Manual of Operations

Prevention and Control of Chronic Lifestyle-Related Noncommunicable Diseases in the Philippines

World Health Organization
Western Pacific Region

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Foreword

The prevention and control of chronic, lifestyle-related, major noncommunicable diseases (NCDs), particularly, cardiovascular diseases, cancers, diabetes mellitus and chronic respiratory diseases, has been traditionally implemented as separate programs, each having its own set of policies, protocols and interventions. In the last ten years, the approach towards NCD prevention and control has focused on their common risk factors, specifically, tobacco and alcohol use, physical inactivity and unhealthy diet. These NCD risk factors are prevalent worldwide and becoming more common in the Philippines. As a response to this growing challenge, DOH has launched its promotion of healthy lifestyle. Promotion of healthy lifestyle aims to increase awareness of people on the common risk factors of NCD and to promote healthy diet and nutrition, physical activity, avoidance of tobacco and alcohol.

Initial reforms in the health sector is also part of the efforts to respond to the growing concern on NCD, particularly in establishing supportive environment at the national and local levels and in forging a more cohesive partnership between the public and private sector. For example, BFAD plays a critical role in ensuring the availability of quality food products in the market through stricter compliance to food quality control and product labelling rules; and PhilHealth explores also sustainable financing for a wider array of preventive measures as well as benefit packages for hypertension and diabetes.

This Manual of Operations on the Prevention and Control of Chronic Lifestyle-Related Noncommunicable Diseases in the Philippines is an attempt by the DOH to put in one document the guidelines, policies and standards in the delivery of an integrated, comprehensive and community-based NCD prevention and control services under a health sector reform orientation. It aims to translate into actionable points the national policies and guidelines for the local level. Most of these guidelines were adopted from the existing program manuals, particularly on cardiovascular diseases, cancer control and management, diabetes mellitus and asthma, updated with the new integrated approach on common risk factors. Best practices on healthy lifestyle promotion from global and local experiences are also included in this document.

The prevalence of major NCDs continues to grow, and countries cannot be complacent. I therefore encourage all entities concerned, particularly the Local Government Units to act now on the prevention and control of NCDs. I urge all concerned providers and promoters of healthy lifestyle in both public and private sector to make this Manual of Operations as part of their day-to-day reference in the delivery of health care and services. It is my hope that through this Manual of Operations, each of us can make a contribution to stop the increase of NCDs in our country.

Francisco T. Duque III, MD, MSc
Secretary of Health

Message

Globally, the epidemic of noncommunicable chronic diseases threatens economic and social development, and the lives and health of millions of people. In 2005, an estimated 35 million people worldwide died from chronic diseases, double the number of deaths from all infectious diseases (including HIV/AIDS, malaria, and tuberculosis), maternal and perinatal conditions, and nutritional deficiencies combined. Deaths due to chronic diseases are projected to increase by 17% by 2015.

In the Philippines, NCDs are among the top killers and cause more than half of all deaths annually. Hypertension and diseases of the heart are among the ten leading causes of illnesses each year. Prevalence of risk factors, particularly tobacco and alcohol use, unhealthy diet, and sedentary lifestyle is high among adults and increasing among adolescents and children.

Fortunately, there are proven and tested cost-effective interventions to prevent premature deaths, diseases, and disabilities from noncommunicable diseases and countries can make significant improvements in chronic disease prevention and control. The major causes of NCDs are known, and if these risk factors were eliminated, at least 80% of all heart disease, stroke and type 2 diabetes and over 40% of cancer would be prevented.

WHO supports and provides guidance to countries via the Action Plan for the Global Strategy on Noncommunicable Diseases and the Regional Framework for NCD Prevention and Control in the Western Pacific Region These guidance documents take off from the policy and program gains of the Framework Convention for Tobacco Control and Global Strategy for Diet, Physical Activity and Health.

This manual of operations for the prevention and control of chronic lifestyle-related noncommunicable diseases is timely and it is likely to be a useful guide in the development or strengthening of national and local policies and programs on NCD prevention and control. It is hoped that this will be used widely by health program managers and other key stakeholders to carry on advocacy for NCD prevention and control and continue to save lives and prevent diseases and disability from NCDs.

Congratulations to DOH for coming out of this relevant document. Mabuhay!

Dr Soe Nyunt-U,
WHO Representative in the Philippines

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Section 1: The Manual of Operations

Major noncommunicable diseases (NCDs), also referred as lifestyle-related diseases (LRDs), include cardiovascular diseases, diabetes mellitus, cancers and chronic respiratory diseases. They are currently among the leading causes of mortality and morbidity in the country and are likely to persist as a major public health concern unless an integrated and comprehensive response is established in local communities.

This Manual of Operations considers the above health situation on NCDs and acknowledges the critical role of the health sector in addressing the problem. It attempts to fill the need primarily of health workers for a reference guide on prevention and control of major NCDs. The document discusses guiding principles, policies, standards and guidelines in the adoption, implementation, and management of an Integrated NCD Prevention and Control initiative at the local level.

The normative policies, standards, and guidelines mentioned in the document were adapted and/or developed from guidance documents from the World Health Organization (WHO), Department of Health (DOH), and national partners, particularly the professional organizations which have assisted DOH in the development of program guidelines for major NCDs including cardiovascular diseases, diabetes mellitus, and cancers. Insights from demonstration projects and local experiences on NCD prevention and control were also considered. The successes of local government units in implementing innovative strategies and achieving favorable health outcomes provide inspiration and additional guidance in finalizing this document.

1.1 Objectives

This Manual of Operations for the Prevention and Control of Lifestyle-Related Diseases aims to:

1. Guide health service providers and allied groups in planning, delivering and managing appropriate services for prevention and control of NCDs;

2. Provide advocacy support for local officials, health program managers, professionals and other concerned groups to invest resources for relevant interventions; and

3. Serve as reference for national, regional and provincial program coordinators, other government agencies and non-governmental organizations (NGOs) in providing support to local implementation.

1.2 Target Users

This Manual of Operations is primarily intended for the national, regional and local health service providers, and other stakeholders involved in the promotion of healthy lifestyle, particularly at the level of communities. Local health service providers include those at the primary, secondary and tertiary level of care in the community, both in the public and private sector.

The manual provides guidance for national, regional, provincial, municipal and city health offices as they adopt, implement, and manage an integrated and comprehensive approach towards prevention and control of lifestyle-related diseases. Other stakeholders outside the health sector (e.g. education, agriculture, nutrition, social welfare, etc.) will also learn from this Manual on how they can participate and interact with the health sector on various concerns of NCD prevention and control.

1.3 Content Overview

This Manual provides the basic principles, procedures and policies in the planning,

implementation, monitoring and evaluation of an integrated and comprehensive program on the prevention and control of lifestyle-related diseases at the local level. It is divided into nine sections. The first three sections provide an introduction of the Manual, overview of the NCD prevention and control program and how it can be established at the local level. Sections 4 to 9 describe the components of the NCD Prevention and Control Program with emphasis on strengthening the health systems as embodied in the DOH's health sector reform initiative called Fourmula 1. Section 10 provides pointers and suggests next steps to ensure sustainability of interventions.

Section 1: The Manual of Operations
This section introduces and describes the objectives and target users of the Manual and gives an overview of the rest of the contents.

Section 2: The Prevention and Control of NCDs
This section describes the status of major NCDs in the country and presents past and current initiatives in addressing them. It briefly introduces the National Policy and Strategic Framework in the Prevention and Control of NCDs which can be read fully in Appendix A. The roles of health workers and other stakeholders in NCD prevention and control are also presented.

Section 3: NCD Prevention and Control Program at the Local Level
This section describes the steps that health workers together with their local government and partners can do to establish, implement their local program on NCD Prevention and Control.

Section 4: Promoting Healthy Lifestyle
This section describes strategies in promoting healthy lifestyle, provides examples of IEC messages and advocacy materials that the local implementers may want to adopt or initiate.

Section 5: Building Healthy Public Policies and Supportive Environments
This section defines the policy development process and gives examples of national and local policies that support NCD prevention and control. Interventions on improving the physical environment to promote healthy lifestyle are also discussed.

Section 6: Establishing Coalitions and Partnerships
This section identifies the stakeholders and potential partners and describes the steps in forming coalitions and partnerships for NCD prevention and control.

Section 7: Making Health Services Available and Accessible
This section sets the essential package of health services that must be provided to high risk clients for the prevention and control of NCDs. It provides coverage on essential services on: (1) risk factor assessment, (2) lifestyle modification, (3) screening and diagnoses, (4) management of the four major NCDs; and (5) rehabilitation and palliative care.

Section 8: Strengthening Program Management
This section describes how the NCD Prevention and Control Program can be properly supported through capacity building/training of health workforce and other key stakeholders, supervision, and surveillance, monitoring and evaluation.

Section 9: Ensuring Sustainable Health Care Financing
This section defines the principles and guidelines to ensure sustainable financing of NCD prevention and control program.

Section 10: Sustaining Initiatives and Planning for the Future
This section provides inputs on ensuring sustainability of interventions and meeting potential challenges in the future.

1.4 Scope and Limitations

This Manual of Operations attempts to provide the minimum standards needed for NCD prevention and control at the local level. It specifies the expected roles and functions of health workers at the national, regional and local level and provides guidance on the essential policy and program elements which include promoting healthy lifestyle, building coalitions and partnerships, and strengthening health systems to prevent and control NCDs.

The manual provides a comprehensive mix of related information to guide feasible and sustainable action on prevention, treatment, rehabilitation and palliation strategies for lifestyle-related diseases. However, it does not contain detailed discussions on specific program strategies nor does it provide a complete listing of clinical protocols or procedures in the sphere of secondary or tertiary care for major NCDs.

This manual is a work in progress. As new learning emerges and new initiatives develop, the opportunity to improve the document should always be considered.

1.5 How to Use this Manual

This Manual is intended for health workers at the national, regional and local level. Here is a suggestion how this manual can be used:

- Read Sections 1-3 to have a comprehensive overview on NCD prevention and control program. Read carefully the expected roles and functions of health workers and identify those most needed and relevant to own level and setting. Learn how to establish the local NCD prevention and control program by going through the suggested steps.
- Read Sections 4-9 for specific guidelines on the six components of NCD prevention and control. Assess the status and achievements of local settings in the implementation of these key components of NCD prevention and control program. Consider the recommended indicators as benchmarks.
- Read Section 10 for pointers in ensuring sustainability of interventions and planning for next steps.

Section 2: The NCD Prevention and Control Program

In recent years, the NCD Prevention and Control Program of DOH has achieved significant milestones in addressing the public health problem on lifestyle-related diseases. One of the most notable innovation is the implementation of the integrated approach to reduce mortality, morbidity, and disability from NCDs. This is done through the promotion of healthy lifestyle with focus on addressing the common risk factors leading to NCDs.. Demonstration projects and local experiences in implementing and managing NCD interventions and activities in local government units (LGUs) have likewise shown successes, and have helped enriched the program to what it is now.

2.1 Burden of Noncommunicable Diseases (NCDs)

Noncommunicable diseases (NCDs) are considered a major public health concern worldwide. They account for 60 percent of total deaths globally (with 40 million deaths estimated occurring annually), and contributes to 40 percent of universal disease burden annually. It is projected that if no action is done in the present, these rates would increase to as high as 73 percent to total deaths and 60 percent to disease burden respectively by 2020 (WHO, 2005).

The Philippines, like other developing countries, exhibits similar increasing trend of NCDs. More than half (58%) of total deaths in the country in 2003 were caused by NCDs Diseases of the heart and vascular system made up almost one-third (30.2%) of all deaths (Philippine Health Statistics, 2003). Other NCDs in the top list include malignant neoplasm, chronic obstructive pulmonary diseases (COPD) and diabetes mellitus. NCDs have replaced the positions of infectious diseases particularly pneumonia and tuberculosis as top-most common causes of deaths.

