what drugs they are taking and what complications they had or they could face. Ask other learners to assist them.)*

- Ask one of the facilitators to write what the participants have answered on a news print.



### Activity 2: Continue Discuss the following content through interactive power point presentation on (20 min)

**Step 1:** Case scenario (mentioned in the PPT)-**Interactive Discussion**

- Definition, clinical features, risk factors, preventive measures, treatment modalities and complications.
- On the PowerPoint, illustrate on the harmful effects of smoking using various pictorials. (NHEICC harmful effects of Smoking)
- During the presentation paraphrase on the points answered by them

**Step 1:** Followed by presentation with Interactive discussion

**Note:**



- (During the presentation paraphrase on what the learners had answered earlier on a flipchart.)
- Discuss about the case scenario. (Paraphrase on the points mentioned earlier by the learners.)
- Ask questions (mentioned in the PPT and handbook) on the basis of the case scenario.



**Tell participants to carefully read the content in Trainee's manual. If there are need any points for clarification.**

---



### **Activity 3: Brain storming and discussion about Asthma :**

**Step 1:** Ask the participants whether they have seen cases of Asthma in their settings.

- Were they exposed to any risk factors?
- What were the clinical features those patients presented with?
- Had they been doing any investigations to the patients presented with the previous complaints?

**Step 2:** Ask 1 or 2 of them to share their experience with prior consent

*(Share their experience on what clinical features they had, what lifestyle modifications they are following, what drugs they are taking and what complications they had or they could face. Ask other learners to assist them.)*

- Ask one of the facilitators to write what the participants have answered on a news print.



### **Activity 4: Continue Discuss the following content through interactive power point presentation on (20 min)**

**Step 1:** Case scenario (mentioned in the PPT)-**Interactive Discussion**

- Definition, clinical features, risk factors, preventive measures, treatment modalities and complications.
- On the PowerPoint, illustrate on the harmful effects of smoking using various pictorials. (NHEICC harmful effects of Smoking)
- During the presentation paraphrase on the points answered by them

**Note:**

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- (During the presentation paraphrase on what the learners had answered earlier on a flipchart.)
- Discuss about the case scenario. (Paraphrase on the points mentioned earlier by the learners.)
- Ask questions (mentioned in the PPT and handbook) on the basis of the case scenario.



**Tell participants to carefully read the content in Trainee's manual. If there are need any points for clarification.**



### **Activity 5: Writing and Presenting about differentiation of Asthma and COPD**

**Step 1:** Ask one of the facilitator to display two newspapers: one presenting the case of COPD and the other presenting the case of Asthma (manual page no...case no...). Now ask them to identify the cases.

**Step 2:** Allow them to point out the basis of differentiation of COPD and Asthma.

- Co-facilitator will record the points in newsprint.



**Step 3:** Now show the PowerPoint mentioning the differences between COPD and Asthma. During the presentation paraphrase on the points answered by them.

### **Summarize**

Session with key messages on CVD, hypertension, MI and Stroke



- Praise all the learners for their efforts.



## Trainer's explanatory notes

### 1. Bronchodilator reversibility test:

Steps to conduct a bronchodilator reversibility test and its interpretation.

#### Case study 1.

Mr. Thapa undergoes peak flowmetry. His pre-bronchodilator value was 120 L/min; after 15 minutes of inhaling two puffs of salbutamol the value was 160 L/min. Calculate and comment on its reversibility.

Answer: Increase in PEF<sub>R</sub> = (160–120) = 40 L/min.

Increase in % =  $40/120 \times 100 = 33\%$

It is reversible and the probable diagnosis is bronchial asthma (not COPD).

#### Case study 2.

Mr. Paudel undergoes peak flowmetry. His pre-bronchodilator value was 120 L/min; after 15 minutes of inhaling two puffs of salbutamol the value was 130 L/min. Calculate and comment on its reversibility.

Answer: Increase in PEF<sub>R</sub> = (130–120) = 10 L/min.

Increase in % is  $=10/120 \times 100 = 8\%$

It is irreversible and the probable diagnosis is COPD.

### 2. Other tests for COPD

- Do a blood test (blood sugar, lipid profile) and a chest X-ray to rule out other causes of symptoms.
- Do a sputum examination to rule out tuberculosis if there is a history of cough for 2 weeks or more and expectoration or blood in the sputum.
- Calculate the body mass index (BMI) to find out if the patient has a healthy weight for the height. This is important because COPD could be managed better if the patient is not underweight or overweight.

#### **Other information required to give a better picture of the severity of COPD severity:**

- How often the symptoms flare up or there is chest infection
- How short of breath the patient feels during everyday activities
- Whether the oxygen level is significantly lower



## Spirometry

Lung function is assessed by spirometry. This involves blowing hard into a machine which measures lung capacity and how quickly the patient can empty the lungs. This is called the forced expiratory volume in one second, often shortened to FEV1.

Your doctor will use a spirometer to measure how narrow your airways are. But this only covers one aspect. Someone with slightly narrowed airways can be more breathless than someone with very narrow airways, depending on their level of fitness and the exact way in which COPD has damaged their lungs.

## 3. Things to remember

### *Exacerbation of COPD*

- ▣▣ An exacerbation of COPD is defined as an acute worsening of respiratory symptoms that will require additional therapy.
- ▣▣ Exacerbations of COPD can be precipitated by several factors. The most common cause is respiratory tract infection.
- ▣▣ The goal for the treatment of exacerbations of COPD is to minimize the negative impact of the current exacerbation and to prevent subsequent events.
- ▣▣ Short-acting inhaled beta2-agonists, with or without short-acting anticholinergics, are recommended as the initial bronchodilators to treat an acute exacerbation.

### *The exacerbations can be*

- a. **Mild, no respiratory failure:** respiratory rate: 20–30 breaths per minute; no use of accessory respiratory muscles; no changes in mental status; hypoxaemia improved with supplemental oxygen given via Venturi mask 28–35% inspired oxygen (FiO<sub>2</sub>); no increase in PaCO<sub>2</sub> (partial pressure of carbon dioxide).
- b. **Moderate, acute respiratory failure – non-life-threatening:** respiratory rate: >30 breaths per minute; use of accessory respiratory muscles; no change in mental status; hypoxaemia improved with supplemental oxygen via Venturi mask 25–30% FiO<sub>2</sub>; hypercarbia, i.e. PaCO<sub>2</sub> increased compared with baseline or elevated 50–60 mmHg.
- c. **Severe, acute respiratory failure – life-threatening:** respiratory rate: >30 breaths per minute; use of accessory respiratory muscles; acute changes in mental status; hypoxaemia not improved with supplemental oxygen via Venturi mask or requiring FiO<sub>2</sub> > 40%; hypercarbia, i.e. PaCO<sub>2</sub> increased compared with baseline or elevated > 60 mmHg or the presence of acidosis (pH <7.25).



### **Management of exacerbations**

- Short-acting inhaled beta2-agonists (salbutamol), with or without short-acting anticholinergics (ipratropium bromide) are the initial bronchodilators for acute treatment of a COPD exacerbation. They can be given by nebulization.
- Maintenance therapy with long-acting bronchodilators should be initiated as soon as possible before hospital discharge.
- Systemic corticosteroids can improve lung function (FEV1), oxygenation and shorten recovery time and duration of hospitalization. Duration of therapy should not be more than 5–7 days in a dose of 30 mg per day.
- Antibiotics can shorten recovery time, reduce the risk of early relapse, treatment failure, and duration of hospitalization. Duration of therapy should be 5–7 days. Amoxicillin is the first drug of choice in a dose of 500 mg thrice daily.
- Methylxanthines (theophyllines) are not recommended due to poor side-effect profiles.
- If the patient has severe exacerbation (moderate with acute respiratory failure) or severe form of the disease, refer to a higher centre for further management with non-invasive ventilation.

### **Complications of COPD**

Respiratory failure and core-pulmonale with right heart failure are important complications of COPD.

1. **Respiratory failure:** look for blue discoloration of the fingers, lips or tongue. Flapping tremors, headache, altered mentation – patient will need oxygen therapy and if not improving, refer to a higher centre. High-flow oxygen may be harmful; hence low concentration of oxygen (28–32%) should be given carefully.
2. **Right heart failure:** look for swelling of the ankles, raised neck veins, tender hepatomegaly, loud second heart sound (S2) and cardiac murmurs. Give oxygen and diuretics (frusemide 40 mg daily).
3. **Pneumothorax:** air sacs may rupture and air may collect in the pleural space. The patient will complain of sudden-onset chest pain and breathlessness. Confirm by chest X-ray. Insertion of a chest tube is needed.



# Session -3.9

## Instrumentation based on PEN Protocol 3



### Time

**Service Provider  
Training  
Training of  
Trainers**

60 Minutes

60 Minutes



### Learning Objectives

By the end of session, trainee will able to

2. Use instruments related to PEN Protocol-I for integrated management of Hypertension (HTN)& Diabetes (DM) at primary health care setting



### Design of Implementation

#### Methods

- Brain storming
- Presentation with mini lecture
- Group discussion
- Question answer

#### Materials needed

- Power point slides and presenter’s note
- Trainer’s guidebook & Trainee’s Manual
- Laptop and Projector,
- Audio-Visual Aids
- PEFR, Spacer
- MDI/DPI
- Markers, newsprint, Meta-cards/sticky note



### Advanced Preparation

#### Advance Presentation:

1. Stations (facilitator must create 4 group)
  - 4 group must be kept at the proper distance from each other
    - Group 1:** availability of all equipment
    - Group 2 :** Availability of all equipment s
  - Appoint a facilitator for each stations



2. Print checklist given at trainer's guide and paste them corresponding to their stations
  3. Disposable box must be kept
  4. Print the below given form & distribute among participants and ask them to fill these forms & submit after completion to the facilitators:
  5. Ensure above mentioned materials/resources preparation under design of implementation
- 



### **Start Up Session**

Introduce the Session and Session objectives with training methodology and contents to be taught (1 to 2 minutes)



### **Activity Instruction**

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#### **Activity 1: Brainstorm, by asking the trainee (5 min)**

- What are the important instruments & diagnostics tools that are used to diagnose the COPD and Asthma?
- Among them what tools are available at their HFs?

#### **Note :**

Request to responses on a flip chart.

Present the slides containing list of important instruments & diagnostics tools that are used to diagnose the Asthma and COPD at PHC level



#### **Activity 2: Presentation and Instruction**

**Step 1:** Show them AV aids about the all instruments

2. Video 3.9 'a' about PEFr measurement
3. Video 3.9 'b' about MDI
4. Video 3.9 'c' about DPI
5. Video 3.9 'd' about MDI and use with spacer

**Step 2:** Divide the trainees into 4 groups & assign them a station

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**Step 3:** Tell them that use another equipment only after learn about previous one

**Step 4:** Facilitator assigned to each group will look after their trainees

6. Trainees must follow the checklist given at their trainees book as task assigned at their station
7. Facilitator must dictate all the steps of the station wise checklist before the beginning of the practicum
8. All the participants must follow those checklist step wise step and they all must do those exercise & observe others to correct and gain more experience
9. They must not put their individual findings in their given form

**After each participants had completed the task**

1. Ask how many of them had seen/used those instruments previously. If any of them had seen/used the instruments, ask him/her about the use of those.
  2. Continue this process till all the trainees had been through all those stations
  3. Clear any doubt & make sure they have perfect knowledge about the use of these instruments
  4. Follow these instructions at all stations:
- 



## Peak Expiratory Flow Rate (PEFR) Flow Meter

1. Tell trainees to open the checklist section given in their book
  2. Trainer must dictate the PEFR measuring checklist and clarify confusions
  3. Now a trainer will demonstrate the correct way of measuring BP on any one trainee. Ask other trainee to follow their checklist and note the missing steps and later on compare the results with the checklist.
  4. Divide the trainees into pairs. Ask the trainees to perform the procedure with their pair per the checklist. The other pairs will monitor & evaluate whether checklist is being followed or not.
  5. After completion of each pair ask other pairs for feedbacks whether any steps were missed or not.
  6. Make sure every trainee is able to correctly measure PEFR.
  7. Repeat the activity if necessary.
  8. Make them note their measurement in given form.
  9. Summary the key points clarify any queries the learners may have.
  10. Praises the trainees for their efforts
-



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## Meter Dose Inhaler and Dry Powder Inhaler

1. Tell the trainees they will follow the steps as shown in the AV aid and will follow the checklist
2. Tell trainees to open the checklist section given in their book
3. Trainer must dictate the Glucometer using checklist and clarify any confusion
4. Now a trainer will demonstrate the correct way of using glucometer on any one trainee. Ask other trainee to follow their checklist and note the missing steps and later on compare the results with the checklist.
5. Divide the trainees into pairs. Ask the trainees to perform the procedure with their pair per the checklist. The other pairs will monitor & evaluate whether checklist is being followed or not.
6. After completion of each pair ask other pairs for feedbacks whether any steps were missed or not.
7. Make sure every trainee is able to correctly use Glucometer
8. Repeat the activity if necessary.
9. Make them note their measurement in given form.
10. Summary the key points clarify any queries the learners may have.
11. Praises the trainees for their efforts

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### Summarize

Session with key messages on Protocol 3 related instrumentation



Praise all the learners for their efforts.

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## Refreshment (Time: 45 min)

### 5 minute Exercise

#### Name of Exercise: Tree pose

1. Begin by standing with arms at the sides.
2. Shift your weight onto the left leg, and put the sole of the right foot on the left thigh.
3. Keep the hips forward and bring the hands to the front into a prayer position with the palms together.
4. Slowly extend the arms above the shoulders, keeping the palms separate and facing one another.
5. Stay in the pose for 30 seconds, lower the arms and right leg, and repeat on the other side.



Start lunch after completing exercise



*Lunch Break*

*(40 Minutes)*

## Session -3.10

### Nepal PEN Protocol 3

Prevention of COPD and Asthma at PHC Level



**Time**

**Service Provider Training** 60 Minutes

**Training of Trainers** 60 Minutes



### Learning Objectives

By the end of session, trainee will able to

1. Use PEN Protocol-3 for prevention and management of COPD and Asthma at primary health care setting



### Design of Implementation

#### Methods

- Brain storming
- Presentation with mini lecture
- Group discussion
- Question answer

#### Materials needed

- Power point slides and presenter's note
- Trainer's guide & Trainee's Manual
- Flip chart
- Laptop and Projector,



## Advanced Preparation

- Arrangement (Class room, group discussion instruction)
  - Ensure the availability of above mentioned materials/resources preparation
  - Ensure availability of Nepal PEN Protocol 3
- 

START  
UP



### Start Up Session

Introduce the Session and Session objectives with training methodology and contents to be taught (1 to 2 minutes)



### Activity Instruction

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**Activity 1: Brain storming and discussion about WHO/ISH CVD risk prediction chart : (10 min)**

**Step 1:** Ask the participants to share

- Their experience of managing COPD and Asthma in their health facility.

**Step 2:** Tell the learners that they are going to learn about PEN Protocol 3 and when it could be used (In PPT slide)

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**Activity 2: Tell the participants to open their Handbook and follow the Facilitator step by step. Clarify that the protocol addressed the Asthma and COPD**

Facilitate by trainer to learn effectively PEN Protocol 3 with an Interactive presentation. The Power Point will have following contents:

- Protocol 3

**For Protocol (Health Post level along with session while for PHCC level in annex 1 of trainee's manual)**

---



## Nepal Pen Protocol Consists

- 3.1 Management of Asthma
- 3.2 Management of COPD

### **ACTION : Start from Ask and Differentiate whether it Asthma or COPD**

1. Differentiate COPD and Asthma by
  - History and Sign and Symptoms
  - Test (PEFR)

### **Note:**

- After that learners enter the management of Asthma or COPD as per Protocol
- Make it clear about diagnosis methods and make clear any confusion or dilemma

### **Tell learners that they will open their handbook and turn the Protocol 3**

1. Clarify the learners that they must ask all the questions to their clients as per PEN protocol 3
2. Clarify any doubts the learners may have.



## **Activity 3: PEN protocol 3 (3.1 Management of Asthma)**

### **ACTION 1: ASK**

- Tell them to open their manual annex.1 for PHCC /page.. for HP questionnaire and follow accordingly
- Clarify them that they must ask all the questions to their clients as per PEN Protocol 3.2
- Discuss the steps of Box 1 step by step using include in protocol questionnaire
- Clarify any doubts they may have.

### **ACTION: 2. ASSESS**

- Tell them that they will now learn about how to assess their clients. (box 2)
- Tell them while assessing the clients, following parameters should be measured: Respiratory Rate, Heart Rate, Mental status, accessory muscle use, cyanosis, SPO2, completeness of activities, PEF METER
- Ask them to turn the manual page no.... PEN protocol 3.1 for Health post/PHC.
- Ask them to read out the points in Assess Box turn by turn.
- Now step by step discuss about the parameters that are to be measured.
- If they have queries about any skill, clarify them.



- Tell them that initially the protocol seems difficult but after repeated use of protocols in their settings, they will be confident.
- Summarize with key message that each and every steps should be followed one by one.

### **ACTION 3: ESTIMATE THE SEVERITY OF ASTHMA REFERRAL**

- Differentiate controlled and uncontrolled asthma
- Grade the severity of asthma

### **ACTION 4: TREATMENT**

- Tell them that on the basis of estimation of severity the case will be managed either by emergency approach or by Step-wise OPD approach management
- Ask them to open and allow one of them to read from step 1 to step 5 of PEN protocol 3.1
- Ask the listeners if they have any confusions to be addressed
- Emphasis on how and when to step-up and step-down the treatment protocol
- Tell them briefly on the important adverse effects of the drugs used in the protocol

### **ACTION: 5. ADVICE**

- Tell them that they are going to the most important part of the action sequence.
- Tell them to follow the steps as per the protocol.
- Ask them to recall the asthma severity grading.
- Tell them about counseling to prevent the exposure of risk factors and allergens to their clients.
- Tell them to give more emphasis on the need to stay on the medicines as prescribed, proper use of MDI, DPI, spacer, etc.
- Suggest them when to refer the case according to the need and severity

Summarize the session with key messages on advice.



### **Activity 3: PEN protocol 3 (3.2 Management of COPD)**

#### **ACTION 1: ASK**

- Tell participants that they will open their manual annex.1 for PHCC /page.. for HP questionnaire and follow accordingly
  - Clarify them that they must ask all the questions to their clients as per ACTION:1(ask box) of PEN Protocol- 3.2
  - Discuss the steps of Box 1 step by step using include in protocol questionnaire
  - Clarify any doubts they may have.
-



### **ACTION: 2. ASSESS**

- Tell them that they will now learn about how to assess their clients. (box 2)
- Tell your participants While assessing the clients, following parameters should be measured: Respiratory Rate, Heart Rate, Mental status, accessory muscle use, cyanosis, peripheral oedema, SPO2, completeness of activities, PEF METER
- Ask them to turn the manual page of PEN protocol 3.2 for Health post and PHC.
- Ask them to read out the points in Assess Box turn by turn.
- Now step by step discuss about the parameters that are to be measured.
- If they have queries about any skill, clarify them
- Tell them that initially the protocol seems difficult but after repeated use of protocols in their settings, they will be confident.
- Summarize with key messages and make sure them that every steps should be followed one by one.

### **ACTION 3: ESTIMATE THE SEVERITY OF ASTHMA REFERRAL**

- Assess the case of COPD and differentiate the case whether its acute exacerbations or the client on regular follow-up

### **ACTION 4: TREATMENT**

- Tell them that on the basis of estimation of severity the case will be managed either by emergency approach or by Step-wise OPD approach management
- Ask them to open protocol and read from step 1 to step 5 of PEN protocol 3.2
- Ask the listeners if they have any confusions to be addressed
- Tell them how and when to step-up and step-down the treatment protocol
- Tell them briefly on the important adverse effects of the drugs used in the protocol

### **ACTION: 5. ADVICE**

- Tell them that they are going to the most important part of the action sequence.
- Tell them to follow the steps as per the protocol.
- Ask them to recall the COPD severity grading.
- Tell them about counseling to prevent the exposure of risk factors and motivate to quit smoking and tobacco products.
- Tell them to give more emphasis on the need to stay on the medicines as prescribed, proper use of MDI, DPI, spacer, etc.
- Suggest them when to refer the case according to the need and severity

Summarize the session with key messages on advice

---



**Summarize the sessions with the key messages and clarify any queries learners may have.**

After the end of all action, tell the participants from health posts that they are not the final prescribers. They have right of immediate management and prescription of first line drug of COPD and Asthma

**Note:**

Before prescribing, the patient needs laboratory assessment (Spirometry) and other physical examinations from a doctor,

- So the patients should be referred as recommended by protocol 3 for HP to a nearby PHC/District hospital.
- While for PHCC also manage as per protocol recommended

**Note:**

Tell the participants to do repeat every steps/activities in successive visit of that patients as per follow up period.



**Tell participants to carefully read the content in Trainee's manual. If there are need any points for clarification.**

---

**Summarize**

Session with key messages on Protocol 3



Praise all the learners for their efforts.



*Tea Break*

*(15 Minutes)*

# Session -3.11

## Chest Rehabilitation

Theory and Practical

**Service Provider Training** 45 Minutes



## Time Training of Trainers

45 Minutes

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## Learning Objectives

By the end of session, trainee will able to

1. Introduce introduction and importance of chest rehabilitation
  2. Exercise of chest rehabilitation
  3. Expiration of cough
- 



## Design of Implementation

### Methods

- Brain storming
- Presentation with mini lecture
- Group discussion
- Question answer

### Materials needed

- Power point slides and presenter's note
  - Trainer's guide & Trainee's Manual
  - Flip chart
  - Laptop and Projector,
- 



## Advanced Preparation

- Arrangement (Class room, group discussion instruction)
  - Ensure the availability of above mentioned materials/resources preparation
  - Ensure availability of Nepal PEN Protocol 3
- 

START  
UP



## Start Up Session

Introduce the Session and Session objectives with training methodology and contents to be taught (1 to 2 minutes)



## Activity Instruction

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### **Activity 1: Brain storming and discussion about Chest Rehabilitation and COPD management : (10 min)**

**Step 1:** Ask the participants to share

- Their experience of managing COPD and Asthma through any type any exercise in their health facility.
- Ask them what do they understand by chest rehabilitation?
- Also ask what do they know about its importance in COPD management.