Majority of these NCDs are linked by common preventable risk factors which include tobacco use, unhealthy diet, physical inactivity, and alcohol use. The 2003 Food and Nutrition Research (FNRI) Study showed that 90 percent Filipinos have at least one or more of NCD risk factors. Prevalence of risk factors among Filipino adults are as follows: smoking (34.8%), hypertension (22.5%), overweight (20.0%) and obesity (4.9%), high blood sugar (4.6%) and abnormal cholesterol levels (8.0%). It is also estimated that about two thirds (60%) of adults are physically inactive. More than half of adult males (56%) and 12 percent of adult females are current smokers.

The NCD risk factors are not only prevalent among adults. Alarmingly, younger children are already showing the propensity to becoming overweight at an early age Prevalence of overweight among adolescents 9-11 years old had increased two folds from 2.4% in 1993 to 4.8% in 2005. Similarly, the prevalence rate of overweight for children 6-10 years old doubled from 0.8% in 2001 to 1.6% in 2005 (Philippine Nutrition Facts and Figures, 2005). Numerous studies have shown a tendency for obese children to remain obese in adulthood.

Twenty two (22) per cent of teenagers currently smoke cigarettes (Philippines Global Youth Tobacco Survey, 2007). About 30% are physically inactive, spending three or more hours per day sitting and watching television, playing computer games, talking with friends, or doing other sitting activities. (Source: Philippines Global School-based Student Health Survey, 2007

Non-communicable diseases causes people to fall into poverty and create a downward spiral of worsening poverty and illness. They also undermine a country's economic development.

The cost of care for chronic diseases is often high, to the detriment of the poor. A study by Higuchi (2009) on costs, availability, and affordability of diabetes care in the Philippines indicate that the median out-of-pocket expenditures for out-patient care is PhP 687 and hospitalization is PhP 8,580. Median daily cost of maintenance medicines is PHP 25/day. Medicines too in general are more expensive compared with other Asian countries. Not surprisingly among diabetics, only 69% are able to sustain regular consultations, 76% maintain regular medication, and 40% maintain regular laboratory tests. Social health insurance covers 79% of those in the formal sector, but lowest at 15% among the informal sector.

2.2 Early Developments in NCD Prevention and Control

The Noncommunicable Disease Prevention and Control Program (NCDPCP) started in 1986 with three major parallel sub-programs focused on major non-communicable diseases. The disease-based approach was implemented down to local levels for about 15 years, with some successes.

In 2000, the Philippines shifted gear towards an integration approach, taking cue from the WHO Global Strategy for the Prevention and Control of NCDs. Milestones in the prevention and control

Table 1. Milestones in NCD Prevention and Control Efforts in the Philippines

2000
- External program evaluation study conducted and served as the basis for integration approach.
- Project Framework for the Integrated Community-Based NCD Prevention Control Program for demonstration developed.
- Management of NCD programs transferred from the Noncommunicable Disease Control Service to the Degenerative Disease Office under the National Center for Disease Prevention and Control (NCDPC).
- Health Sector Reform Agenda introduced and advocated for changes in the health sector particularly in the areas of service delivery, governance, financing and regulations; It facilitated the integration of NCDPC-related efforts.

2001
- Pateros and Guimaras mobilized as the demonstration sites for the community-based integrated NCD prevention and control project (INCDPCP).
- Training Module for Health Service Providers on the INCDPCP developed, and utilized for nationwide training of local health staff.

2002
- INCDPCP formally launched in Pateros and Guimaras.
- Healthy Lifestyle approach evolved with due recognition of 3 major risk factors: physical inactivity, tobacco use and unhealthy diet;
- DOH and Philippine Heart Association staged a comprehensive advocacy program on the prevention and control of cardiovascular and other chronic diseases;
- Tobacco Regulations Act (Republic Act 9211) passed.

2003
- "Mag HL Tayo Campaign" launched.
- Guinness Record for largest number of participants in aerobics display earned.
- Nationwide training of regional NCD coordinators and health education and promotion officers (HEPOs) on the promotion of HL conducted.
- Integrated NCD Prevention and Control Strategy Framework developed;
- National Nutrition Council incorporated support for non-communicable disease prevention and control in the Philippine Plan of Action for Nutrition.

2004
- Philippine Coalition for the Prevention and Control of NCDs formally organized.

2005
- Advocacy with commercial food establishments to offer healthier menu options initiated.
- Key officials and technical staff of the national government agencies (DILG, DepED, DSWD, DOT, etc.) trained on HL.
- A policy development study identifying policy agenda in support to the integrated NCDPC strategy completed;
- Assessment on the demonstration project in Guimaras and Pateros conducted and showed promising results.
- Presidential Decree on the Decade of Healthy Lifestyle 2005-2015 issued;

2006
- Pilot study on breast cancer intervention study in Pateros and pilot study in Guimaras on community-based CRD initiatives initiated;
- Bi-annual Public Health Forum on NCD Program and Control started;

2007
- Updated Framework for Action for NCD Prevention and Control in the Philippines developed based on WHO Global Plan of Action and Western Pacific Regional Strategy for Prevention and Control of NCDs.

of NCDs in the Philippines on this regard are enumerated in Table 1.

2.3 The Integrated NCD Prevention and Control Program Framework

The Integrated NCD Prevention and Control Program has the following key characteristics:

- Uses the integrated approach;
- Provides comprehensive services along the continuum of care;
- Promotes the primary health care approach and encourages community-based implementation;
- Addresses equity concerns;
- Provides continuity of services throughout the human life cycle;
- Encourages evidence-based program management;
- Encourages partnerships and advocates for whole-of-government and whole-of-society approaches;
- Ensures sustainability.

The full document on the Integrated NCD Prevention and Control Framework can be read in Appendix A. The WHO Western Pacific Regional Framework is likewise shown in Appendix B

2.4 Roles of Health Workers in NCD Prevention and Control

The health workers play a central role in operationalizing the framework of NCD prevention and control. The expected roles and functions are described below.

Table 2. Roles of Health Workers at Different Levels of Implementation

	Policy and program development	Program implementation	Program Management
National Level Department of Health	• Set overall policy directions; • Formulate National Strategic Plan of Action; • Advocate for the drafting and passage of bills/laws; • Develop national agenda for research and policy actions; • Disseminate policies, guidelines and standards;	• Provide technical assistance to the CHDs, LGUs and other partners: to include support for the following: ▸ Develop standards and protocols to guide the program implementation; ▸ Design and provide training to address capability gaps; ▸ Develop prototypes of IEC and advocacy materials	• Design and advocate financing mechanisms to help LGUs sustain delivery of the NCD prevention and control services; • Ensure compliance of LGUs to the provisions of passed laws, policies, standards and protocols • Coordinate with international development partners for technical updates • Collaborate with donor agencies to harmonize investments and assistance; • Develop guides on supervision and surveillance system • Conduct monitoring and evaluation
Regional Level Centers for Health and Development	• Promote and advocate adoption of the National Policy and Program on NCD Prevention and Control • Ensure implementation of Implementing Rules and Regulations (IRR), policies and guidelines issued at the national and regional level	• Provide technical assistance to the LGUs on NCD prevention and control • Conduct region-wide IEC advocacy activities for HL/NCD prevention and control • Conduct training on NCD prevention and control	• Upgrade and maintain operations of regional medical centers and DOH-retained hospitals as referral centers for advanced management and treatment of NCD cases. • Establish links with partner agencies to generate support and participation • Provide financial and logistics augmentation to LGUs on NCD prevention and control • Conduct regular monitoring and evaluation

	Policy and program development	Program implementation	Program Management
Local Level Provincial Government	• Formulate Provincial Integrated NCD Prevention and Control Policy Framework and Strategic Plan; • Help enforce national laws and policies in support to NCD prevention and control;	• Adopt and implement the NCD prevention and control program to the whole province; • Provide technical assistance to municipal/ city in implementing NCD prevention and control measures; • Conduct baseline survey on NCD in partnership with the city/ municipality; • Upgrade provincial and district hospitals as referral centers for higher level of care needed in management and treatment of NCDs; • Train municipal/city health service providers on NCD prevention and control;	• Conduct regular supervision of municipal/ city level service providers in the delivery of NCD preventive and control services; • Provide financial and logistics augmentation as able; • Continue to support PhilHealth enrollment and advocate adoption of other financing mechanism; • Establish links with partner agencies and solicit their support and participation; • Monitor and evaluate progress and status in NCD Plan implementation and outcomes of efforts.
Local Level Municipality City	• Adopt and formulate their own Municipal/ City Integrated NCD Prevention and Control Policy and Program; • Formulate local policies and ordinances to provide a supportive policy environment for the implementation of NCD prevention and control; • Enforce compliance to NCD-related national laws and policies;	• Coordinate with national, regional, provincial levels for technical assistance and submit documents and reports as needed; • Conduct baseline survey or rapid assessment to establish NCD status in their respective localities; • Establish and operate a two-way referral scheme to ensure patients needing higher level of care and services to access them; • Establish links with barangays and communities for social mobilization and participation • Provide packages of services / interventions at the municipal level to prevent and control NCDs.	• Upgrade facilities, deploy staff and equip them to deliver quality NCD prevention and control services; • Provide regular budget allocation for NCD prevention and control; • Comply with the accreditation and licensing requirements of PhilHealth and DOH; • Continue to enroll indigent members to PhilHealth to improve access to NCD services; • Design and operate local financing scheme in support to NCD prevention and control; • Establish and implement functional surveillance system for NCD; • Conduct monitoring and evaluation;
Local Level Barangay/ Community	• Promulgate ordinances and resolutions to support NCD prevention and control; • Enforce compliance to NCD-related national laws and policies;	• Provide packages of services / interventions at the barangay / community level to prevent and control NCDs. • Organize community support groups for NCD patients: diabetes club, cardiovascular club, etc. • Continue to provide IEC among household members on healthy lifestyle;	• Provide budget allocation for essential medicines in NCD; • Explore possibilities for local health financing in support to NCD cases; • Identify key community leaders to participate in the planning and monitoring of relevant NCD prevention and control measures'; • Establish a community-based surveillance system on NCDs;

Section 3: NCD Prevention and Control Program at the Local Level

This section describes the essential processes and requirements to establish the NCD Prevention and Control Program at the local level.

3.1 Planning the NCD Prevention and Control Program

Planning is the process of coming up with a unified and comprehensive response to the identified needs of the locality to prevent and control NCDs. The planning process is important in: (1) identifying and establishing the actual NCD needs and situation of the locality; (2) focusing and prioritizing efforts and resources to combat the rise of NCDs, (3) unifying the efforts of all concerned towards NCD prevention and control; and (4) mobilizing support from various stakeholders.

Ideally, this entails a comprehensive assessment of NCD situation in the locality, a good analysis of the situation, charting strategic action points in response to these needs and identifying key partners in the implementation of these actions.

3.1.1 Principles in Formulating Local NCD Prevention and Control Plan

Situations and conditions of localities vary in form, scope and degree of prevalence and intensity. The following principles are important for localities to be able to balance their diverse needs and priorities.

- Formulation of local should ideally be guided by the Policy and Strategic Framework presented in Section 2 to ensure that action plans at various levels of administration are mutually supportive to each other.
- Integrated prevention and control strategies have been shown to be most effective. Planning processes should therefore primarily focus on addressing the common risk factors of major NCDs.
- The plan needs to be comprehensive in such a way that it addresses both the needs of the population as a whole and that of high-risk individuals.
- Considering that some localities may not have the full resources to address all the needs for the prevention and control of NCDs, it is advisable that activities found most feasible given existing NCD resources in the area should be implemented first.
- Since the major determinants for NCDs lie outside the health sector, it is important that the plan must involve multi-sectoral action.
- Relevant milestones should be established at each level of intervention.

3.1.2 Basic Steps in Planning

Planning consists of the following steps: (1) assessing the NCD health situation in the population; (2) developing the mission, goals, and objectives; and (3) identifying key interventions and deciding means of implementing, monitoring, and evaluating them.

STEP 1: Situational Analysis

LGUs are encouraged to seek technical assistance from the Centers for Health Development (CHDs) in developing their local NCD prevention and control programs.

The initial step shall consist of an assessment of the local NCD situation, which shall include but not limited to the following activities:

- Review reports on the major causes of morbidity and mortality for the past five (5) years and determine the burden of NCDs;
- Conduct focus group discussion (FGDs) among service providers on NCDs and common risk factors encountered in the community;
- Review hospital records for reasons of admissions and discharges;
- Randomly select patient records to review common risk factors.

Upon availability of resources, LGUs may conduct a baseline survey to measure the prevalence of NCDs and unhealthy lifestyle practices, e.g. tobacco and alcohol use, unhealthy diet, and physical inactivity. WHO has developed a tool to help assess risk factor profiles – the STEPwise approach to Surveillance (STEPS), which collects risk factor data as follows:

- **Step 1**: Collecting questionnaire-based information about diet and physical activity, tobacco use and alcohol consumption;
- **Step 2**: Using standardized physical measurements to collect data on blood pressure, height, and weight;
- **Step 3**: Expanding physical measurements with the collection of blood samples for measurement of lipids and glucose status.

An assessment of the physical and social environment can also be done, to include but not limited to the following:

Determining the existence of policies and local legislations that promote healthy lifestyle or discourage NCD risk factors

- Identifying social behavior and practices (e.g. low prevalence of exercise and physical activity, intake of fruits and vegetables, etc) that contribute to NCDs and risk factors
- Identifying physical structures (e.g. parks and open spaces for physical activity, biking and walking lanes, etc.) that serve as barriers or support for healthy lifestyle
- Identifying physical structures (e.g. parks and open spaces for physical activity, biking and walking lanes, etc.) that serve as barriers or support for healthy lifestyle

A stakeholders profile can also be developed to map up individuals and groups that can be potential partners, targets, or beneficiaries for NCD interventions. The activity can identify partners in the public and private sectors and segments of population that can be targets for public health education.

A capability assessment of the local health system to respond to NCD prevention and control can also be done by:

- Identifying the availability and accessibility of service outlets (e.g. BHS, RHUs, hospitals, private clinics, school clinics, etc.), including existence of referral mechanisms for continuity of care across levels of the health care system
- Determining the availability of trained staff, logistics, equipment, etc. for the delivery of HL services
- Determine existence of inter-local health zone or other forms of inter-LGU coordination mechanisms

The LGU, with technical assistance from CHD, shall organize a series of meetings with local health officials and stakeholders to formulate their Plan of Action to address the identified NCD problems and issues in their locality. The Plan shall contain the following: (1) key action points, (2) target indicators (3) locus of responsibility, and (4) resources required. This Plan shall be presented to the Local Chief Executives (LCE) and other stakeholders for adoption and implementation.

STEP 2: Developing the Local NCD Prevention and Control Plan

After analyzing local NCD needs, there is a need to formulate the vision, goals, objectives and identifying key strategies in addressing NCD problems in the locality.

Vision: Describes the end-condition of the population which the locality would like to see happen as a result of NCD prevention and control measures in their area after a certain period of time.

Goals: Sets the outcomes to be realized in

NCD prevention and control. The main goals for chronic disease prevention and control include the following:

- improve the health of the population especially the most disadvantaged;
- respond to the needs and expectations of people who have chronic diseases; and
- provide financial protection against the costs of these diseases

Objectives: Refers to desired intermediary results which can be measured in shorter period of time. Objectives may be established according to desired results for each of the targeted segments of the population, or may be set according to the results of key interventions or measures. The following are examples:

According to Targeted Population Segments

- Reduce the prevalence of smoking among the youth
- Increase the proportion of households eating vegetables in the right quantity and quality
- Improve the proportion of the general public undertaking regular physical activities

According to Key Intervention Measures

- Establish a supportive policy environment for adopting and practicing healthy lifestyle
- Expand and strengthen the service delivery network of NCD prevention and control services
- Strengthen the coordination of NCD-related prevention and control measures

The following are proven to have been associated with successful local policy and program implementation:

- High level political mandate in policy formulation. Policies emanate from local government authorities, particularly local chief executives, the legislative officials and other executive departments;
- The participation of a committed group of advocates. The advocates assist in assessing the local NCD situation, advocate for appropriate actions, and participate in the development, implementation, monitoring, and evaluation of interventions.;
- Collaboration with external agencies and institutions at the national or international levels that provide technical updates and assistance;
- Wide consultation in the process of drafting, formulations and finalizing the plan until such that the final document is endorsed;
- Recognizing that the process of consultation is as essential as the content of the policy framework and plan;
- With accompanying communication approach consistent from the start of the process to the end;
- Simple and clear vision with set of outcome-oriented goals and objectives

STEP 2: Identifying Key Interventions and Means of Implementation, Monitoring, and Evaluation

The third planning step is to identify the key interventions for the achievement of program goals and objectives and determining appropriate implementation, monitoring, and evaluation strategies. It is advised that localities adopt the STEPWISE approach to planning, which identifies interventions as core, expanded, or desirable, depending on their feasibility in time.

The comprehensive approach requires a wide range of interventions to be implemented depending on their feasibility and likely impact on the local conditions taking into consideration the potential constraints and barriers during implementation. This requires decisions to be made based on the resource available and most likely to be mobilized, the evidences available, known experiences that worked as well as the level of advocacy that can be mounted to support the identified measures.

Strategies and activities can be classified as core, expanded, and desirable.

- Core: interventions that are essential and feasible to implement with existing resources in the short term
- Expanded: interventions that can be done when more resources are available
- Desired: interventions that are beyond the reach of existing resources but can be implemented when optimal amount of resources becomes available

The local plan should be comprehensive and should consist of a combination of interventions that target the whole population and high-risk individuals. It should also contain strategies for program monitoring and evaluation.

The following provides a menu of options that can be implemented per identified strategy

3.1.2.1 Promoting Healthy Lifestyle

- Develop information, education and communication (IEC) materials that will improve knowledge and behavior of the target population on healthy lifestyle
- Conduct advocacy campaigns and activities among identified partners who have direct impact or influence to preventing and controlling NCDs, e.g. education, agriculture, private sector, etc.
- Coordinate with different community groups – youth, informal sector, sports clubs, civic organizations where healthy lifestyle can be integrated in their activities and regular meetings
- Convene barangay officials to cascade the healthy lifestyle promotion initiatives down to the community level
- Implement healthy settings, primarily healthy workplaces and health-promoting schools, for promotion of healthy lifestyle

3.1.2.2 Building Healthy Public Policies and Supportive Environments

- Develop or adopt policies that support local NCD prevention and control:
  - Local ordinances to implement RA 9211, specifically, banning of smoking in public places, schools, amusement parks frequented by children, workplaces, government buildings, hospitals; regulation of sale of cigarettes among minors; and banning of advertisements of tobacco products in the community
  - Local ordinances or resolutions enjoining the communities, workers and children to join exercise programs
  - School ordinance to support smoke-free, alcohol-free, drug-free and sports-oriented schools to promote health and well-being of students, faculty and other school personnel; provision of healthy foods in the school canteen and banning of foods that are deemed "unhealthy;"
- Orient stakeholders regarding impact of transport design to physical activity of the population
- Encourage LGU to build parks and areas for recreation and physical activity, e.g. bicycle lanes, walk pathways, etc
- Organize community activities to promote healthy diet and physical activity
- Regularly monitor compliance to the regulations and consistently administer agreed-upon penalties to those found not complying to the regulations

3.1.2.3 Establishing Coalitions and Partnerships

- LGUs need to engage potential partners including those outside the health sector to participate in the implementation of the local NCD prevention and control program
- LGUs can establish a local coalition to facilitate multisectoral activities. They can review

existing committees that can serve as the coordinating body.

3.1.2.4 Making Health Services Available and Accesible

- Ensure availability of package of interventions in the local health facilities
- Make available affordable medications
- Adopt the Risk Assessment tool in all health facilities
- Adopt and comply with DOH-endorsed clinical practice guidelines
- Strengthen referral systems among health facilities
- Organize support groups, e.g. obesity and diabetes clubs, cancer support, etc

3.1.2.5 Strengthening Program Management

- Collect and analyze data using DOH-prescribed monitoring and evaluation tools
- Conduct semi-annual program review
- Disseminate results of monitoring and evaluation
- Submit accomplishment reports
- Document good practices in the implementation of the program
- Utilize results in subsequent planning and policy and program development

3.1.2.6 Ensuring Stable Financing

- Advocate for LGUs to increase budget allocation for NCD prevention and control
- Conduct resource generation from development agencies, private sectors and other partners
- Expand PhilHealth membership for the support of some clinical packages in NCD
- Design a local financing scheme as needed and develop corresponding guidelines and protocols for its implementation
- Monitor the collection and utilization of finances to ensure that these are prioritized for promoting healthy lifestyle

Promoting healthy lifestyle is geared towards the process of enabling people to increase control over their health and to improve their health behaviors in relation to prevention and control of NCDs. It is about people making healthy choices and living healthy lives.

Section 4: Promoting Healthy Lifestyle

4.1 Goals and Targets of Healthy Lifestyle

The goal of promoting healthy lifestyle is the practice of the following behaviors:

- Engaging in regular physical activity
- Having a healthy diet and eating more fruits and vegetables
- Avoiding tobacco and alcohol use

The target groups for promoting healthy lifestyle include:

- The general public to practice healthy lifestyle
- Health workers, both in the public and private health system and including those based in schools and workplaces, to carry the work of encouraging the adoption and practice of healthy lifestyle
- Local chief executives, community leaders, school heads, workplace managers, and other decision makers to support initiatives for the prevention and control of lifestyle-related diseases
- The private sector to adopt healthy lifestyles in their business environment and provide additional resources for NCD-related work as part of their social commitments and responsibilities.
- Various organizations, including non-government organizations, people's organization, faith-based organizations, and consumer groups to support healthy lifestyle and generate market demand for healthier products and services
- Media to communicate messages, disseminate correct information, persuade and motivate people to practice healthy lifestyle

4.2 Local Activities in Promoting Healthy Lifestyle

Promoting healthy lifestyle supports personal and social development through provision of health information and education and enhancing life skills. Local activities can include development of information, education and communication (IEC) materials and interpersonal communication techniques.

4.2.1 Development of IEC Materials

Health workers at the local level may request for technical assistance from the provincial/city or CHD Health Education and Promotion Officer and take guidance from program health promotion and communication plan to accomplish the following tasks:

- **Identify target audiences and IEC objectives**. Knowing the characteristics of the audience(s) and being clear with IEC objectives will help define the most appropriate strategies and materials for reaching them. Numerous approaches that can be considered for reaching the target audience include radio, TV, posters, interpersonal approaches, and traditional media.
- **Assess existing materials and consider adapting them, as appropriate**. A wide variety of materials are available nationally which can be used "as is" or adapted to meet local needs.
- **Develop IEC materials**. Development of draft materials is based on decisions about messages and approaches to be used for delivery to target audience(s). A good message is short, accurate, and relevant. It should be disseminated in the language of the target audience(s) and should use vocabulary appropriate for that audience.
- **Pre-test new materials among key target audiences**. Pre-testing allows the evaluation of messages and materials with regard to acceptability before production and distribution and prevents wastage of resources by ensuring that materials are effective.

Pre-testing may involve asking potential users individually to review the materials and answer a series of questions, or they may involve a group setting as in focus groups. It is also important to give service providers an opportunity to review and comment on materials before they are finalized.

- **Produce and distribute the material**. The number of materials to be produced and distributed should ideally correspond to the number of intended audiences. Consider posting or making them available in strategic places (e.g. BHS, RHU, Schools, Barangay Hall, Municipal Hall, public markets, etc.).
- **Monitor and evaluate IEC use**. Monitoring and evaluation provide inputs for fine-tuning messages and materials and overall IEC approach, as needed. This can be done locally by doing exit interview of clients at the health center or during home visits by asking of their understanding of the message in the IEC materials and what action did they do after seeing/reading the materials.