### **Activity 2: Continue Discuss the following content through interactive power point presentation.**

Facilitate by trainer to learn effectively chest rehabilitation

- Introduction
- Rationale
- Various ways to manage daily working
- Methods of expiration of cough
- The steps of chest rehabilitation
- The steps of chest muscle rehabilitation



### **Activity 3: Chest Rehabilitation Exercise**

**Step 1:** Request to participants stand up and make some space for exercise

**Step 2:** Tell to participants take 2-3 time long breathing

**Step 3:** Demonstrate 1 step of chest rehabilitation

**Step 4;** Request to do same as per protocol or Manual guidance

**Step 5:** Similarly follow the other step primarily demonstrate by trainer and then by participants.

**Step 6:** Ask to the participants if any confusion

#### **Note:**

- If feel any discomfort by any participants then request to stop



- 
- Assist in case of necessary
  - Other trainer check whether participants follow trainer or not
  - Ensure they could deliver the session in their facility

**Summarize the session with key messages on stop smoking & do chest rehabilitation regularly**

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### **Activity 3: Expiration of Cough**

**Step 1:** Request to participants stand up and make some space for exercise

**Step 2:** Tell to participants take 2-3 time long breathing

**Step 3:** Demonstrate the step/process of cough expiration (Active Cycle of Breathing Techniques-ACBT)

**Step 5:** Ask to the participants if any confusion

#### **Note:**

- If feel any discomfort by any participants then request to stop
- Assist in case of necessary
- Other trainer check whether participants follow trainer or not
- Ensure they could deliver the session in their facility

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#### **Summarize**

Session with key messages on of chest rehabilitation with again enforce to stop the smoking, tobacco and air pollution (House air pollution)



Praise all the learners for their efforts.

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# Session -3.12

## Case Management using PEN Protocol 3



### Time

<b>Service Provider Training</b>	45 Minutes
<b>Training of Trainers</b>	45 Minutes



### Learning Objectives

By the end of session, trainee will able to

1. Management of different case by use PEN Protocol-3 for management of COPD and Asthma at primary health care setting



### Design of Implementation

#### Methods

- Brain storming
- Presentation with mini lecture
- Group discussion
- Question answer

#### Materials needed

- Power point slides and presenter’s note
- Trainer’s guidebook & Trainee’s Manual
- Laptop and Projector,
- Markers, newsprint, Meta-cards/sticky note



### Advanced Preparation

- Arrangement (Class room, group discussion instruction)
  - Ensure the availability of above mentioned materials/resources preparation
- Ensure availability of Nepal PEN Protocol 3

START  
UP



### Start Up Session

Introduce the Session and Session objectives with training methodology and contents to be taught (1 to 2 minutes)



## Activity Instruction

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### Activity 1: Case studies



Brain Storming



Discussion and



Presentation

**Step 1:** Formation of group 5 group

**Step 2:** Provide different cases to them (2 cases for 1 group)

**Step 3:** Assist by trainer (Not provide any answer but support the way of presenting)

**Step 4:** Presentation of cases as per protocol standard

**Step 5:** Larger group dissuasion whether that have miss the any steps direct by protocol

**Step 6:** Provide necessary feedback and again phrasing the main activities regarding the management of cases

### Case Study : 1

78 years male, Ganaprasad presented to your health facility with complaints of shortness of breath and cough for last few days.

⇒ Ask your participants what do they want to know more on his history

On asking further, Mr. Ganaprasad told that he started smoking *bidi* 40 years back when he used to be a Pradhan-pancha of his village then. He used to smoke 15-20 sticks of *bidi* then and has been taking around 10 sticks every single day for last 10 years. He started developing shortness of breath for last 5 years, which initially was during climbing uphill and then gradually developed while walking on a plane road and since last dashain it's seen during rest too. He produces whitish sputum on and off and occasional cough. For the last couple of days he has developed fever of 101.2 F and increasing shortness of breath.

⇒ Ask your participants what they will do in his physical examination.

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On general physical examination, Mr. Ganaprasad is moderately built with sitting on the bed with 3 pillows on his back. He is tachypnea and breathing through mouth, uses his accessory muscles of respiration. There is cyanosis in his fingertips and slight oedema present on his both legs. His SPO<sub>2</sub> is 85% and has diffuse b/l wheezes with left sided basal crepitation present on his chest. He has to take 2-3 pauses while completing a sentence, however is well oriented to time, place and person. Other systemic examination reveals no significant findings.

⇒ Ask your participants what could be the possible diagnosis of the case according to the history and clinical examination.

**Diagnosis:** Acute exacerbation of COPD (also explain the justification)

⇒ Ask your participants how will they manage (investigation and treatment) such cases in their health facility. What could be the areas of counseling required to Mr Ganaprasad.

**Treatment and advice:** Ask your participants to open page no.... and follow PEN protocol 3 accordingly. And advise them to refer Mr. Ganaprasad to the higher center if he meets the referral criteria.

## **Case Study : 2**

Patient is a 55-year-old male smoker smoking 12 hand-rolled cigarettes per day for the past 23 years. Complained of gradually progressive breathlessness and productive cough of 4 years these symptoms occurred during the winter seasons he had increased purulence of sputum twice during the past 1 year. On examination the chest was hyper inflated and there were bilateral basal crepitations.

**1) Diagnosis:** COPD (explain justification too)

**2) Management (investigation and treatment) of the case**

Ask them to open page.... and follow PEN protocol 3 to manage this case

**3) Advice**

Ask them to open page. and follow PEN protocol 3 to provide counseling accordingly

*After discussion and presentation ask these following question and make it clear if they are confusing*

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- 
- ⇒ Ask them what they want to know more on the history of this case.
  - ⇒ Ask them what might be the disease could be and its possible differential diagnoses.
  - ⇒ Discuss why it is not bronchial asthma and what investigations should be done?
  - ⇒ Ask them how will they manage such cases in their settings after learning PEN protocol.
  - ⇒ Ask them whether he needs any behavioral changes

### **Case Study : 3**

A 24-year-old female, known asthmatic for 8 years, was on combination (LABA + steroid) inhaler therapy with adequate control (no symptoms, normal daily activities, no night symptoms), developed acute viral upper respiratory tract infection (URTI) (fever, sore throat, cough, yellow sputum, sneezing, running nose, headache and myalgia) for 3 days, cough and wheeze reappeared, night symptoms increased, no relief despite taking 12 puffs of salbutamol inhaler and the above steroid and LABA inhaler eight doses, patient reported to emergency. On examination: tachypnea (increased respiratory rate of 32/min); tachycardia (increased heart rate 132/min), accessory muscles of respiration are working, severely breathless, pulsusparadoxus of 26 mmHg; unable to complete sentences, mild blue discoloration of fingers and tongue, chest had bilateral wheeze, oxygen saturation of 87%; PEF METER 60 L/min.

**1) Diagnosis:** Exacerbated Asthma

#### **2) Management (investigation and treatment) of the case**

Ask them to open page.... and follow PEN protocol 3 to manage this case

#### ***Management of the case***

The patient should be nebulized with one capsule of salbutamol continuously for three doses and then 6-hourly; oxygen inhalation, encouraged to drink enough liquids, oral prednisolone 40 mg/day.

Within the next 24 hours she improved gradually and during the next 5 days her chest became normal. Her respiratory rate and heart rate settled down to normal, oxygen saturation was 96% and chest was clear. She completed 5 days of oral corticosteroids and

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inhalers were continued. During the next few weeks her inhalers were reduced to one puff twice daily.

### 3) Advice

Ask them to open page.... and follow PEN protocol 3 to provide counseling accordingly  
After discussion and presentation ask these following question and make it clear if they are confusing

- ⇒ Ask them what do they want to know more on the history of this case.
- ⇒ Ask them what might be the disease could be and its possible differential diagnoses.
- ⇒ Ask them how will they manage such cases in their settings after learning PEN protocol.
- ⇒ Ask them whether she needs any behavioral changes

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### Summarize

Session with key messages on Protocol 3 related case management



Praise all the learners for their efforts.

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## Session -3.13

### Prevention of Cancer at PHC Level

Prevention of breast, Cervical and Oral Cancer at Primary Health Care Setting



#### Time

**Service Provider Training** 45 Minutes

**Training of Trainers** 60 Minutes



#### Learning Objectives

By the end of session, trainee will able to explain

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1. Define cancer including its clinical features, risk factors, Prevention and diagnosis with referral counseling of breast and cervical cancer
  2. Describe the benefits of Screening and early diagnosis of Cancer
  3. Perform Breast examination and counsel on Self Breast examination (breast health examination).
  4. Identify the risk factors, simple screening referral of oral cancer.
- 



## Design of Implementation

### Methods

- Brain storming
- Presentation with mini lecture
- Group discussion
- Question answer

### Materials needed

- Power point slides and presenter's note
  - Trainer's guidebook & Trainee's Manual
  - Video clips, job aids (flip chart)
  - Meta cards, newsprint
  - Laptop and Projector,
- 



## Advanced Preparation

- Arrangement (Class room, group discussion instruction)
  - Ensure the availability of above mentioned materials/resources preparation
  - Ensure speaker and software that addressed your video clips.
- 

START  
UP



## Start Up Session

Introduce the Session and Session objectives with training methodology and contents to be taught (1 to 2 minutes)



## Activity Instruction

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### **Activity 1: Brain storming and discussion about Cancer:**

**Step 1:** Ask the participants.

- Ask them, all the different types of cancer, why only Ca breast and Ca cervix have been included in the protocol.
- Ask some participants, whether they have seen or dealt with cases of Ca breast/cervix in their settings/family/society. If yes, ask them to share their experience about the stage in which Ca was diagnosed (early/late) and fate of those patients. If the answer slate stage, then ask whether it was possible to diagnose the cancer early.

**Step 2:** Ask 1 or 2 of them to share their experience with prior consent

*(Share their experience on what clinical features they had, what lifestyle modifications they are following, what drugs they are taking and what complications they had or they could face. Ask other learners to assist them.)*

- Ask one of the facilitators to write what the participants have answered on a news print.



---

### **Activity 2: Continue Discuss the following content through interactive power point presentation on (20 min)**

**Step 1: Interactive Discussion**

- Start the session with a brief interactive presentation on different types of cancer, common cancers in Nepal, mortality from cancer and the current status of Cancer cervix/breast/oral in Nepal.
- Definition, clinical features, risk factors, preventive measures, treatment modalities and complications of Oral, Breast and Cervical Cancer.
- Praise them for their experience sharing.

**Step 2:** Followed by presentation with Interactive discussion

- Clarify the benefits of screening and early diagnosis of Ca Cervix/breast/oral with an Interactive Presentation.
- Address any concerns they may have.

**Note:**

- (During the presentation paraphrase on what the learners had answered earlier on a flipchart.)
-



- Discuss about the case scenario. (Paraphrase on the points mentioned earlier by the learners.)