4.2.2 Development of Interpersonal Communications Strategies

Although mass media is very important in creating the awareness of the target clients, changing their behavior to access health services and comply with treatment regimen can only be achieved through any of the following interpersonal communications techniques:

- Bench conference/Mothers' class
- Enter-educate activities (e.g., jingle- slogan contests, poster-making contests, amateur singing contests, puppet shows, theater groups, concerts)
- Texting (SMS) information-dissemination
  - National Office to coordinate with telecommunication companies and develop short and witty messages on NCD for SMS
  - Local health providers to pass these messages to their clients through texting (SMS)
  - Evaluate the impact of the messaging to the intended audience through informal interviews with clients visiting the clinic or during mothers' class
- Healthy lifestyle expo or exhibit
- Home visits
- Client education/counseling
- Client testimonials
- Health events (e.g., heart month, cancer awareness month, diabetes week, etc.)

4.2.3 Promoting Healthy Settings

Healthy settings, such as schools and workplaces provide rich opportunities for promoting healthy lifestyle. They create school environments and employment environments that are conducive to healthy eating and physical activity among students, teachers, school administrators, parents and communities.

School health programmes often include the following components: health policies, health education, supportive environments, and health services. They often include physical education, nutrition and food services, health promotion for school personnel and outreach to the community.

Workplace wellness programmes often focus on chronic diseases and risk factors that substantially inhibit productivity and incur the most serious health and economic burdens. They can lead to large gains for employees and employers as improvements can be seen in worker productivity, reduced levels of absenteeism, and employer cost-saving. Some interventions include hypertension and diabetes screening, physical fitness activities, healthy meals at the workplace, as well as psychosocial support to reduce work-related stress and associated illness.

Box 1. Promoting Healthy Lifestyle in Bangued, Abra

Healthy Lifestyle: The Bangued Way

The Municipality of Bangued in the Province of Abra and under the Cordillera Administrative Region (CAR) includes health as a priority concern. Subscribing to the Latin adage Mens Sana in Corpore Sano (a healthy mind goes with a healthy body), several programs to promote a healthy lifestyle in the municipality had been introduced and implemented as follows.

- Enactment of Executive Order No. 14 in 2001 which mandated the conduct of a one-hour, bi-weekly physical fitness program called "Hataw Na: The Taebo Challenge." This was complemented by the introduction of the "Hataw" exercise program in 2003.
- Various forms of physical exercises were introduced to the Bangued-LGU such as brisk walking, jogging, dancing and other indoor activities.
- Sport facilities were improved and procured to further engage the support of the municipal employees. Even the venues of the physical exercises/activities were enhanced not just for the employees but for the public to use as well. Example of which is the Municipal Plaza which serves as the perfect haven for early morning joggers/walkers.
- Other programs include the anti-smoke belching campaign, Eco-Park construction, Clean and Green Program and annual medical check-up for all municipal employees.

Bangued-LGU continues to be committed to bring healthy lifestyle to the core of the community's everyday life.

Section 5: Building Healthy Public Policies and Supportive Environments

Building healthy public policy requires diverse but complementary approaches, such as legislation, fiscal measures, taxation, and organizational change. Health workers at the local level can advocate for the development and implementation of policies to support NCD prevention and control.

5.1 Development of Local Policies and Legislation

The main goals of public health policy for NCD prevention and control are:

- Improve the health of the population, especially the most disadvantaged
- Respond to needs and expectations of people who have chronic diseases
- Provide financial protection against the costs of ill-health

The steps in the development of local policies and legislation are as follows:

- Review existing local policies and ordinances related to the promotion of healthy lifestyle, and determine their status of implementation. Based on the review, identify policy gaps.
- Consult with key stakeholders, including the segment of the population who are most likely to be affected with the issuance of the local policy or legislation, and validate policy situation and solicit recommendations.
- Draft the policy or legislation. Ensure that the policy or legislation clearly states the goals, objectives and priority strategies.
- Identify champions or prominent individuals who will support its approval.
- Disseminate, publish or conduct in-depth discussion of the policies or legislations that were passed among targeted beneficiaries.

5.1.1 Examples of Policy and Legislation to Support NCD Prevention and Control

There are several areas where local policy and legislation can support NCD prevention and control. For instance, LGUs can strengthen local implementation of the following national laws through some suggested action areas:

- Anti-Tobacco Law (Republic Act 9211)
  - Prohibiting the sale of cigarettes to minors
  - Prohibiting the sale of cigarettes near school premises
  - Declaring public areas as non-smoking areas

- Sanitation Code
  - Enforcing food establishments to meet sanitary and hygienic requirements
  - Encouraging food establishments to sell safe, healthy and nutritious food

Local legislations are formulated and the passed through the mandated local legislative body of the government – the "Sanggunian" bodies at the provincial, city, municipal and barangay levels.

5.2 Enforcing Policies and Regulations

Reforms in health regulations are intended to ensure safety, quality and accessibility to health care and services. There is a need to: (1) disseminate policies and regulations related to NCD prevention and control, (2) prompt into action concerned offices or bodies to implement these policies and regulations, and (3) follow-up and monitor compliance of target stakeholders at various levels of operations.

5.2.1 Implementing and Enforcing Policies at the Local Level

Once policies and legislation are developed, there is a need to: (1) disseminate and educate, (2) prompt concerned offices or bodies to implement, and (3) follow-up and monitor compliance of target stakeholders at various levels of operations. Localities can do a lot to help implement policies and ensure safety, quality and accessibility to health care and services related to NCD prevention and control as follows:

- Ensure that its health facilities (e.g. hospitals, laboratories, clinics) comply with the licensing requirements set by the DOH;
- Ensure that health officials and staff only procure drugs and medicines that are included in the essential drugs list and from qualified suppliers by BFAD;
- Ensure that medical instruments and equipment and other technical devices are procured by the LGUs are those that have been certified and endorsed by BFAD;
- Monitor food products sold in malls, supermarkets, sari-sari stores, etc. to carry warning statements, nutrient claims and nutrition information profiles;
- Designate and authorize specific offices to enforce national laws and policies and provide orientation on the provisions of national laws and policies;

Health Office through the Sanitary Inspectors:

  - monitoring of local implementation of RA 9211

Local Police:

  - monitor ban of cigarette advertising including sponsorship of sports and cultural events;
  - monitor compliance of stores banning the sales of cigarettes to minors
  - compliance of the public to designated smoke-free areas

- Monitor compliance to ordinances or resolutions passed by the ***Sangguniang Pangkalusugan*** in promoting practice of healthy lifestyle practices:
  - o designating lanes/streets for pedestrians to encourage walking as a form of physical activity
  - o designating public space or area for mass physical exercise or sports

- Ensure that commercial food establishments, business corporations and other facilities are inspected and complying with standards and requirements before the issuance or renewal of permit to operate;
- Ensure that clients with chronic diseases, especially the poor are not deprived of health care and services due to imposition of user fees or high cost of medicines or treatment.

5.3 Supportive Environments

Creating supportive environments is about making living and working conditions that are safe, stimulating, satisfying and enjoyable. Creation of supportive environments could be physical or organizational. Health workers at the local level are encouraged to initiate efforts and to advocate creation of supportive environments.

5.3.1 Physical Environment

The following initiatives can contribute to making the physical environment conducive to healthy lifestyle practice:

- Provision of exercise facilities and areas in communities, schools, workplaces
- Ensure safe transport and building road network for bicyclists and pedestrians to encourage increased physical activity (e.g. biking or walking to the office instead of taking the jeepney or tricycle)
- Provision of healthier food choices in eating places for school children, the working population, and communities.
- Making available whole, fresh fruits and vegetables, fortified staple and processed food products, and other healthy foods in public markets, supermarkets and stores
- Banning of smoking and drinking in public places

5.3.2 Organizational Environment

Initiatives to enhance the organizational environment for promoting healthy lifestyle include the creation of partnerships, networks and coalition to promote health action. (see section on forming coalitions and partnerships)

Box 2. Enforcing Anti-smoking Campaign in Davao City

Advancing the Anti-Smoking Initiatives in the City: The Davao Experience
Dr. Domilyn C. Villarreiz, Co-Chairperson, Anti-Smoking Task Force – Davao City

"In health there are no compromises – No smoking is now a discipline, a habit and a way of life for the people of Davao."

The pursuit of the Anti-Smoking Task Force of Davao City together with the turned-advocate Dabawenos of the vision for a Smoke-Free Davao City required a two-pronged strategy: promoting a smoke-free environment by strictly enforcing the smoking ban in enclosed places and public places; and preventing the initiation and increase the cessation on cigarette smoking by increasing the awareness of the public on the effects of smoking to one's health and on the Anti-Smoking Laws.

Smoking has been actually banned in all establishments except for those with approved "smoking room/area." Those applying for smoking rooms are strictly inspected prior to approval by the City Engineer's Office and the Anti-Smoking TF. Posting of appropriate signages are ensured for smoke-free/smoke-regulated establishments. Those found violating the law are apprehended.

With regard to selling of cigarettes, the TF sees to it that all points of sale for cigarettes apply for permit to sell: (i) Stores within 100 meters from learning facilities and recreational places are not allowed to sell cigarettes while (ii) Stores with approved permits to sell cigarettes are required to place a sign that minors are not allowed to sell cigarettes. Restrictions are also imposed on advertizing cigarettes. All advertisements of tobacco products near learning facilities and recreational places were removed while new billboards/signages are screened by the Signage Section of the Building Official.

These rules and prohibitions could not have been easily enforced if not for series of information campaigns undertaken among various groups of stakeholders. To discourage initiation and encourage cessation of cigarette smoking, lectures on the effects of smoking to health in schools/workplaces/communities were undertaken. Medical groups assigned in different schools/ hospitals were encouraged to put up smoking cessation clinics. A tri-media campaign of the effects of smoking was also mounted.

To ensure that these initiatives are not ningas-cogon in the making, sustainability measures include the (i) incorporation of the Compliance of Establishments to the Anti-Smoking Law in the Healthy Places Inspection and Rating; (ii) the creation of a Barangay Anti-Smoking Team to enforce laws at the lowest level; (iii) organization of the Smoke-Free Davao Advocates, Anti-Smoking Youth Club and Anti-Smoking Kiddie Club. All establishments assigned their respective Anti-Smoking point person to ensure their own establishment's compliance to the Anti-Smoking Laws. Health professionals also signed up the Declaration of Commitment for the Campaign; while an Executive Order was issued to celebrate No Tobacco Day every May 31 in Davao City.

Section 6: Establishing Coalitions and Partnerships

Coalition and partnerships bring together different parties to achieve shared goals on NCD prevention and control. Working together ensures synergies, avoids overlapping and duplication of activities, prevents unnecessary or wasteful competition. Strengthening partnerships within the health sector is crucial, but it is also necessary to reach out to other key players and engage in intersectoral action as the underlying causes of noncommunicable diseases lie outside the health sector. The health sector should provide the leadership for establishing coalitions and partnerships at all levels of governance.

Building local coalitions are partnerships are often cost-effective ways of mobilizing communities and individuals for NCD prevention and control. Examples of community-based actions that enhance social mobilization and participation include the organization of the following groups:

- Support groups and health clubs, such as: Diabetes Club, Asthma Club, Exercise Club, Cigarette and Alcohol Quitters Club;
- Peer counselors in communities, schools and workplaces;
- Task Forces for monitoring compliance to local policies and legislation on tobacco and alcohol use.

6.1 Identifying Potential Local Partners

The following table specifies the groups of stakeholders that can be mobilized to support NCD prevention and control in a locality. It also enumerates the possible areas or forms of support that each group can contribute.