**Tell participants to carefully read the content in Trainee's manual. If there are need any points for clarification.**

---



### **Activity 3: Discussion and presentation of and BHE methods of Breast cancer:**

**Step 1:** Ask the participants whether they have seen cases of Breast Cancer in their settings.

- Tell participants that they will now see a presentation on risk factor associated with Breast Cancer and its clinical features
- Show and present with discussion of breast examination by health worker and Self Breast Health Examination

#### **Note:**

- During the presentation paraphrase on what the learners had answered earlier on a flipchart.
  - Ask questions and ensure about any confusion if yes them make it clear again
- 

#### **Summarize**

Session with key messages on CVD, hypertension, MI and Stroke



- Praise all the learners for their efforts.
- 



Further Reading for Trainer

## **Trainer's explanatory notes**

### **About Breast Cancer:**



### **Breast cancer risk factors**

Several risk factors for breast cancer have been well documented. However, for the majority of women presenting with breast cancer it is not possible to identify specific risk factors (IARC, 2008; Lacey et al., 2009).

A familial history of breast cancer increases the risk by a factor of two or three. Some mutations, particularly in BRCA1, BRCA2 and p53 result in a very high risk for breast cancer. However, these mutations are rare and account for a small portion of the total breast cancer burden.

Reproductive factors associated with prolonged exposure to endogenous estrogens, such as early menarche, late menopause, late age at first childbirth are among the most important risk factors for breast cancer. Exogenous hormones also exert a higher risk for breast cancer. Oral contraceptive and hormone replacement therapy users are at higher risk than non-users. Breastfeeding has a protective effect (IARC, 2008, Lacey et al., 2009).

The contribution of various modifiable risk factors, excluding reproductive factors, to the overall breast cancer burden has been calculated by Danaei et al. (Danaei et al., 2005). They conclude that 21% of all breast cancer deaths worldwide are attributable to alcohol use, overweight and obesity, and physical inactivity. This proportion was higher in high-income countries (27%), and the most important contributor was overweight and obesity. In low- and middle-income countries, the proportion of breast cancers attributable to these risk factors was 18%, and physical inactivity was the most important determinant (10%).

The differences in breast cancer incidence between developed and developing countries can partly be explained by dietary effects combined with later first childbirth, lower parity, and shorter breastfeeding (Peto, 2001). The increasing modes of adoption of Western lifestyle habits in low- and middle-income countries is an important determinant in the increase of breast cancer incidence in these countries.

### **Breast cancer control**

Raising general public awareness on breast cancer and the mechanisms for its control as well as advocating for appropriate policies and programmes are key strategies of population-based breast cancer control.

### **Prevention**

Control of specific modifiable breast cancer risk factors as well as effective integrated prevention of non-communicable diseases which promotes healthy diet, physical activity and control of alcohol intake, overweight and obesity, could eventually have an impact in reducing the incidence of breast cancer in the long term.



## **Early detection**

Early diagnosis strategies focus on providing timely access to cancer treatment by reducing barriers to care and/or improving access to effective diagnosis services. The goal is to increase the proportion of breast cancers identified at an early stage, allowing for more effective treatment to be used and reducing the risks of death from breast cancer. Although some risk reduction may be achieved with prevention, these strategies cannot eliminate the majority of breast cancers that develop in low- and middle-income countries. Therefore, early detection in order to improve breast cancer outcome and survival remains the cornerstone of breast cancer control (Anderson et al., 2008).

There are two early detection methods:

- ⇒ early diagnosis or awareness of early signs and symptoms in symptomatic populations in order to facilitate diagnosis and early treatment, and
- ⇒ Screening – that is the systematic application of a screening test in a presumably asymptomatic population. It aims to identify individuals with an abnormality suggestive of cancer.

A screening programme is a far more complex undertaking than an early diagnosis programme. (WHO, 2007). In the vast majority of less developed regions, early diagnosis of breast cancer should be prioritized over breast cancer screening (WHO, 2014).

Irrespective of the early detection method used, central to the success of population-based early detection is careful planning and a well-organized and sustainable programme that targets the right population group and ensures coordination, continuity and quality of actions across the whole continuum of care. Targeting the wrong age group, such as, younger women with low risk of breast cancer, could lead to a lower number of breast cancers found per woman screened and, therefore, reduce its cost-effectiveness. In addition, targeting younger women would lead to a greater evaluation of benign tumours causing unnecessary overload of health-care facilities due to the use of additional diagnostic resources (Yip et al., 2008).

## **Mammography screening**

Mammography screening is the only screening method that has proven to be effective, though the studies evaluating mammography were all done in high-income countries with well-resourced health systems. Although there is evidence that organized population-based mammography screening programmes can reduce breast cancer mortality by around 20% in the screened group versus the unscreened group across all age groups, in



general there appears to be a narrow balance of benefits compared with harms, particularly in younger and older women.

A WHO position paper on mammography screening concluded that in well-resourced settings women aged 50–69 should undergo organized, population-based mammography screening if pre-specified conditions on programme implementation are met. In limited resource settings with weak health systems, mammography is not cost-effective, and early detection should focus on diagnosis at early stage through improved awareness. For women aged 40–49 years or 70–75 years, WHO recommends systematic mammography screening only in the context of rigorous research and in well-resourced settings. There is uncertainty about the magnitude of the harms, particularly over diagnosis and overtreatment. Mammography screening is very complex and resource intensive and no research on its effectiveness has been conducted in low-resource settings.

### **Breast self-examination**

There is no evidence on the effect of screening through breast self-examination. However, the practice of breast awareness has been seen to empower women, taking responsibility for their own health. Therefore, breast awareness is recommended for improving the rate of early diagnosis of breast cancer among women at risk.

### **Clinical breast examination (CBE)**

It is an examination of both breasts performed by a trained health professional. CBE can be used as a diagnostic test in a woman who has a breast lump or as a screening test in a woman during a screening programme. CBE seems to be a promising approach for low-resource settings and could be implemented depending on the evidence from ongoing studies. Research is underway to evaluate CBE as a low-cost approach to breast cancer screening that can work in less affluent countries. Promising preliminary results show that the age-standardized incidence rate for advanced-stage breast cancer is lower in the screened group compared with the unscreened group (Sankara narayanan, 2011).

Since screening requires substantial investment and carries significant potential personal and financial costs, the decision to proceed with screening should be pursued only after (i) basic breast health services including effective diagnosis and timely treatment are available to an entire target group; (ii) its effectiveness has been demonstrated in the region; and (iii) resources are available to sustain the programme and maintain quality.

## **Key Message about Cervical Cancer**

### ***Key messages***



- ⇒ Early detection by screening all women in the target age group followed by treatment of detected precancerous lesions can prevent the majority of cervical cancers.
- ⇒ Cervical cancer screening should be performed at least once for every woman in the target age group where the most benefit can be achieved: 30–49 years.
- ⇒ Cervical cancer screening, at least once, is recommended for every woman in the target age group, but this may be extended to women younger than 30 years of age if there is evidence of a high risk for cervical squamous intraepithelial neoplasia (CIN)2+.
- ⇒ HPV testing, cytology and visual inspection with acetic acid (VIA) are all recommended screening tests.
- ⇒ For cervical cancer prevention to be effective, women with positive screening test results must receive effective treatment.
- ⇒ It is recommended to take either a “screen-and-treat” approach or a “screen, diagnose and treat” approach.
- ⇒ Decisions on which screening and treatment approach to use in a particular country or health-care facility should be based on a variety of factors, including benefits and harms, potential for women to be lost to follow up, cost, and availability of the necessary equipment and human resources.
- ⇒ In the screen-and-treat approach, the treatment decision is based on a screening test and treatment is provided soon or, ideally, immediately after a positive screening test (i.e. without the use of a diagnostic test).
- ⇒ The screen-and-treat approach reduces loss to follow up, and can reduce the time lag for women to receive treatment.
- ⇒ Among women who test negative with VIA or cytology, the interval for rescreening should be 3–5 years.
- ⇒ Among women who test negative with HPV testing, rescreening should be done after a minimum interval of 5 years.
- ⇒ If cancer is suspected in women who attend screening, they should not be treated but should be referred to a facility for diagnosis and treatment of cancer.
- ⇒ Cryotherapy or loop electrosurgical excision procedure (LEEP) can provide effective and appropriate treatment for the majority of women who screen positive for cervical pre-cancer.

## OA-7: Summary of Day

**Service Provider Training** 15 Minutes



**Time**    **Training of Trainers**

15 Minutes



### Objectives of Activity

Ensure that the trainee are

1. Learn the contents of third day and remind for next day activities



### Design of Implementation

#### Methods

- Summary telling from reporter of day

#### Materials needed

- Not specific

### Introduction:

Summary is done to evaluate the acquiring knowledge of the participants which then helps facilitators gauge the process, way and modalities to be changed or improved for next day for improving interest or continuation of trainee's willingness to learn. If any confusion then immediately could revise, retelling and give more emphasis to recall in next day review session. It should cover all important chapters to be discussed during the session.



### Trainer Instruction

#### Related to Summary

1. Trainer already (Before starting of session of 3<sup>rd</sup> day) nominate the reporter of day or could choose randomly for telling the summary of learning (must to know rather than good to know). Trainer should facilitate to summary session only based on content not the name of trainer, objectives process, refreshment time etc.
2. If still any confusion, tell to participants to read the Trainee's book and make more clear on day 4 at review session



**Instruct clearly** to participants the activities, or any reading for next day  
**(Formation of group and give the title of ROLE PLAY for next day)**

## Day Four

# OA-8: Recap of 3<sup>rd</sup> Day



## Time

**Service Provider Training** 30 Minutes

**Training of Trainers** 30 Minutes



## Objectives of Activity

Enforce trainee about the recalling of content deliver previous day

1. Status Learn the contents of third day
2. Review, recall and reinforce of content delivered previous day



## Design of Implementation

### Methods

- Question answer and quiz
- True or False and Short question

### Materials needed

- Questionnaire sheet
- Clock



### Introduction:

A review is done to evaluate the existing knowledge of the participants which then helps facilitators gauge the depth of knowledge and information to be delivered during the training. The test involves quiz type question answer and short question as necessary or true/false questions to assess basic knowledge that must to know based on the content delivered previous day. It should preferably cover all important chapters to be discussed during the session.



## Trainer Instruction

### Related to Summary

1. Trainer already nominate person or trainer his/her self could ask the question.
2. Trainer should facilitate to recall summary in case of wrong answer, confusion or anything about unclear
3. Use the review question of 3<sup>rd</sup> day review from annex

# Session -3.14

## Nepal PEN Protocol 4



# Screening and Refer of Suspected Breast and Cervical Cancer at PHC Level



## Time

**Service Provider Training** 30 Minutes

**Training of Trainers** 60 Minutes

---



## Learning Objectives

By the end of session, trainee will able to

1. Use PEN Protocol-4 for Screening and Refer of Suspected Breast and Cervical Cancer at PHC Level
- 



## Design of Implementation

### Methods

- Brain storming
- Presentation with mini lecture
- Group discussion
- Question answer

### Materials needed

- Power point slides and presenter's note
  - Trainer's guide & Trainee's Manual
  - Flip chart, marker, news print
  - Laptop and Projector,
- 



## Advanced Preparation

- Arrangement (Class room, group discussion instruction)
  - Ensure the availability of above mentioned materials/resources preparation
  - Ensure availability of Nepal PEN Protocol 4
- 

START  
UP



## Start Up Session

Introduce the Session and Session objectives with training methodology and contents to be taught (1 to 2 minutes)



## Activity Instruction

---



### Activity 1: Brain storming and discussion about WHO/ISH CVD risk prediction chart : (10 min)

**Step 1:** Ask the participants to share

- Their experience of screening, refer, counseling of breast cancer and cervical cancer

**Step 2:** Tell the learners that they are going to learn about PEN Protocol Present 4 and when it could be used (In PPT slide)

---



### Activity 2: Tell the participants to open their Handbook and follow the Facilitator step by step. Clarify that the protocol addressed the breast and cervical cancer

Facilitate by trainer to learn effectively PEN Protocol 4 with an Interactive presentation. The Power Point will have following contents:

- Protocol 4

**For Protocol (Health Post level along with session while for PHCC level in annex 1 of trainee's manual)**

#### Nepal Pen Protocol Consists

- 2.1 Screening and Early Detection of Breast Cancer
- 2.2 Screening and Early Detection of Cervical Cancer

#### Note:

- After that the learners enter the management of breast and cervical cancer as per Protocol Instruction
- Make it clear about early diagnosis and refer

1. Tell learners that they will open their handbook and turn the Protocol 4
-



2. Tell the learners that they must ask all the questions to their clients as per PEN protocol 4
- 



### **Activity 3: PEN protocol 3**

#### **(4.1 Screening, early detection and refer of Ca Breast)**

##### **ACTION 1: ASK**

- Tell them to open their manual annex.1 for PHCC /page.. for HP questionnaire and follow accordingly
- Clarify them that they must ask all the questions to their clients as per PEN Protocol 4.1
- Discuss the steps of Box 1 step by step using include in protocol questionnaire
- Clarify any doubts they may have.