6.2 Building Local Coalition for NCD Prevention and Control

Forming coalition among community groups and individuals is important for mounting an effective integrated NCD prevention and control program. CHDs and LGUs can facilitate the formation of the local coalition. The following outlines the key

Table 4. Potential Partners and Possible Areas of Contributions

Sectoral Partners	Particular Groups	Possible Areas of Contribution/Action
1. Political Partners	Local Chief Executives	• can be a strong advocate or champion for HL • approve and issue policies in support to HL • mandate offices to enforce national laws and ordinances supporting HL • prioritize HL in development agenda • initiate collaboration with private sector
	Legislative Branch (Committee on Health)	• sponsor budget allocation for HL programs and activities • draft and pass resolutions or ordinances to support HL • can also become strong advocate and champion for HL
	Provincial Officials	• can be tapped to provide additional resources for HL • strengthen and improve operations of hospitals as referral units for clients with NCDs
	Representa-tives to the Lower and Upper House	• can be tapped to provide additional resources for HL • at the national level, can support passage of laws and bills in support to HL promotion

Sectoral Partners	Particular Groups	Possible Areas of Contribution/Action
2. Government Partners	Municipal/ City Health Office	• ttake the lead in implementing HL promotion activities • provide appropriate health services to community members • conduct community outreach for HL • establish referral system for continuous management and treatment of clients at higher levels • establish special clinics (e.g. diabetic clinic, smoking cessation units, etc.) • convene concerned stakeholders to form coalitions and partnerships • initiate local financing schemes for HL activities and services • RSI takes lead in monitoring compliance to Food Safety and Environmental Health
	DepEd or school admi-nistration at the local level	• at the national level, can support passage of laws and bills in support to HL promotion • district supervising doctors/nurses including school clinic staff can be trained on HL promotion and serve as providers of NCD-related health services to faculty members and students • school administrators can pass policies/guidelines to promote healthy lifestyle practices among the students (e.g. enforcing non-smoking policy within and outside the school premises, minimizing the sale of soft drinks and junk food in their school canteen • at the national level, DepEd can strengthen integration of HL promotion into the school curricula • faculty members can integrate HL topics in their lesson plans and school activities
	Nutrition Committee	• propose policies to improve the population's diet and nutrition • lead in monitoring compliance to national laws and ordinances • coordinate nutrition-related programs and projects to ensure consistency and harmonization of efforts towards good nutrition
	Other Executive Offices	• Organize physical exercises for employees • Promote healthy lifestyle to their respective clients • Planning and Development Office incorporate programs and activities for NCD prevention and control into the local development and investment plan; consider provision for space and proper zoning to allow safe and comfortable area for physical activities, and for public to encourage walking ; • Social Welfare Office to integrate in the Parent Effectiveness Services topics on HL practices • Agriculture Office to plan and implement programs to produce or make available fruits and vegetables to the public
3. Corporate Partners	Private Corps/ Companies/ Factories	• Commercial establishments can become source for financial assistance for HL activities • Corporate offices can help establish HL programs in the workplace (e.g. no-smoking policy, healthy-nutritious food served in their canteens/cafeteria, sponsor annual check-ups of employees, their clinics can administer risk assessment and provide necessary counseling and information services; organize and implement physical activities for employees
	Food establish-ments	• Make menu options available for healthy and nutritious foods (e.g. salad, vegetables,) and non-use of pork lard, etc. • Observe hygienic and safe food handling practices

Sectoral Partners	Particular Groups	Possible Areas of Contribution/Action
4. Beneficiary	All bene-ficiaries	• Can be consulted through surveys or FGDs regarding needs and preferences in terms of HL interventions and measures • Can help in designing/implementing HL promotion activities • Can participate in monitoring progress of HL promotion and compliance to HL policies and guidelines • Can form part of advocates for HL promotion or become members of support groups
	Children	• Can be reached through the parents/caregivers at home, in school or through youth organization in church, civic societies, or youth council
	Youth	• Those who are studying can be reached through schools and the out-of-school through teen centers, tambayan centers, organized community youth groups, etc.
	Formally employed	• These are adult population employed either in government or private offices
	Informal sector	• Self-employed belonging associations like the market vendors association, the transport workers association (e.g. tricycle drivers association-TODA, jeepney drivers association, etc.), the home industry workers association, etc. In rural areas, these may include the farmers' association, and those with their own businesses at home
	General public	• Can be reached through mass media, community assemblies, meetings, house-to-house campaigns, etc.
4. Community	Barangay Captains or Barangay Councils	• Allocate funds for HL activities • Organize and implement HL activities (e.g. barangay sports leagues, vegetable food production • Enforcing national laws and ordinances
	Community members	• Form themselves into organized support groups • Participate in community-based HL activities like sports, physical exercises, etc.

steps that can be can be undertaken:

1. Identify the potential partners (see Table 4).

2. Invite the identified partners to join the coalition by sending letters of invitation, organizing meetings or conducting office visits.

3. Set-up the first meeting. This meeting must establish clearly the NCD situation, highlight the need to integrate efforts and the importance of sharing technical expertise and resources. Agree to reconvene in order to come up with a holistic plan of action to address the NCD issues in the locality. Participants to the meeting should have identified specific areas where they can contribute as part of their organizational mandate, programs and activities.

4. Establish the organizational structure of the Coalition, keeping in mind the following:

   - The organizational structure of the coalition would vary depending on the complexity of the NCD situation in the area and the size of membership. However, it is advisable to keep the organizational structure as simple as possible.
   - The organizational structure may comprise of the coalition itself with elected officers, and with the support of a secretariat.
   - Technical committees on various concerns (e.g. policy/local legislation committee, advocacy committee, service delivery committee, etc.) may be formed on an ad hoc basis depending on need.
   - Define the roles and functions of the Coalition and the Secretariat:

Coalition Body: may be comprised of heads of participating offices/ organizations or their designated alternates
Governing Officers: may include a chair, a co-chair, secretary, treasurer elected or agreed-upon by the members

Overall Function: Set the overall direction and thrust of NCD prevention and control measures in the area and serves as the coordinating body of programs and activities in support to NCD prevention and control

Specific Functions:

(1) Provide support to the development of local policies and legislation, frameworks, standards and guidelines for NCD prevention and control;
(2) Conduct various advocacy and information initiatives in order to gain the commitment of the political , social, religious and traditional leaders at different levels of society;
(3) Provide support to resource mobilization and facilitate pooling of human and financial resources among members;
(4) Provide support to surveillance, monitoring, and evaluation of NCDs;

Secretariat: This maybe designated to one office (e.g. MHO/CHO or a team of technical/administrative staff from the member organizations

Overall Function: To provide administrative and technical assistance to the operations of the NCD Coalition

Specific Functions:

(1) Prepare all technical materials for discussion of the Coalition;
(2) Collects information/data as needed by the Coalition in order to be able to make sound decisions;
(3) Track progress of implementation of decisions made by the Coalition;
(4) Identify and summarize issues to be addressed by the Coalition;
(5) Draft proposals/position papers or other technical documents that might be required by the Coalition for decisions, discussions, etc.
(6) Organize and schedule meetings and follow-up members to attend meetings and document proceedings of all Coalition meetings

5. Develop the Coalition workplan.

6. Organize meetings to discuss updates on workplan implementation and issues and concerns on local NCD prevention and control.

7. Provide opportunities for continuing education and technical updates on NCD prevention and control for Coalition members.

8. Mobilize resources to sustain activities of the Coalition.

Section 7: Making Health Services Available and Accesible

This section sets the guidelines for the overall delivery of health services for NCD prevention and control, primarily at the level of the municipality or city. It defines the recommended minimum package of services at various levels of care, describes the flow and continuity of service delivery, and provides standards to ensure the quality of services. The standards describe the required type or category of personnel and their competencies, logistics (medicines, supplies, and equipment), physical set-up, recording and reporting tools, and guides in service. Package of intervention by level of care and corresponding standards and requirements are provided in Appendix C.

7.1 Principles in the Delivery of Health Care Services

The principles in the delivery of health care services include discussion of the levels of care and recommended flow of health care services in the prevention and control of NCDs.

7.1.1 Levels of Care

The health care needs of individuals vary according to the presence or absence of risk factors and the severity of their health conditions. These needs can be adequately and appropriately responded to when basic package of services are made available and accessible for each level of care in an integrated health care system.

The primary level of care refers to barangay health station (BHS) or its equivalent in the community (Level-1) and rural health unit (RHU) or its equivalent in the community (Level-2). Clinics or health units in the schools, workplaces, and communities can serve as primary level outlets.

Recommended minimum package of services at the BHS (primary level-1) includes: (1) health education and promotion; (2) risk factor assessment, (3) lifestyle modification measures, and (4) referral and follow-up. Health education and promotion emphasizes healthy lifestyle. Risk assessment focuses on common risk factors, primarily unhealthy diet, use of tobacco and alcohol, physical inactivity and intermediate risk factors like overweight, obesity and hypertension; it requires at the very least patient interview on risk factors and anthropometric and blood pressure measurement. Lifestyle modification measures include advise and counseling for diet modification, smoking cessation, and regular conduct of physical activity.

Recommendations for municipal health centers (primary level-2) include those services under BHS (primary level-1) plus the following: higher level of screening procedures (including access to cervical cytological testing (Pap smear) or visual inspection using acetic acid (VIA), clinical breast examination, laboratory examination such as urinalysis and blood glucose determination, and digital-rectal examination), and basic clinical management of noncommunicable diseases. At the very least, there should be access to first line medicines for hypertension, diabetes, and chronic respiratory diseases.

Secondary level of care refers to district, community, and provincial hospitals that customarily do not offer specialized NCD care. Recommended minimum package of services for these facilities include the package of services under primary level of care PLUS the following: more advanced screening and diagnostic procedures (blood chemistry, ECG, x-ray, surgical biopsy, etc) and clinical care. More advanced pharmacologic treatment should be available and there should be some provisions for palliative care (e.g step-ladder pain management for terminally ill cancer patients) and access to rehabilitative care. Organization of patients' support groups;

e.g., Diabetes Club, Cancer Support Group, etc., are important elements for holistic care within this level.

Tertiary level of care refers to hospitals, usually located in urban areas, which provide highly specialized medical care for patients who are usually referred from secondary level care centers. Minimum basic services should include the package of services under secondary level of care PLUS the following: more advanced diagnostic procedures like angiography, diagnostic imaging (CT scan, MRI, etc), echo-cardiography, ultrasound, pathological diagnosis, etc, specialized treatment (medical management, surgery, radiotherapy, and/or chemotherapy), palliative and rehabilitative care. Tertiary package of services often can be made available in the regional hospitals, medical centers and/or specialty hospitals.

To be able to deliver the package of services for the various levels of care, certain requirements or standards in the type of health personnel required (includes appropriate training and competencies), medicines, supplies and equipment, health promotion aids and recording and reporting tools are needed. These are tabulated under Appendix C.

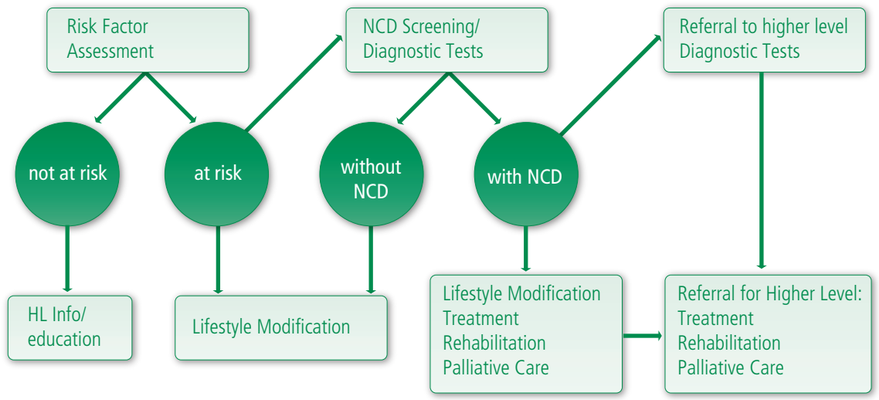
7.1.2 Flow of Delivery of Health Care Services

The flow of delivery of care for persons at risk or with NCDs consists of sequential steps following transition from one level of care to the other. In case of full progression of the disease, a patient will thus shift from availing services from primary, secondary, and ultimately tertiary levels of care. Figure 1 illustrates this flow of delivery.

Risk factor assessment is the key in the process of screening individuals for the presence or absence of risk factor/s that expose them to increased likelihood of developing NCDs. It involves asking specific questions, often referred to as history taking, and making anthropometric and clinical measurements related to the presence of risk factors.

It is recommended that risk factor screening be integrated into the routine history taking and screening procedures of every health facility. It

Figure 1. Delivery Flow of NCD Prevention and Control Services



should be administered to all clients who come in for consultations, regardless if the main reason for visit to the health facility is NCD-related or not. It should be administered even to clients who are not sick but come in for regular health services (e.g. pregnant women and lactating women, children brought in for immunization, etc.). Risk assessment requires thoroughness, completeness and accuracy in obtaining information and measurements.

7.2 Guidelines to Specific Health Care Procedures and Services

Specific health care procedures and services are organized into the following categories: (1) risk factor assessment, (2) lifestyle modification, (3) screening and diagnosis of NCDs, (4) management of major NCDs, and (5) rehabilitation; and (6) palliative care.

7.2.1 Risk Factor Assessment

The initial critical step in preventing NCDs is the identification of common major risk factors, which become the starting point for determining the appropriate preventive and control interventions. Risk factors refer to any attribute, characteristic, or exposure of an individual which increases the likelihood of developing NCDs. The major behavioral risk factors highly associated with NCDs include: (1) physical inactivity, (2) unhealthy diet (high fat, low fiber), and (3) use of tobacco or tobacco smoking. Other factors that could be considered are excessive alcohol drinking and too much stress. Refer to Appendix D for the sample copy of the Risk Assessment Form.

7.2.1.1 Assess use of tobacco or smoking status

In assessing use of tobacco or smoking, it is essential to determine: (1) the smoking status (smoker or non-smoker); (2) the trend in client's smoking practice; and (3) exposure to second-hand smoke (i.e. passive smoker).

- **For Current Smokers**: Ask age when he/she started smoking, average number of cigarettes smoked per day and the number of quit attempts he/she made last year
- **For Former Smokers**: Ask age when he/she started smoking and at what age he/she quit. Inquire about the average number smoked at the time of regular smoking
- **For Passive Smokers**: Ask if he/she is exposed to second-hand smoke, setting (home, office, etc.) and establish level of exposure

7.2.1.2 Assess nutritional status or diet

This normally requires a comprehensive assessment, which includes: (1) a detailed food recall, (2) an extensive questionnaire on food frequency, and (3) estimation of food nutrients using the Food Composition Table and Food Exchange List. However, a more simple tool for assessment of nutrition/diet is recommended for easier administration in the health facilities, especially if there is a long queue of clients awaiting services.

- Establish the amount and frequency of eating certain foods that contribute to NCD development. (List foods that are particularly common in the locality).
- Ask about the amount and frequency of food eaten particularly (a) vegetables, (b) fruits, (c) fat, (d) sodium or salt, and (d) sugars or simple carbohydrates. Compare their actual intake of the above with the prescribed number of servings as shown in the attached guide.
- Further qualify the following practices:
  - *For Vegetables*: what are the usual types of vegetables eaten
  - *For Fat*: which part of the food (e.g. skin of the chicken) is eaten, how often they eat fried foods and how often they go out to fast food restaurants
  - *For Sodium and Salt*: how often preserved, canned and instant foods are eaten per week, and how much salt is used when cooking
  - *For Sugars*: how often table sugar is used,

Table 5: Summary of Risk Assessment for Overweight or Obesity

Measurement	Formula	How to Measure	Categories	
BMI for adults	weight in kilos height in meters2		< 18.5	Underweight
			18.6-22.9	Healthy weight
			≥ 23.0	Overweight
			23.0-24.9	At Risk
			25.0 – 29.9	Obese 1
			≥ 30.0	Obese 2
Waist Circumference for adults	waist circumference in inches or cms	Use a non-stretchable tape around the waist (unclothed), standing with the abdomen, relaxed, arms at the sides and feet together	Men: < 90 cm (35 inc)	normal
			≥ 90 cm	at risk
			Women: < 80 cm (31.5 inc)	normal
			≥ 80 cm	at risk
Waist Hip Ratio for adults	waist circumference (cm)/ hip circumference (cms)	Similar as the Waist Circumference; but measurement should include the hip	Men: < 1.0	normal
			≥ 1.0	android or central obesity
			Women: < .85	normal
			≥ .85	android or central obesity
Weight for Age (for children)	actual weight/ prescribed weight for specific age in months		underweight	< -2SD
			normal	-2SD to + 2 SD
			overweight	> +2SD

and frequency of carbohydrates drinking soft drinks, cakes, chocolates, candies and other sweetened food products

- Assess for the Presence of Body Fat (Overweight and Obesity).The presence of excess fat in the body is usually demonstrated by being overweight or obese.
  - Overweight or obesity is best assessed using the Body Mass Index (BMI) and waist circumference. (Take note, however, that these do not account for frame size, cannot be adjusted for age and do not indicate fat distribution).
  - Other means of assessing for overweight or obesity include: weight for age among children and waist-hip ratio
  - Follow the correct way of measuring weight, height, waist circumference and hip circumference. Compute for BMI and waist-hip ratio using the formula found below. Compare the results of the actual measurements with the standards shown in Table 5.

7.2.1.3 Assess for physical inactivity

In assessing physical inactivity, obtain information on the (1) type of work of the individual clients, (2) means of transportation, and (3) time for leisure activities like sports and formal exercise.

- In general, at least 30 minutes of cumulative physical activity, moderate in intensity, is recommended for most days of the week.

- Recommended amount of physical activity to achieve desired health benefit:
  - Regular physical activity: minimum 30minutes daily or most days of the week
  - If moderate intensity: 5 or more days of the week
  - If vigorous intensity: 3 or more days of the week

7.2.1.4 Assess for alcohol drinking

The practice of excessive alcohol drinking is not encouraged considering the increasing deaths due to vehicular accidents and effects on the liver (e.g. cirrhosis).

- Determine if the individual has a habitual alcohol intake or a risky behavior (e.g., driving or operating a machine) while intoxicated;
- Quantify the amount of drinking. Probe further if the individual does not provide an exact amount (e.g. a little, once in a while, only during special occasions, etc.)
- Find out the specific type of beverage since the type determines the alcohol or ethanol content.

7.2.1.5 Assess for level of stress and coping

The degree under which the individual is subjected to stress or pressure is considered another risk factor that may lead to other unhealthy practices leading to NCDs. Stress is a condition or feeling experienced when a person perceives that the "demands exceed the personal and social resources the individual is able to mobilize. Individuals must be screened on the degree of stress they face.

- Determine if the individual is suffering from any form of stress. This may come in the form of physical, emotional, psychological, mental problem or issue.
- Try to establish the degree or extent of stress or pressure the individual is subjected to day to day.
- Find out the specific factors causing the individual to be stressed or under pressure.

7.2.1.6 Summarize results of risk assessment

Results of the risk assessment must be communicated at once to the client in a customer-friendly manner.

- If the client does not manifest any of the risk factors yet, congratulate him/her for good lifestyle practices and reiterate the message to continue with the practice of not smoking, eating a healthy diet and maintaining a regular physical activity.
- If the client is found to have one of the 5 risk factors, engage in lifestyle modification (see section 7.2.2), determine if he/she needs further screening or diagnostic procedures (see section 7.2.3).
- If the client is diagnosed to have any of the NCD, make the appropriate treatment and management (see section 7.2.4).

7.2.2 Lifestyle Modification

There are five major lifestyle modifications that need to take place depending on the risk factor that was identified during the risk assessment process. These include: (1) promotion of smoking cessation; (2) promotion of proper nutrition; (3) promotion of physical activity and exercise; and 4) avoidance of alcohol use; and (5) promotion of stress management;

7.2.2.1 Promoting smoking cessation

Use of tobacco or smoking is considered the most common and serious risk factor for NCDs as it is related to the development of at least 40 diseases and 20 types of cancers. Most prominent of these diseases are chronic obstructive pulmonary diseases (COPD), ischemic heart disease, stroke and cancer. Smoking causes lung cancer, and other cancers such as oropharyngeal, esophageal, laryngeal and anal cancers. It is also known as a common trigger to asthma development

and exacerbations. It affects not just the active smokers but also those who are exposed to second-hand smoke (passive smokers). Smoking cessation is known to greatly reduce risk to NCDs. Promoting a smoke-free environment also helps individuals quit smoking.

Some pointers in promoting smoking cessation:

- Be guided by the following measures in assisting clients to quit smoking:
  - Update and record smoking status of clients during every visit.
  - Take every opportunity to counsel smoking clients who visit the health facility.
  - Always discuss maintenance of cessation with clients who have quit.
  - Rearrange facility systems/procedures to facilitate delivery of smoking cessation.
  - Get technical updates on smoking cessations.
  - Link with other concerned personnel and institutions in providing interventions since smoking cessation requires behavioral and pharmacological management.
  - Be a role model. If you are a smoker yourself, avoid smoking in front of your clients and comply with the policies regarding no-smoking areas.

- Follow the 5 As in helping clients to quit smoking:

  ASK client of his/her smoking status
  Step 1: Assess the smoking status of client.
  Step 2: Find out if client has considered or tried quitting and determine the stage of change (e.g. pre-contemplation, contemplation, decision, action or maintenance).

  ADVISE client to stop smoking and that smoking can cause disease, even death.
  Step 3: Urge all cigarette smokers to quit

  ASSESS client's willingness to quit
  Step 4: Target client's motivation to quit
  Step 5: Encourage complete cessation
  Step 6: Discuss alternatives and substitutes to smoking

  ASSIST client in quitting
  Step 7: Develop a quit plan with the client. Set a Quit Date
  Step 8: Provide supplementary materials to assist the client
  Step 9: Develop a plan to prevent relapse

  ARRANGE follow-up
  Step 10: Set follow-up sessions to monitor progress and prevent relapses

- Work for the establishment of a Smoking Cessation Clinic in your locality or link with a nearby facility which can provide cessation interventions to your smoking clients who expressed the desire to quit.
- Help promote a smoke-free environment:
  - Take every opportunity to educate and inform people outside the health facility about the harmful effects and hazards of smoking.
  - Advocate for the passage of local legislations in support to the following:
    - Limiting access of children and youth to cigarettes (e.g. prohibiting the sale of cigarettes in nearby schools and prohibiting sale to minors);
    - Declaring enclosed places and public utilities, especially health facilities as no-smoking areas;
    - Making sure that cigarette labels have prominent warning signs on the dangers of smoking; and
    - Banning the advertisements and sponsorships of activities directed to children and youth.

  - Establish local coalitions to support individuals break free from their addiction to smoking.

7.2.2.2 Promoting proper nutrition

Promoting proper nutrition is essential in the prevention of major non-communicable diseases, particularly cardiovascular diseases, diabetes mellitus and cancer. It is known that diet high in calories and fats increases the risk to cardiovascular diseases while diets low in fiber and complex carbohydrates increases the risk of cancer and diabetes. A diet of low salt, low fat and high fiber helps decrease these risks. Promoting proper nutrition will entail the following tasks: (1) nutrition counseling, (2) nutrition education for specific target groups, and (3) supportive environment for healthy nutrition.

- **Provide Nutrition Counseling**. It is not enough to perform risk assessment and screening of individuals. Whenever screening is done, there is ethical responsibility to assist and provide support to individuals who turn out to be at risk or positive for disease. One intervention is to provide nutrition/diet counseling. It is a more individualized health education and addresses the specific problem of the client.
  - Educate and counsel clients found with the following nutrition- related problems that lead to NCDs: (1) obesity; (2) increased fat intake; (3) increased intake of salt and/or processed and instant foods; (4) and inadequate dietary fiber.
  - Provide specific information and assist the person to modify his/her risk. Take note of the following guide as you educate or counsel them on their nutrition-related problems:
    - ***Aim for ideal body weight***. If client is found to be overweight or obese, he/she should be helped to get back to his/her desirable body weight and maintain it at this level. Maintaining a desirable body weight entails the following:
      - Recognize the eating pattern by keeping a food diary;
      - Observing helpful diet practices such as not losing weight too fast or taking eating small portions of food slowly to end up eating less, etc.;
      - Regular exercise to accompany change in eating habits to make weight reduction more effective.