##### **ACTION: 2. ASSESS**

- Tell your participants While assessing the clients, following parameters should be measured: general physical examination with breast health examination (shape, size, mobility, tenderness, manual page no.... PEN protocol 4.1 for Health post.
- Ask them to read out the points in Assess Box turn by turn.
- Now step by step discuss about the parameters that are to be measured.
- Tell them that initially the protocol seems difficult but after repeated use of protocols in their settings, they will be confident.

##### **ACTION 3: SUSPECT THE POSSIBLE MALIGNANCY OF THE LUMP**

- Ask your listeners to follow the flow chart of the protocol to early diagnose and refer the cases according to the age category.
- Differentiate whether it's benign or malignant.

##### **ACTION 4: MANAGEMENT (REFERRAL OR FOLLOW-UP)**

- Tell them that on the basis of inspection of possible malignancy, the case will be referred timely or asked for follow up regularly using the flow chart of PEN protocol 4.1
  - Ask them to open page no..../annex...and allow one of them to read steps of PEN protocol 4.1
  - Ask the participants if they have any confusions to be addressed
-



- Ask them to think where they can refer such suspected cases of cancer nearby to their health facility where investigation and management facilities are available.

#### **ACTION: 5. ADVICE**

- Tell them that they are going to the most important part of the action sequence and they are going to suspect and refer the cases as early as possible.
- Tell them to follow the steps as per the protocol.
- Ask them to recall the symptoms and signs breast cancer
- Tell them about counseling to prevent the exposure of risk factors
- Tell them to give more emphasis on the need to examine the breast by the patients themselves at home regularly.
- Suggest them when to refer the case according to the need and severity and suggest them to keep their clients on regular follow up.

Summarize the session with key messages on advice.

- ⇒ Never advice critically, make it more soft, psychological counseling because your detection is not final.



### **Activity 4: PEN protocol 4**

#### **(4.2 Screening, early detection and refer of Ca Cervix)**

#### **ACTION 1: ASK**

- Tell them to open their manual annex.1 for PHCC /page.. for HP questionnaire and follow accordingly
- Clarify them that they must ask all the questions to their clients as per PEN Protocol 4.2
- Discuss the steps of Box 1 step by step using include in protocol questionnaire
- Clarify any doubts they may have.

#### **ACTION: 2. ASSESS**

- Tell your participants while assessing the clients, following parameters should be measured: general physical examination, abdominal examination, inguinal lymph nodes, per-speculum examination (color, discharge, erosions, any masses, and tenderness). Turn the manual page no.... PEN protocol 4.2 for Health post.
  - Ask them to read out the points in Assess Box turn by turn.
  - Now step by step discuss about the parameters that are to be measured.
-



- Tell them that initially the protocol seems difficult but after repeated use of protocols in their settings, they will be confident.

### **ACTION 3: SUSPECT THE POSSIBLE MALIGNANCY OF THE CASE**

- Ask your listeners to follow the flow chart of the protocol to early diagnose and refer the cases according to the age category.
- Differentiate whether its benign or malignant. If available VIA needs to be done in their health facility or refer the cases to the nearby center to do so and estimate the possible malignancy of ca

### **ACTION 4: MANAGEMENT (REFERRAL OR FOLLOW-UP)**

- Tell them that on the basis of estimation of inspection of possible malignancy, and VIA results the case will be referred timely or asked for follow up regularly using the flow chart of PEN protocol 4.2
- Ask them to open page no..../annex...and allow one of them to read steps of PEN protocol 4.2
- Ask them if they have any confusions to be addressed
- Ask them to think where they can refer such suspected cases of cancer nearby to their health facility where investigation and management facilities are available.

### **ACTION: 5. ADVICE**

- Tell them that they are going to the most important part of the action sequence and they are going to suspect and refer the cases as early as possible.
- Tell them to follow the steps as per the protocol.
- Ask them to recall the symptoms and signs cervical cancer
- Tell them about counseling to prevent the exposure of risk factors (e.g. safe sexual practice)
- Tell them to give more emphasis on history, clinical examination, per speculum examination, along with VIA if available.
- Suggest them when to refer the case according to the need and severity and suggest them to keep their clients on regular follow up.

Summarize the session with key messages on advice. Never advice critically, make it more soft, psychological counseling because your detection is not final.

---

**Summarize the sessions with the key messages and clarify any queries learners may have.**

---



After the end of all action, tell the participants from health posts/PHCC that they could not have facility to diagnosis and necessary management of cancer. They have right to early detection of suspected cancer, refer, follow up about status and counseling.

**Note:**

Tell the participants to do repeat every steps/activities in successive visit of that patients as per follow up period.



**Tell participants to carefully read the content in Trainee's manual. If there are need any points for clarification.**

---

**Summarize**

Session with key messages on Protocol 4



Praise all the learners for their efforts.

---

## Session -3.12

### Case Management using PEN Protocol 3



**Time**

**Service Provider Training** 45 Minutes

**Training of Trainers** 45 Minutes

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**Learning Objectives**

By the end of session, trainee will able to

- 2. Management of different case by use PEN Protocol-3 for management of COPD and Asthma at primary health care setting
-



## Design of Implementation

### Methods

- Brain storming
- Presentation with mini lecture
- Group discussion
- Question answer

### Materials needed

- Power point slides and presenter's note
- Trainer's guidebook & Trainee's Manual
- Laptop and Projector,
- Markers, newsprint, Meta-cards/sticky note



## Advanced Preparation

- Arrangement (Class room, group discussion instruction)
- Ensure the availability of above mentioned materials/resources preparation  
Ensure availability of Nepal PEN Protocol 3

START  
UP



## Start Up Session

Introduce the Session and Session objectives with training methodology and contents to be taught (1 to 2 minutes)



## Activity Instruction



## Activity 1: Video Presentation

1. Clinical Breast Examination (Video 3.12 'a')
2. Breast Health Self Examination (Video 3.12 'b')
3. Speculum examination of Cervix (Video 3.12 'c')
4. VIA Examination (Video 3.12 'd')

### Note:

- Explain the steps show in video after pause
- Translate the English to Nepali



- Ensure the participants learning status
- If confusion again repeat the video where necessary



## Activity 2: Case studies



Brain Storming



Discussion and



Presentation

**Step 1:** Formation of group 5 group

**Step 2:** Provide different cases to them (1 cases for 1 group)

**Step 3:** Assist by trainer (Not provide any answer but support the way of presenting)

**Step 4:** Presentation of cases as per protocol standard

**Step 5:** Larger group discussion whether that have miss the any steps direct by protocol

**Step 6:** Provide necessary feedback and again phrasing the main activities regarding the management of cases

### Case 1

२७ वर्षिय दुई बच्चाकी आमा तपाईंको स्वास्थ्य चौकीमा गुप्ताङ्ग बाट पानी बग्ने र यौन सम्पर्क गर्दा पिडा हुने समस्या लिएर आउनुभएको छ ।

- PEN Protocol अनुसार यो case लाई व्यावस्थापन गर्नुहोस् ।

### Case 2

२२ वर्षीय अविवाहीत महिला आफ्नो स्तनमा गाठो आएको समस्या लिएर तपाईंको स्वास्थ्य चौकीमा आउनुभएको छ ।

जाँच गर्दा : गाठा Soft र Motrie छ ।

- PEN Protocol अनुसार यो case लाई व्यावस्थापन गर्नुहोस् ।



### **Case 3**

३२ वर्षीय ३ बच्चाकी आमा जसको श्रीमान भारतमा काम गर्नुहुन्छ तपाईंको स्वास्थ्य चौकीमा पिसाब पोल्ने र गुप्ताङ्ग बाट गन्हाउने पानी बग्ने समस्या लिएर तपाईंको स्वास्थ्य चौकीमा आउनु भएको छ ।

- PEN Protocol अनुसार यो case लाई व्यवस्थापन गर्नुहोस् ।

### **Case 4**

४८ वर्षीय ९ बच्चाकी आमा तपाईंको स्वास्थ्य चौकीमा तल्लो पेट दुख्ने समस्या लिएर आउनुभएको छ ।

PEN Protocol अनुसार यो case लाई व्यवस्थापन गर्नुहोस् ।

### **Case 5**

२५ वर्षकी अस्मिताको देब्रे स्तनमा एउटा डल्लो देखा परेको छ । यो छाम्दा दुख्ने वा स्तन वरिपरी को छाला रातो भएको छैन । उनलाई कुनैबेला यो डल्लो अझ वृद्धि भए जस्तो लाग्छ । उनी यो क्यान्सर हो की भनेर तपाईंको संस्थामा आएकी छन्, यसलाई कसरी व्यवस्थापन गर्नु हुन्छ ?

### **Case 6**

२२ वर्षकी सन्ध्या गर्भवती भएको १ महिना भयो उनले स्तनपान गराइरहेकी छन् तर विगत ५ दिनदेखि उनको बायाँ स्तन रातो भएर निकै दुखेको छ त्यसैले उनले बायाँ स्तनबाट स्तनपान पनि गराइरहेकी छैनन् उनी संस्थामा दुखाई कम गर्ने औषधी माग्न आएकी छन् उनलाई कसरी व्यवस्थापन गर्नुहुन्छ ?

### **Case 7**

मायाको दुवै स्तन महिनावारी हुने बेलातिर दुख्छन् साथै गाँठागुठी पनि देखा पर्दछन् उनी तपाईंको संस्थामा चिन्तित रुपमा आएकी छन् उनको समस्या कसरी व्यवस्थापन गर्नुहुन्छ ?

### **Case 8**

२७ वर्षकी राधाको तल्लो पेट दुख्नुका साथै सेतो पानी बग्ने थालेको १ महिना भयो । उनको व्यवस्थापन गर्नुहोस् ।

### **Case 9**



---

६ वर्ष अगाडि महिनावारी बन्द भएकी आरती योनीबाट हल्का रगत मिसिएको पानीबग्ने समस्या लिएर तपाईंको संस्थामा आएकी छन, उनलाई कसरी व्वस्थापन गर्नुहुन्छ ?

---

### Summarize

Session with key messages on Protocol 4 related case management



Praise all the learners for their efforts.



*Tea Break*

*(15 Minutes)*



# Session -3.16

## Role Play based on Disease management and counseling



### Time

**Service Provider Training** 60 Minutes

**Training of Trainers** 60 Minutes



### Learning Objectives

By the end of session, trainee will able to

1. Management of different case by use PEN Protocol-3 for management of COPD and Asthma at primary health care setting



### Design of Implementation

#### Methods

- Instruction
- Role Play
- Group discussion
- Question answer

#### Materials needed

- Trainer's guidebook & Trainee's Manual
- Markers, newsprint, Meta-cards/sticky note



### Advanced Preparation

- Arrangement (Class room, Role play instruction)
- Arrangement of cases and identify the possible role and participants
- Ensure the availability of above mentioned materials/resources preparation
- Ensure availability of Nepal PEN Protocol, trainee manual

START  
UP



### Start Up Session

Introduce the Session and Session objectives with training methodology and contents to be taught (1 to 2 minutes)



## Activity Instruction



Brain Storming



Discussion and



Role play

### Activity 1: Formation of Group (Need to form previous day OR at 3<sup>rd</sup> Day)

**Step 1:** Formation of group 5 group

**Step 2:** Provide different cases to them (1 cases for 1 group)

**Step 3:** Assist by trainer (Not provide any answer but support the way of presenting)

**Step 4:** Presentation of cases as per protocol standard

**Step 5:** Larger group discussion whether that have miss the any steps direct by protocol

**Step 6:** Provide necessary feedback and again phrasing the main activities regarding the management of disease and counseling

<p><b>1. <u>Role Play Group 'A'</u></b> Related to Counseling (case related to tobacco or alcohol)</p>	<p><b>2. <u>Role Play Group 'B'</u></b> Related to Protocol 1 (Case should be hypertension and pre-diabetic)</p>
<p><b>3. <u>Role Play Group 'C'</u></b> Related to COPD</p>	<p><b>4. <u>Role Play Group 'D'</u></b> Related to Counseling (case related to physical activity or food)</p>
<p><b>5. <u>Role Play Group 'E'</u></b> Related to Cancer related</p>	<ul style="list-style-type: none"> <li>▪ Each team get 10 minute</li> <li>▪ Finally 10 minute for discussion</li> </ul>

### Summarize

Session with key messages on case management



Praise all the learners for their efforts.



## Theme 4:

Service delivery and community linkages and NCD prevention and care

---

प्रमुख नसर्ने रोग रोकथाम तथा स्याहार  
सम्बन्धि सेवा प्रवाह तथा सामूदायिक सम्बन्ध





# Session - 4.1

## Team support, communication and referral management



### Time

<b>Service Provider Training</b>	30 Minutes
<b>Training of Trainers</b>	30 Minutes



### Learning Objectives

By the end of session, trainee will able to

1. Concepts and create team based care and task shifting and manage communication at facility level
2. Process of referral flow, management and follow up of referred case
3. Orient and sharing information to other staffs of concern health facility



### Design of Implementation

#### Methods

- Brainstorming
- Presentation
- Group discussion
- Question answer

#### Materials needed

- Trainer's guidebook & Trainee's Manual
- Markers, newsprint, Meta-cards/sticky note



### Advanced Preparation

- Arrangement (Class room)
- Ensure the availability of above mentioned materials/resources preparation
- Ensure availability of trainee manual

START  
UP



### Start Up Session

Introduce the Session and Session objectives with training methodology and contents to be taught (1 to 2 minutes)



## Activity Instruction

---



### Activity 1: Discussion about the team care and peer coaching

#### Ask learners

- What is team based care
  - How do you manage team for NCD related case/client management at your facility?
  - Have you experiences of task shifting (registration including recording, assessment and diagnosis, treatment and counseling) and how do you manage at facility level?
  - How do you sharing of learned things with your colleges/staffs? Do have practice of peer coaching or education process
- 



### Activity 2: Continue Discuss the following content through interactive power point presentation on

#### Step 1: Interactive Discussion

- Meaning of team based care
- How to manage team based care in service delivery
- Task shifting in health care setting with examples
- Role and process of communication for effective team based care
- Management to provide information to clients/patients
- Importance of sharing of learned thing with colleague
- Process of sharing of learned things or information at facility level

#### Step 2: Followed by presentation with Interactive discussion

- What is your role in team based care... spell out the role (By provide the service block and present it and identify the responsible block)
-



---

### **Activity 3: Discussion about the referral management of NCD cases and financial support by government** *(Bippanna Nagarik Cosh)*

#### **Ask learners**

- Have you referred NCD related cases to the higher center
- How do you manage refer to higher facility (form fill up, refer counseling, communicate with higher facility and follow up referred case after return)
- Have you have any idea about the *(Bippanna Nagarik Cosh)*



---

### **Activity 4: Continue Discuss the following content through interactive power point presentation on**

---

#### **Step 1: Interactive Discussion**

- Concept about referral management
- Importance and things to be done during the referral
- How could establish the referral communication with higher center
- Possible centers for refer and things to consider
- *Bippanna Nagarik Cosh* and process to receive it
- Follow up case and knowledge building



**Tell participants to carefully read the content in Trainee's manual. If there are need any points for clarification.**

---

#### **Summarize**

Session with key messages on team based care, peer coaching and referral management



Praise all the learners for their efforts.

---



# Session - 4.2

## Community Mobilization and Engagement for NCD prevention and Control



### Time

<b>Service Provider Training</b>	30 Minutes
<b>Training of Trainers</b>	30 Minutes



### Learning Objectives

By the end of session, trainee will able to

1. Define the concepts of community mobilization in reference to NCD prevention and control
2. Identify the stakeholders for the community mobilization and engagement
3. Identify activities of community mobilization and engagement



### Design of Implementation

#### Methods

- Brainstorming
- Presentation
- Group discussion
- Question answer

#### Materials needed

- Trainer’s guidebook & Trainee’s Manual
- Markers, newsprint, Meta-cards/sticky note



### Advanced Preparation

- Arrangement (Class room)
- Ensure the availability of above mentioned materials/resources preparation
- Ensure availability of trainee manual

START  
UP



### Start Up Session

Introduce the Session and Session objectives with training methodology and contents to be taught (1 to 2 minutes)



## Activity Instruction



### **Activity 1: Discussion about the team care and peer coaching** **Ask learners (Ask 1 or 2 participants to share their experience)**

- Have you experiences of community mobilization in your service area

*(Share their experience on what types of events, what type of mobilization, how do you assist/involve in mobilization and what are the learning reflects from that mobilization. Assist them to explore the real things of community mobilization.)*

- Did you engage yourself and stakeholder in any community mobilization (type)-(participation in others program or/and organize by yourself)

*(Share their experience on what types of events, what type of mobilization, how do you assist/involve in identification and what are the learning reflects from that identification.*

*What type of support you provided or get from such identification and engagement.)*



### **Activity 2: Continue Discuss the following content through interactive power point presentation on**

#### **Step 1: Interactive Discussion**

- Meaning of community and mobilization
- Advantage of community mobilization
- Meaning of stakeholders and engagement
- Possible stakeholders at local level
- Role of stakeholders

*(Share other examples of success of community mobilization in prevention, control and management of other program in context of Nepal if necessary)*

#### **Step 2: Followed by presentation with Interactive Dissuasion**

- a. Attached news print at white board



- b. Make logical matrix (Listing of possible activities in logical frame with who, when, whom and resource)

SN	Activities	By whom	For Whom	How to manage resource	Outcome
-	-	-	-	-	-



**Tell participants to carefully read the content in Trainee's manual. If there are need any points for clarification.**

### Summarize

Session with key messages on community mobilization and engagement



Praise all the learners for their efforts.

## Refreshment (Time: 45 min)

### 5 minute Exercise



STEP 1  
10-20 SECONDS  
2 TIMES



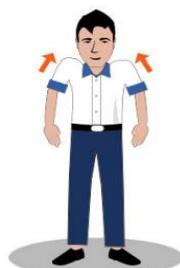
STEP 2  
10-15 SECONDS  
1 TIME



STEP 3  
10-12 SECONDS  
2 TIMES  
EACH SIDE



STEP 4  
15-20 SECONDS  
1 TIME



STEP 5  
3-5 SECONDS  
3 TIMES



STEP 6  
10-12 SECONDS  
1 TIME  
EACH ARM



STEP 7  
10-15 SECONDS  
1 TIME



STEP 8  
10-15 SECONDS  
1 TIME



Start lunch after completing exercise



*Lunch Break*

*(40 Minutes)*

## Session - 4.3

### Introduction to Recording and Reporting Tools of NCDs



**Time**

**Service Provider Training** 45 Minutes

**Training of Trainers** 60 Minutes



### Learning Objectives

By the end of session, trainee will able to

1. Conceptualize the recording and reporting, importance, used of recorded data
2. Introduce about the NCD related RR tools (OPD card, NCD Register and Monthly reporting)



### Design of Implementation

#### Methods

- Brainstorming
- Presentation
- Group discussion
- Question answer

#### Materials needed

- Trainer's guidebook & Trainee's Manual
- Markers, newsprint, Meta-cards/sticky note



### Advanced Preparation

- Arrangement (Class room)
- Ensure the availability of above mentioned materials/resources preparation



- Ensure availability of trainee manual
- 



### **Start Up Session**

Introduce the Session and Session objectives with training methodology and contents to be taught (1 to 2 minutes)



### **Activity Instruction**

---



### **Activity 1 : Discussion about the team care and peer coaching**

**Ask participants to share their experience**

- What is about recording and reporting
  - How do you currently manage recording and reporting
  - Challenges and your effort to manage RR problems at your health center
- 



### **Activity 2 : Continue Discuss the following content through interactive power point presentation on**

#### **Step 1: Interactive Discussion**

- Meaning of data, recording and reporting
  - Any recording and reporting
  - How to use recording and reporting during planning process
- 



### **Activity 3 : Continue Discuss the following content through interactive power point presentation on**

The presentation start with asking with participants about any experiences to use NCD related RR tools if yes any comments/suggestion

#### **Step 1: Interactive Discussion**

- Introduce about NCD related RR tools (OPD card, NCD register and Monthly reporting)
  - Instruction about the using process of tools
-



---

### Summarize

Session with key messages on community mobilization and engagement



Praise all the learners for their efforts.

---

## Session – 4.4

### Practice of Recording and Reporting Tools of NCDs



#### Time

**Service Provider Training** 45 Minutes

**Training of Trainers** 45 Minutes

---



#### Learning Objectives

By the end of session, trainee will able to

1. Record and report of data through NCD related RR tools (OPD card, NCD Register and Monthly reporting)
- 



#### Design of Implementation

##### Methods

- Brain storming
- Presentation with mini lecture
- Group discussion
- Question answer

##### Materials needed

- Power point slides and presenter’s note
  - Trainer’s guidebook & Trainee’s Manual
  - Laptop and Projector,
  - Markers, newsprint, Meta-cards/sticky note
- 



#### Advanced Preparation

- Arrangement (Class room, group discussion instruction)
  - Ensure the availability of above mentioned materials/resources preparation
-



- Ensure availability of exercise cases
- 



### **Start Up Session**

Introduce the Session and Session objectives with training methodology and contents to be taught (1 to 2 minutes)



### **Activity Instruction**

---



### **Activity 1: Case recording and reporting**



**Brain Storming**



**Discussion and**



**Presentation**

**Step 1:** Formation of group of paring (2 person in each group)

**Step 2:** Provide cases (10 cases that already discussed) (Give variety of case bundle relating to all diseases)

**Step 3:** Assist by trainer (Not provide any answer but support the way of presenting)

**Step 4:** Presentation of cases as per recording reporting

**Step 5:** discussion whether that have miss any things

**Step 6:** Provide necessary feedback and again phrasing the main activities regarding the reporting of cases

1. First Fill up OPD card
2. Fill up Register based on OPD card
3. Compile the record encode in register and fill up in monthly reporting form

1. Presentation of any one group and discussion
  2. Re-correct and Talley with other groups
- 
-



## Activity 2: Filling of monthly reporting by given cases

1. Give this cases to all participants
  2. Provide monthly reporting sheet
  3. Instruct to read and fill up monthly reporting sheet
- In the month of Bhadra 2074, 130 pts came to a HF among which 55 were follow up cases. Among follow up cases 5 male & 3 female had DM & HTN both, 4 female and 6 male had DM only and 14 male and 4 female were diagnosed with COPD. 3 had suspected breast cancer and 11 had suspected cervical cancer and 3 male child and 2 female adults had asthma. Among the F/U cases, 2 males had >30%, 3 males had risk 10-20%, 6 males had <10% risk whereas 1 female had >30%, and 6 females had <10% risk.
  - Among 75 New Cases, 10 females and 20 males had HTN, 5 males had COPD, 10 females and 5 males had Diabetes, 5 males had both HTN and DM, 3 females had both COPD and HTN and 9 had suspected Breast CA and 8 had Suspected Cervical CA. 20 males had 10-2-% risk, 10 males had <10% risk and 20 females had <10%.
  - The facility referred 85 patients to other higher health facility for further evaluation and 4 patients were referred in to your facility from illam hospital for medication.
  - There were 67 new cases in the month Shrawan 2074. It was sad to know that 5 NCD patients visiting your health post died in that month, out of which 1 died in RTA.
1. Presentation of any one group and discussion
  2. Re-correct and Talley with other groups

### Note

Ensure that the all participants able to fill up OPD card, Register and Monthly reporting

### Summarize

Session with key messages on recording and reporting



Praise all the learners for their efforts.



*Tea Break (15 Minutes)*

## Session – 4.5

### Development of PEN Work Plan and Evaluation



#### Time

**Service Provider Training** 30 Minutes

**Training of Trainers** 30 Minutes



#### Learning Objectives

By the end of session, trainee will able to

1. Able to advocacy to share and implement plan with responsible health facility



#### Design of Implementation

##### Methods

- Brain storming
- Presentation with mini lecture

##### Materials needed

- Power point slides and presenter’s note
- Trainer’s guidebook & Trainee’s Manual



- Group discussion
  - Question answer
  - Laptop and Projector,
  - Markers, newsprint, Meta-cards/sticky note
- 



## Advanced Preparation

- Arrangement (Class room, group discussion instruction)
  - Ensure the availability of above mentioned materials/resources preparation
  - Ensure availability of Work Plan Sheet
- 



## Start Up Session

Introduce the Session and Session objectives with training methodology and contents to be taught (1 to 2 minutes)



## Activity Instruction

---



### Activity 1 : Discussion about work plan

**Ask participants to share their experience**

- Have you any experiences to develop NCD related smart action plan
  - How do you advocacy to implement this action plan in your facility
- 



**Activity 2 : Continue Discuss the following content through interactive power point presentation on**

### Step 1: Interactive Discussion

- Introduce about the smart action plan
  - How could we advocate to implement the smart action plan
- 
-



### Activity 3: Development of Action plan based on your facility status of management of NCD prevention and control

**Step 1:** Formation of group of paring (5 person in each group)

**Step 3:** Assist by trainer to development of workplan

- Analysis of current situation
- Analysis our objectives and vision
- Identify the gap
- List the activities to fulfill the gap
- Identify the resources
- Define time period, responsibility
- Development of monitoring indicator
- Define time period to follow up of developed action plan

**Step 4:** Presentation of developed action plan

**Step 5:** Discussion whether that have miss the any things

**Step 6:** Provide necessary feedback and again phrasing the main activities regarding the response of gap

**Sample as follows**

<p>स्वास्थ्य मन्त्रालय स्वास्थ्य सेवा विभाग स्वास्थ्य शाखा र कार्यालय कार्य योजना फारम</p>							
<p>लक्ष्य : .....</p> <p>उद्देश्य (हरु).....</p>							
क्र.सं.	समस्याहरु	कारणहरु	समाधानका उपायहरु	कसले	कहिले	कार्यान्वयनको अवस्था	प्रमाणित गर्ने (Means of Verification)
१							
२							
३							
	कार्यान्वयन समूहको नामावली						
	१.			२.		३.	
<p>श्रोत:</p> <p>क्र.सं. १ को समस्या वा योजना कार्यन्वयन गर्ने स्रोत ब्यबस्थापन.....</p> <p>क्र.सं. २ को समस्या वा योजना कार्यन्वयन गर्ने स्रोत ब्यबस्थापन.....</p>							



---

क्र.सं. ३ को समस्या वा योजना कार्यन्वयन गर्ने स्रोत ब्यबस्थापन.....

---

**Note**

Ensure that the all participants will developed and implement of action plan as improvement pf NCD services, as advocacy tools and management of service at facility level

---

**Summarize**

Session with key messages on recording and reporting



Praise all the learners for their efforts.

---



# Last Day at Ending

## OA-9: Recap of 4<sup>th</sup> Day



### Time

<b>Service Provider Training</b>	15 Minutes
<b>Training of Trainers</b>	15 Minutes



### Objectives of Activity

Enforce trainee about the recalling of content deliver previous day

1. Status Learn the contents of fourth/last day
2. Review, recall and reinforce of content delivered same day



### Design of Implementation

#### Methods

- Question answer and quiz
- True or False and Short question

#### Materials needed

- Questionnaire sheet
- Clock



### Introduction:

A review is done to evaluate the existing knowledge of the participants which then helps facilitators gauge the depth of knowledge and information to be delivered during the training. The test involves quiz type question answer and short question as necessary or true/false questions to assess basic knowledge that must to know based on the content delivered previous day. It should preferably cover all important chapters to be discussed during the session.



### Trainer Instruction

#### Related to Summary

1. Trainer already nominate person or trainer his/her self could ask the question.
2. Trainer should facilitate to recall summary in case of wrong answer, confusion or anything about unclear
3. Use the review question of 4<sup>th</sup> Day/Last day review from annex



# OA-10: Post Testing



## Time

<b>Service Provider Training</b>	15 Minutes
<b>Training of Trainers</b>	20 Minutes



## Objectives of Activity

Trainee and training Management team aware on

4. Identify the knowledge, information, skills and attitude status of participants
5. Evaluation changes knowledge and skills level during the training period



## Design of Implementation

### Methods

- Multiple choice question tick
- True or False and Short question

### Materials needed

- Pretest questionnaire
- Clock

## Introduction:

A post-test is done to evaluate the existing knowledge of the participants which then helps evaluation of knowledge and skills to be delivered during the training. The test involves multiple choice questions (MCQs) or true/false questions to assess basic general knowledge based on the content being studied. It should preferably cover all important chapters to be discussed during the session.



## Trainer Instruction

### Related to Pre testing

Trainer explains the objectives of the post test and the time given for it. He/she asks the participants to put a symbolic code on the paper instead of their name for anonymity. After the completion of the test, the facilitator collects them and issues a score. And present it to all participants about their achievements of training. The model questions for the pre/post-test can be found in **annex 1**.



# OA-11: Closing and Certification



## Time

<b>Service Provider Training</b>	15 Minutes
<b>Training of Trainers</b>	30 Minutes



## Objectives of Activity

Ensure that the trainee are

1. Certified by authorization and officially ending of training session



## Design of Implementation

### Methods

- Summary telling from reporter of day
- Speech

### Materials needed

- Not specific

### Introduction:

- Step 1:** Officially chairing as per need
- Step 2:** Summary is done to about the key knowledge learn, benefits of training, management of training, skills of trainer. Only from 1 to 2 participants
- Step 3:** Speech by trainer and guest
- Step 4:** Certification to all participants (Those only who are involved full time as pet training norms in all days)
- Step 5:** Closing remarks



Praise all the Participants, Trainers, Coordinators, Managers and Office that directly involved for their kind efforts.



## Annex 1

### Participants' registration and Daily attendance sheet

**Nepal Government**

.....

Training: PEN training to health worker

Venue

Date: .....

SN	Name	Position	Facility Name	Phone no	Stationary Received Sig	Attendance Day			
						1	2	3	4
1									
2									
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									

*So on*



## Annex 2: Pre Test and Post Test Questions (For Service Provide)

### नसर्ने रोग सम्बन्धि NCD PEN तालीम तालिम ज्ञान सम्बन्धि PRE TEST & POST TEST प्रश्नावली

तालिम सहभागीको नाम.....

#### कृपया सही उत्तरमा गोला लगाउनुहोस्

१. PEN protocol अनुसार प्रमुख ४ नसर्ने रोगहरु मध्ये कुन पर्दैन ?  
(क) मुटु तथा रक्त नलिका रोग (ख) मधुमेह  
(ग) क्यान्सर (घ) मानसिक रोग
२. निम्न लिखित व्यवहारहरु मध्ये नसर्ने रोगको कारण कुन होईन ?  
(क) धूम्रपान तथा सुर्तिजन्य पदार्थको प्रयोग (ख) चिल्लो खाने कुरा  
(ग) मध्यपान (घ) नियमित हिडाई
३. हामीले कम्तिमा पनि निम्न शारीरिक गतिविधि गर्नुपर्छ ?  
(क) आफ्नो घरको दैनिक काम गरेपछि अरु गतिविधि गर्नु आवश्यक छैन  
(ख) दैनिक एक घन्टा हिडनुपर्छ  
(ग) हप्तामा कम्तिमा ५ दिन आधा घन्टा छिटो छिटो हिडनुपर्छ  
(घ) विहान बेलुकि मन लागे जति हिडनुपर्छ
४. नुनको दैनिक औषत प्रयोग कति सम्म हुनु पर्दछ ?  
(क) ५ ग्राम भन्दा कम हुनपर्दछ (ख) १० ग्राम भन्दा कम हुनपर्दछ  
(ग) ८ ग्राम भन्दा कम हुनपर्दछ (घ) व्यक्तिको स्वादमा भर पर्दछ
५. मधुमेहका रोगीले PEN Protocol अनुसार आखाँको जाच कम्तिमा ?  
(क) प्रत्येक ६ महिनामा गर्नुपर्छ (ख) प्रत्येक बर्ष बर्ष मा गर्नुपर्छ  
(ग) प्रत्येक २ बर्ष मा गर्नुपर्छ (घ) आखाँमा समस्या देखिए मात्र गर्नुपर्छ
६. मधुमेहका रोगीले आलु, चामल, गुलियो खानेकुरा, मासु .....  
(क) कहिल्यै पनि खानु हुदैन (ख) थोरै मात्रामा खान हुन्छ  
(ग) मन लागे जति खानु हुन्छ (घ) औषधी खाए पछि खाना बार्नुपर्दैन
७. तल उल्लेख गरिएका मध्ये कुन चाहिँ first degree relatives पर्दैनन् ?  
(क) बुवा/आमा (ख) दाजुभाई (ग) दिदीबहिनी (घ) हजुरआमा/हजुरबुवा



८. सुतिजन्य पदार्थ नियन्त्रण ऐन २०६८ अनुसार १८ बर्ष मुनि तथा गर्भवति महिलालाई सुतिजन्य पदार्थ बिक्री वितरण गरेमा कति सम्म जरिवाना हुने व्यवस्था छ रु  
(क) रु १०० (ख) रु ५००  
(ग) रु १००० (घ) रु १००००
९. तल मध्ये कुनचाहि value CVD risk estimation मा बढी भरपर्दो हुन्छ ?  
(क) Body weight (ख) BMI (ग) Waist circumference (घ) Height
१०. PEN प्रोटोकलको Healthy diet अनुसार दिनको कति पसर(servings) फलफुल वा हरियो तरकारी/साग सब्जी खानुपर्छ ?  
(क) ३ पसर (servings) (ख) ५ पसर (servings)  
(ग) ४ पसर (servings) (घ) २ पसर (servings)
११. WHO/ISH risk prediction chart प्रयोग गर्दा तलको मध्ये कुन risk factor लाई समावेश गरिदैन ?  
(क) धुम्रपान (ख) रक्तचाप (ग) कोलेस्ट्रॉल (घ) मध्यपान
१२. रगतमा शुगरको मात्रा कति भए मधुमेह हुन्छ ?  
(क) Random Blood Glucose >250mg/dl, लक्षण सहित  
(ख) Fasting Blood Glucose >=126mg/dl  
(ग) Random Blood Glucose >=200mg/dl, लक्षण सहित  
(घ) कम्तिमा २ चोटि रगत जाच गर्दा ख र ग मध्ये दुवै  
(ङ) कम्तिमा २ चोटि रगत जाच गर्दा ख र ग मध्ये कुनै एक
१३. Body Mass Index (BMI) अनुसार वयस्क व्यक्तिमा मोटोपना (Obesity) भन्नाले ?  
(क) BMI 25-30 (ख) BMI >30 (ग) BMI 25-28 (घ) BMI 28-30
१४. स्तनको जाँच गर्दा निम्न मध्ये कुन स्थान/अंगको जाँच गर्न छुटाउन हुदैन ?  
(क) पाठेघरको मुख (Cervix) (ख) काखी (Axilla)  
(ख) आँखा (Eye) (घ) मुटु (Heart)
१५. धुम्रपान गर्ने व्यक्ति ले कम्तिमिमा कति समय धुम्रपान छाडेकोलाई non smoker भनेर भनिन्छ ?  
(क) ३ महिना भन्दा कम (ख) ३-६ महिना  
(ग) ६-१२ महिना (घ) १२ महिना भन्दा बढी
१६. उत्प्रेरणात्मक अन्तवार्ताको 5A मा कुन पर्दछ ?  
(क) Ask, Assist, Advise, Avoid, Argue (ख) Assist, Ask, Arrange, Advise, Argue  
(ग) Ask, Assist, Advise, Assess, Arrange (घ) Ask, Assist, Advise, Assess, Avoid



१७. प्राथमिक स्वास्थ्य तहमा पाठेघरको मुखको क्यान्सर को screening को लागि तलको मध्ये कुन जाँच उपयुक्त हुन्छ ?

- (क) Pap smear test (ख) VIA  
(ग) Speculum examination (घ) Biopsy/cytology

१८. COPD को उपचारका लागि तलका मध्ये कुन चाहिँ उपाय सबैभन्दा महत्वपूर्ण हो ?

- (क) Chest physiotherapy (ख) Smoking cessation  
(ग) Salbutamol (घ) Antibiotics

१९. तल दिईएको Fat को प्रकार मध्ये सबैभन्दा हानिकारक कुन लाई मानिन्छ ?

- (क) Saturated (ख) Poly unsaturated  
(ग) Mono unsaturated (घ) Trans fat

२०. तल उलेख गरिएका मध्ये कुन चाहिँ औषधी चलाउनु पूर्व मिर्गौला को जाँच अनिवार्य गर्नुपर्छ ?

- (क) Enalapril (ख) Amlodipine  
(ग) Glimepiride (घ) Atenolol

21; How many tools are developed for recording and reporting of NCDs

- (क) 2 (ख) 3  
(ग) 4 (घ) 5

22: During the referral of patients what must do by the healthworker except

- (क) About transportation (ख) About referred health facility  
(ग) About the Family condition (घ) About Finance need

23: Every health facility should developed the Action plan primarily for

- (क) Tracking of NCD Services (ख) For identification of Financial resource  
(ग) For using as advocacy tools (घ) For completion of duty role

\*\*\*धन्यवाद\*\*\*



## Annex 3:

### Review Question of First Day (For Service Provide)

Review Questions of Day 3 for Day 4

- **Help the reviewer to conduct the session and help to clarify the confusions if arise.**
- **Praise them for answering the questions and thank the reviewer for successfully conducting the session**

1. What is full form of PEN?
2. List the name of protocol include in PEN
3. List the 3 most importance of PEN that should incorporate in PHC setting
4. What ate best buys methods of tobacco
5. What are the best buys methods of physical activities that used in your community
6. What are the steps of behavior change counseling's process
7. What type of element that used during behavior change counseling
8. What are the 5A and 5R
9. What are healthy and un healthy foods
10. How many grams only take salt for one day
11. What type of physical activities should necessary for adult



### Annex 3:

## Review Question of Second Day (For Service Provide)

- Help the reviewer to conduct the session and help to clarify the confusions if arise.
  - Praise them for answering the questions and thank the reviewer for successfully conducting the session
1. What about the CVD and its type with examples
  2. What is Hypertension?
  3. What are the risk factors for MI and stroke
  4. What are the steps of blood pressure measurement
  5. Types of hypertension and its indicator
  6. What are the clinical feature of Diabetes
  7. What are the drugs commonly given for hypertension and dose at HP level ?
  8. What are the drugs commonly given diabetes and dose at HP level ?
  9. What are the important care for Diabetes
  10. What does mean of WHO/ISH risk prediction chart and its importance
  11. What are the limitation of WHO/ISH risk prediction chart
  12. Interpret the 20 risk factor of CVD
  13. What are the indicator should necessary to calculate the CVD
  14. What is the formula to calculate the BMI
  15. What are the steps of measurement of glucometer (Demonstrate)
  16. Why waist circumference is most important than BMI for estimating the risk
  17. What are the question for general checkup for patients if coming with symptoms of hypertension
  18. What are the emergency condition should refer according to protocol 1



## Annex 3:

### Review Question of Third Day (For Service Provide)

- Help the reviewer to conduct the session and help to clarify the confusions if arise.
  - Praise them for answering the questions and thank the reviewer for successfully conducting the session
1. What is bronchial asthma?
  2. What are the risk factors for asthma?
  3. How would you differentiate controlled asthma from uncontrolled?
  4. What are the features of severe asthma?
  5. What are the drugs commonly given for controlled asthma?
  6. How would you differentiate asthma from COPD?
  7. What are the major risk factors for COPD in the context of Nepal?
  8. How could you differentiate COPD from asthma using PEF METER value?
  9. What are the management modalities of COPD according to PEN protocol?
  10. Show how to use DPI/MDI correctly
  11. What is cancer? What are the common cancers for male and female in Nepal?
  12. Tell few points on how would you differentiate benign lump from malignant
  13. Mention some major symptoms and signs of breast cancer
  14. Mention some major symptoms and signs of cervical cancer
  15. What are the important components of breast health examination
  16. Why is early diagnosis and early referral important in suspected cases of cancer?



### **Annex 3: Review Question of Fourth Day (For Service Provider)**

- Help the reviewer to conduct the session and help to clarify the confusions if arise.
  - Praise them for answering the questions and thank the reviewer for successfully conducting the session
1. What are the steps of breast self examination
  2. Why early detection is most important for cancer management
  3. What are the risk factors for breast cancer
  4. What do you do if you identify the mobile lump at breast
  5. What are the things should consider during the provide information to patients families
  6. What should do by health worker at time of refer
  7. What are the steps of receiving the *Bippnna Nagarik upachar cosh* support
  8. What are the possible stakeholder of community mobilization
  9. List the activities that could implement in your facility area to prevent and control of NCD at low cost
  10. List the RR tools



## Annex 4

### Contributors

#### Core technical working team members of Development of Trainer's Book

S.N.	Name	Designation	Organization
1	Binod Regmi	Technical Coordinator	EDCD/WHO
2	Sudip Ale Magar	PHO	PPD/MOHP
3	Dr Anup Bikram BC	District Coordinator	EDCD/WHO-Kailai
4	Dr. Bibek Raj Paudel	Medical Officer	PHCC, Shivanagar,
5	Dr. Milan Malla	Medical Officer	PHCC, Burtibang
6	Dr. Sagar Aryal	District Coordinator	EDCD/WHO-Ilam

#### List of Participants of the PEN Trainer's Book Development workshop

S.N.	Name	Designation	Organization
1	Dr. Bibek Kumar Lal	Director	EDCD
2	Mr Jhalak Sharma Paudel	Director	
3	Dr. Phanindra Pd Baral	Chief	NCD and Mental Health Section/EDCD
	Jiwan Malla	Sr. PHA/Chief	Curriculum Development Section/NHTC
4	Dr. Ramraja Panthi	Sr. IMA	NHTC
5	Dr Basudev Karki	Sr. Consultant Psychiatrist	EDCD
6	Dr. Bhakta KC	Sr. HEA	NHEICC
7	Dr Narendra Jha	Chief	Training Accrediation and Regulation Section/NHTC
8	Dr. Ishwor Upadhaya	Sr. IMO	NHTC
9	Dr. Lonim Prasai Dixit	NPO	WHO
10	Ashesh Regmi	PHO	EDCD
11	Sudip Ale Magar	PHO	PPD/MOHP
12	Binod Regmi	Technical Coordinator	EDCD/WHO
	Dr. Anup Bikram BC	District Coordinator	EDCD/WHO-Kailai
13	Dr. Bibek Raj Paudel		
14	Dr. Milan Malla		



15	Dr. Sagar Aryal	District Coordinator	EDCD/WHO-Ilam
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# PEN Training Trainer's Guide

स्वस्थ हुनु भनेको ABCDE जस्तै सजिलो छ । त्यसैले

<b>A</b> void alcohol मदिरापान नगर्ने	
<b>B</b> e physically active शारीरिक रूपमा सक्रिय रहने	
<b>C</b> ut down on salt and sugar नुन र चिनीको कम प्रयोग गर्ने	
<b>D</b> on't use tobacco products सूर्तिजन्य पदार्थको सेवन नगर्ने	
<b>E</b> at plenty of fruits and vegetables फलफूल र सागासब्जी प्रशस्त खाने	

स्वास्थ्य जीवनशैली अपनाउने र आवधिक रूपम जाँच गरिराखेमा