    - ***Build healthy nutrition-related practices***.
      Encourage client to consume adequate and well-balanced diet and adopt desirable food and nutrition practices.
      - Eat variety of foods everyday;
      - Maintain children's normal growth through proper diet and monitor growth regularly;
      - Consume fish, lean meat, poultry or dried beans;
      - Eat more vegetables, fruits and root crops;
      - Eat foods cooked in edible/cooking oil daily (preferably vegetable oil);
      - Use iodized salt but avoid excessive intake of salty foods;
      - Exclusively breastfeed infants up to 6 months and then give them appropriate complementary foods while breastfeeding up to 24 months;
      - Consume milk, milk products and other calcium rich foods;
      - Eat clean and safe food;
      - Avoid drinking of alcoholic beverages

    - ***Choose food wisely***. Advise client to select the proper kind of food to eat especially processed foods by giving careful attention to their labels. Advise them how to interpret the nutrition facts in the food labels. They must take note also of the freshness of the food while checking out on the kinds of additives that were used.

    - ***Break-off from fast food***. Remind clients that the key to breaking a bad habit is to replace it with a new, positive one. Be guided by the following steps in helping clients break any bad habit.
      - Help them define the bad habit. Be sure to describe a bad habit in a specific manner. For example, instead of saying "I don't eat very well," describe a specific behavior that demonstrates the problem: "I eat too much potato chips."
      - Assist client set a goal. A goal describes the behavior to be substituted for the bad habit. It should be specific and clear and should have a realistic deadline. It should also emphasize doing something, e.g for snacks, choose foods low in fat, such as fruit and low-fat cheeses. If a goal is broad, it should be broken into sub goals.
      - ***Design with the client an action plan***.
        (a) Monitor the bad habit. Spend a week carefully observing and recording bad habit.
        (b) Write the plan. Describe in detail the specific day-to-day changes to reach goals. The plan should be a gradual, step-wise process.
        (c) Keeping a record. Record new behavior daily, including setbacks.

- ***Advise client to seek support from family members and friends***. Family and friends should keep an eye on the client's progress, and keep a handy list of the benefits of new behavior. Surroundings should be structured to support efforts.

- Should an extensive nutrition counseling be required, refer the client to the nutritionist for further action.

- **Conduct Nutrition Education for Specific Target Groups**. Nutrition education is a key strategy in the promotion of good nutrition among target population. With the increasing prevalence of NCDs, the need to provide nutrition education among target clients specifically on healthy diet and the promotion of a supportive environment for good nutrition is very important. It is one of the major tasks and a challenge among health workers mainly responsible for public health care and service delivery.
  - Focus your nutrition education efforts to the following groups of clients:
    - Clients who are well, at risk, or even with disease
    - Mothers, food handlers and food service people
    - Stakeholders in key positions to influence others like teachers, day care workers, community and civic leaders
  - When conducting health education for a group, assess the following:
    - Learning needs depending on the characteristics of the group
    - Readiness to change
    - Development stage and their immediate concerns

- **Promote Supportive Environment for Healthy Nutrition**. Providing nutrition education or counseling to individuals is not enough to promote good nutrition. The environment plays a major role in influencing nutrition-related behavior, particularly in the availability and access to healthy food. It is essential that you advocate among your clients the following behaviors:
  - *Encourage client to put up vegetable gardens in their backyard*. Aside from being a healthy outdoor activity, it would provide the cheapest and most accessible source of fruits and vegetables.
    - Support government programs that encourage gardening and vegetable farming;
    - Collaborate with the Department of Agriculture and other government agencies to help conduct trainings and seminars as to the proper way of growing fruits and vegetables (e.g. which plant would survive in which type of soil and other conditions such as amount of water and minerals that specific plants need);
    - Promote fruits and vegetables as special prizes or rewards in school affairs and in certain barangay events, such as fiestas and other public celebrations.
  - *Campaign for nutrition-friendly environments*
    - Advise client to buy fresh food instead of commercially processed food items. Encourage selling of farm products produced in the community, making sure they are fresh and safe. Fresh foods are usually more nutritious and safe from all the chemical additives present in processed foods;
    - Encourage them too to campaign against the proliferation of commercial establishments (e.g. fast food buildings or stalls) in the area which could become source of unhealthy food and food products. Campaign for proper zoning to limit these food establishments.
  - *Advocate clients to support health and nutrition policies*
    - Support the formulation and implementation of policy in prohibiting drinking of alcohol beverages, limiting the sale of soft drinks and junk foods in the school canteen and prohibiting students from buying their food for lunch from the street vendors;
    - Advocate and influence health school and local government officials for the strict implementation of school policies.

7.2.2.3 Promoting physical activity and exercise

The importance of physical activity or exercise in the prevention of NCDs cannot be overemphasized. Sedentary lifestyle or the lack of physical activity has grave consequences to one's health. It is highly associated with the increased risk to cardiovascular diseases, diabetes mellitus and obesity including colon and breast cancer, high blood pressure, lipid disorder, osteoporosis, depression and anxiety. Clients that manifest physical inactivity during risk assessment should be provided with clear information and guide how to establish a regular physical activity or exercise.

- Clarify first the difference of physical activity from exercise.
  - Physical activity refers to something that you do at home (e.g. washing of dishes, sweeping the floor, etc.) and also things that are done outside the house (e.g. gardening, washing car, etc.).
  - Exercise is a planned, structured and repetitive movement (e.g. jogging or walking daily for 2 hours, basketball once a week, etc.) done to improve or maintain one or more components of physical fitness, namely: cardio-respiratory, endurance, muscle strength, and toning or weight loss.
- Explain the benefits of physical activity.
  - Regular physical activity improves health and reduces the risk of premature death. It provides physiological gains like (1) increased efficiency of the heart to function, (2) improved blood circulation/ supply to the heart, (3) increased blood volume, number of red blood cells and high-density lipoprotein; and (4) decreased levels of bad cholesterol. It provides emotional benefits like mental alertness, concentration, self-image, self-confidence and lowered stress and anxiety.

- Promote Physical Activity
  - Client needs to improve the performance of daily activities by integrating and putting in more activities into the daily routine (e.g. walking, cycling, jogging to work, taking the stairs instead of elevators, take fitness breaks instead of coffee breaks, perform gardening, cleaning the house, scrubbing, etc.).
  - Advise that the minimum amount of physical activity required to achieve health benefits is:
    - at least 30 minutes, cumulative of moderate intensity for 5 or more days a week (e.g. walking briskly, mowing the lawn, dancing, swimming, etc.);
    - at least 30 minutes, cumulative of vigorous intensity, 3 or more days a week (e.g. jogging, chopping wood, bicycling uphill, etc.)
  - Emphasize that physical activity should be done as a habitual practice, meaning that it should be done regularly. Clients who are currently performing moderate physical activity should be encouraged to increase the intensity of their activities while those who are already performing vigorous intensity activities should maintain them so.

- Promote Exercise
  - Plan with the client which of the four components of the exercise he/she would like to achieve. Based on this, identify specific exercise activities that the client would like to engage in.
  - Incorporate during planning the three factors of FIT Principle: (1) frequency of the exercise, (2) intensity of the exercise; and (3) time allotted for the exercise.
  - Advise the client to monitor the intensity of the exercise through the following: (1) perceived exertion, and (2) target heart rate and estimate d heart rate
  - Advise the following safety measures during exercise
    - There is a need to warm up and cool down before and after the exercise;
    - Observe precaution to avoid soreness or injury to the musculoskeletal system;
    - Advise clients who experience the following forms of cardiovascular diseases (high blood pressure, high blood cholesterol, family history of heart disease, diabetes mellitus and obesity) to seek medical evaluation before engaging in exercise programs.

- Promote physical activity in the workplace, in

school, church, among youth clubs, informal sector groups or other segments in the community.
- Involve target clients in designing the physical activity and exercise programs to help sustainability of the activity

7.2.2.4 Promoting avoidance of alcohol use

- Help clients recognize that alcohol is not good for the body. Chronic alcohol use can lead to dependence, neurological problems, and vitamin deficiency.
- Determine the scale of drinking by asking clients to record the amount of alcohol consumed in a week or a month and help then decide to stop the habit.
- Analyze the pattern of drinking to successfully stop the habit. If drinking mainly with friends, advise to stay in or look for other activities such as any sports event, trip to the movies or the mall, or walk in the park.
- Advise clients to avoid keeping alcohol in the house.
- Determine whether clients need professional help to stop drinking alcohol and refer.

7.2.2.5 Promoting stress management

The effect of stress depends on how the client handles it. Handling and management of stress depends mainly on being able to recognize it, knowing where the stress is coming from and understanding the stress-management options best suited for each particular situation.

- **Identify symptoms of stress**. Manifestations of stress are numerous and varied but they generally fall into 5 categories, namely: physical, mental, emotional, behavioral and interpersonal. Several stress reactions that persist for long periods of time and recur without warning after a traumatic event or even after an intense experiences such as an accident, hospitalization, or loss, may become a post-traumatic stress disorder (PTSD) requiring professional assistance to overcome.

Box 3. Symptoms of Stress

- Physical Symptoms. These can be caused by other illnesses; hence, medical consultations needed.
  - headaches
  - sleep disorders (e.g. insomnia, oversleeping, early awake)
  - lower back pains (clenching of jaws or grinding teeth
  - constipation, diarrhea, colitis, indigestion or ulcer
  - skin rashes
  - muscle aches (especially neck and shoulders)
  - excessive perspiration
  - appetite change
- Mental Symptoms
  - trouble concentrating
  - difficulty in making decisions
  - forgetfulness
  - confusion
  - poor memory and recall
  - excessive daydreaming
  - preoccupation with a single thought or idea
  - loss of sense of humor
  - decreased productivity, lower quality of work
  - increased number of errors
  - poor judgment
- Emotional Symptoms
  - anxiety or worry
  - depression or cries easily
  - irritability
  - nervousness
  - lowered self-esteem or feelings of insecurity
  - increased sensitivity or feeling easily hurt
  - angry outburst
  - aggression or hostility
- Behavioral Symptoms
  - Mood swings
  - Fidgeting
  - Nervous habits (nail biting, foot tapping)
  - Changed in eating and sleeping habits
  - Increased in smoking and drinking alcohol
  - Yelling, swearing and blaming
- Interpersonal Symptoms
  - Inappropriate distrust of others
  - Blaming others
  - Missing appointments or canceling them on a short notice
  - Faultfinding and verbal attacking
  - Overly defensive attitude
  - Giving others the "silent treatment"

- **Identify sources of stress**. There are two kinds of stressors, (1) internal and (2) external.

  Internal Stressors

  - Lifestyle choices: caffeine, not enough sleep, overload schedule
  - Negative self talk: pessimistic thinking, self-criticism, overanalyzing
  - Mind traps: unrealistic expectations, taking things personally, all or nothing thinking and exaggerating, rigid thinking
  - Stressful personality traits: Type A, perfectionist, workaholic, pleaser
  - Major life events: death of a loved one, lost of job, promotion, marriage, separation or divorce, new baby, illness, calamity and disasters

  External Stressors

  - Physical environment: noise, bright lights, heat, confined spaces
  - Social interaction: rudeness, bossiness, aggressiveness on the part of someone else
  - Organizational: rules, regulations, "red tapes" deadlines, reorganizations
  - Daily hassles: commuting, traffic, mechanical breakdown, misplacing of things such as keys, documents, bills

- **Promote stress management techniques.**
  - *Spirituality*. Spirituality can be exercised through meditation. The idea of meditation is to focus one's thoughts on one relaxing things for a sustained period of time. It gives the body time to relax and recuperate and clear away toxins that may have built up through stress and mental or physical activity.
    - Meditation should be done in a position that one can comfortably sustain for a period of time (20-30 minutes is ideal). The lotus position may be appropriate or sitting in a comfortable chair or lying on a bed can be equally effective.
    - Meditation can have the following effects:
      - lowers blood pressure
      - slows breathing
      - helps muscles relax
      - gives the body time to eliminate lactic acid and other waste products
      - eliminates stressful thoughts
      - helps clear thinking
      - helps with focus and concentration
      - reduces stress headaches
  - *Self Awareness*. It means knowing oneself, getting in touch with one's feelings or being open to experiences. It increases sensitivity to inner self and to relationship with the world around, how one responds to people and the effects on them. It is important in evaluating one's abilities realistically, identifying the areas in which one needs to improve on, recognize and build strengths to develop more effective interpersonal relationship, understand the kind of motivation that are influencing such behavior, develop empathy and understanding to recognize both personal needs and needs of other people.
  - *Scheduling*: Refers to time management. It is important to begin accepting time as the most important resource, a tool which can be drawn upon to accomplish results, an aid that can take care of need, an assistant in solving problems. Managing time means managing oneself in such a way as to optimize the time available so that it will yield gratifying results.
  - *Siesta*. It means taking a nap, a short rest, a break or recharging of "battery" in order to improve productivity. It helps relax the mind and the body muscles. A study has shown that siesta invigorates the body. Performance of an individual scored high when siesta is observed for 15-30 minutes. If one exceeds 30 minutes, one will feel groggy and ineffective. Siesta can be done by having a nap, lying down, closing your eyes and resting your head.
  - *Stretching*. These are simple movements performed at a rhythmical and slow pace executed at the start of a demanding

activity to loosen muscles, lubricate joints and increase body's oxygen supply. It requires no specific equipment, no special clothes, no special skills and can be done anywhere and at any time. Stretching encompasses the following:

- ***Breathing Control***. Deep breathing is a key element of everything from "taking deep breaths" approach to calming someone down, to yoga relaxation and Zen meditation. It works well in conjunction with other relaxation techniques.
  - Concentrate on breathing in and out
  - Accompany this by counting your breaths using the numbers 0 to 9.
  - Visualize the images of the numbers changing with each breath
  - Alternately visualize health and relaxation flowing into your body when you inhale, and stress or pain out when you exhale

- ***Exercise***. Frequent exercise is probably one of the best physical stress-reduction techniques available. Exercise not only improves one's health but also relaxes the tense muscles and helps you sleep. Other benefits of exercise include:
  - Improves blood flow to the brain, bringing additional sugars and oxygen which may be needed when one is thinking intensely
  - When thinking hard, the neurons of the brain function more intensely and build up toxic waste products that cause foggy thinking. Exercise speeds up the flow of blood through the brain , moving the waste products away faster
  - Releases chemicals called endorphins into the blood stream which give a feeling of happiness and well-being.

- ***Progressive Muscular Relaxation (PMR)***. It is a purely physical technique for relaxing the body when muscles are tense. The idea behind PMR is that a group of muscles is tightened as they are tightly contracted as possible by holding them in a state of extreme tension for a few seconds first, and relaxing them back again to their previous state. This can be applied to any or all of the muscle groups in the body depending on the need and preferences. Try the following example:
  - Form a fist and clench your hand as tight as you can for a few seconds
  - Then relax your hand to its previous tension
  - Then consciously relax it again so that it is as loose as possible
  - Feel the deep relaxation in the muscles

- ***Imagery***. This is a powerful method of stress reduction when combined with physical relaxation methods such as deep breathing and PMR. Knowing that certain types of environment can be very relaxing while others can be intensely stressful, the imagery technique makes use of the imagination to recreate a place or scene that is very relaxing. The more intensely one uses his/her imagination to recreate the place or situation, the stronger and more realistic the experience will be.
  - Imagine a scene, place or event that you remember as peaceful, restful and happy;
  - Bring all your senses into the image, with sounds of running water and birds, the smell of lavender, the taste of cool spring water and the warmth of the sun, etc.;
  - Use the imagined place as a retreat from stress and pressure

- *Sensation Techniques*. The sense of touch is a powerful and highly sensitive form of communication. It is a natural reaction to reach out and touch, whether to feel the shape or texture of something or to respond to another person. Massage helps soothe away stress, unknotting tensed and aching muscles, relieving headaches and helping sleep problems. It is also invigorating as it improves the functioning of many of the body's systems, promotes healing and tones muscles, leaving with a feeling of renewed energy.
- *Sports*. These are skills and games which involve the participation of group of people or a person, competing with others for a common goal. In sports, the mind and body work together as a single unit and therefore affects the bodily system. In particular, it has effects on the heart muscle, blood pressure, pulse rate, red blood corpuscles and the nervous system. It is important to engage in sports activities that create awareness. Sports have been identified as one way to manage and relieve stress.
- *Socials*. Man is a social being who exist in relationship with his physical environment and in relationship with people and society. Socialization plays a very important role in the development of interpersonal relationships. Through it, life comes meaningful, happy and worthy. On the contrary, without socialization, life will be boring and empty. One form of a social activity is dancing. Through dancing, man enjoy his body's love and expresses gesture and releases tension through rhythmic movement
- *Sounds and Songs*. Music plays an important part in everyday life of an individual. It provides the medium of expression of thoughts and emotions. It is also the best means to relieve tension, stress, fears and anger. Music is believed to have tremendous moral and social forces, arousing an individual into action and giving him/her awareness of the world of peace and beauty. Sound is a form of music – where it stimulates a motion of molecules in the air. This chain reaction continues as it strikes the card rum where the nervous system picks up the impulses and transmits it to the brain and finds them fascinating and satisfying. Songs on the other hand is the most natural form of music. Issuing from the body, it is projected by means of the voice.
- **Speak to Me**. Communication is the means by which people make their needs known. It is the way people gain understanding, reinforcement and assistance from others. Talking to someone when one feels overwhelmed or unable to deal with the stresses in his/her life is often the best medicine.
- *Stress Debriefing*. Critical incident stress debriefing is assisting crisis workers or team members to deal positively with the emotional impact of a severe event or disaster, and to provide education about current and anticipated stress responses, as well as information about stress management. Critical event is any unusually strong or overwhelming emotional reactions which have potential to interfere with work during the event or thereafter among the majority exposed.
- *Smile*. It has been observed that individuals who always smile are healthy people. Smile is an expression of pleasure, amusement, affection and irony. Studies have shown that smiles relive all kinds of stresses, physical or mental. It is also considered as one of the ingredients that will motivate and encourage individuals to work harder and improve level of performance. When one smiles, muscles are relaxed because only 15 muscles are working while frowning affect about 65 muscles.

7.2.3 Screening and Diagnosis of NCDs

Individuals identified with high-risk factors need to be further screened for the possible presence already of a disease. Screening is the "presumptive identification of unrecognized disease or defect by the application of tests, examination or other procedures which can be applied rapidly. The primary goal of screening is to detect a disease in its early stages to be able to treat it and prevent its further development. It must be understood that screening is not a diagnostic measure but it is a preliminary step in the assessment of the individuals' chances of becoming unhealthy.

7.2.3.1 Types of Screening Program

Individual Screening: Refers to the testing applied to one person considered to be at high risk for a disease or condition (e.g. Paps smear (conventional cytology) for possible cervical cancer, digital rectal exam for possible prostate cancer);

Group or Mass Screening: Refers to tests applied to a segment of population which

portrays any of the following situations: (1) an increased incidence of a condition; (2) a significant prevalence of the condition; and (3) a recognized element of high risk within the group. This however is quite expensive considering the mass of people who will be subject to screening tests.

7.2.3.2 Specific Screening Tests

Screening is usually disease-specific. Hence, specific screening tests are applied for each of the following diseases.

Hypertension: A sustained elevation in mean arterial pressure which results from changes in the arterial wall such as loss of elasticity and narrowing of blood vessels, leading to obstruction in blood flow that can damage the heart, kidney, eyes and brain

Elevated Blood Cholesterol: Defined by having cholesterol level higher than normal levels which is either classified as elevated may be at risk (200-239 mg/100 ml) and elevated at risk (≥240 mg/100 ml)

Diabetes Mellitus: A genetically and clinically heterogeneous group of metabolic disorders characterized by glucose intolerance with hyperglycemia present at time of diagnosis elevated amount of sugar in the blood

Cancer: Growth of abnormal cells in specific parts of the body much faster than normal cells do, thus outliving them and continue to compete for blood supply and nutrients that normal cells need

COPD: Characterized by airflow limitation that is not fully reversible. It is usually both progressive and associated with abnormal inflammatory response of the lungs to noxious particles or gases

Asthma: An inflammatory disorder characterized by increased airway hyper-responsiveness manifested by a widespread narrowing of air passages which may be relieved spontaneously or as a result of therapy. Other clinical manifestations include paroxysm of breathlessness, chest tightness, breathing and coughing.

The screening tests to be applied per disease, the classifications of the results obtained from the tests and guides for frequency of tests or interpretation are summarized in Table 6.

- Be reminded of the following guide as you screen clients:
  - Remember that screening is only a way to detect if individuals are at risk or with possible disease. Hence, Do Not Label individuals at this stage yet as "hypertensives," "diabetics," or "asthmatics" at this stage since it may result to extreme anxiety on the part of the clients and their families.
  - If screening turns out to be positive, there is a need to further confirm the diagnosis and repeat the test or refer clients to appropriate institutions if the condition warrants specialized diagnosis and treatment.
  - On the other hand, if the result is negative, it does not also mean that a person is disease free. It is best to schedule client for a repeat testing.
  - Inform clients of the meaning and limitations of the results. Explain that this can contribute to the development of the disease if not controlled.
  - Educate clients how to modify the risk factors and promote positive lifestyle change.
  - Monitor and follow-up clients based on the recommended schedule.
- If there are risk factors present:
  - **CONFIRM** retesting if needed and frequency of retesting. For example, a client with 140/90 BP is classified to be in Stage 1 and needs to be confirmed in 2 months.
  - **EXPLAIN** the significance of the finding and that this can contribute to development of disease if not controlled.
  - **EDUCATE** on how to modify risk factors

Table 6: Recommended Screening Tests and Classifications by Disease

Disease	Screening Tests Recommended	Classification			Remarks
Hypertension	Determined by taking the blood pressure	**Mean BP in mmHg**		**Classification**	**Recommended Confirmation Schedule**
		systolic	**diastolic**		
		< 120	< 80	Normal	Recheck in 2 years
		120-139	80-89	High Normal	Recheck in 1 year
		140-159	90-99	Stage 1	Confirm in 2 months
		> 160	> 100	Stage 2	Evaluate and refer to source of care within 1 month
Elevated Blood Cholesterol	Measured by taking a small blood sample and testing for total blood cholesterol including low density lipoprotein (LDL) and high density lipoprotein (HDL)	**Cholesterol Level**		**Interpretation**	**Frequency of Tests**
		<200 mg/100 ml		normal	Repeat every 5 years
		200-239 mg/100 ml		Elevated, may be at risk	Repeat tests, take average of both tests
		240 mg/100 ml and above		Elevated at risk	Further tests needed (lipid profile and treatment)
Diabetes Mellitus	Fasting Blood Sugar (FBS): defined as no caloric intake for at least 8 hours which means no food, juices, milk; but water is allowed 2-hr blood sugar test:: performed after using 75g glucose dissolved in water or after a good meal	**FBS Values**		**Classification**	**Criteria for Diagnosis of Diabetes Mellitus**
		109 mg%		Normal	Any of the following: • symptoms of diabetes plus RBS ≥ 200 mg/ dL (11.1 mmol/L) • FBS ≥ 126 mg/dL (7.0 mmol/L) • 2-hr blood sugar ≥ 200 mg/dL (11.1 mmol/L) during an oral glucose tolerance test (OGTT)
		110-125 mg%		Impaired glucose tolerance	
		126 mg%		Possible diabetes mellitus	
Cancer	**Types of Cancer**	**Screening Tests**			
	Breast Cancer	• Clinical Breast Exam • Breast Mammography			
	Cervical Cancer	• Visual Inspection with Acetic Acid • Paps smear (conventional cytology)			
	Colon Rectal Cancer	Annual Test: • digital rectal exam • stool blood test • inspection of colon			
	Prostate Cancer	Digital Rectal Exam			
	Lung Cancer	• Chest X-Ray every 6 months • Sputum cytology			
COPD	Spirometry is done to determine the degree of obstruction	Suspect COPD in persons with the following: • > 50 years old • smoking for many years • with symptoms of progressive and increasing shortness of breath on exertion and/or • chronic productive cough			
Asthma	Spirometry can aid in diagnosis. Can also be achieved by measuring the peak expiratory flow rate using a peak flow meter before and after using a bronchodilator	Suspect asthma person with the following: • one or a combination of cardinal symptoms (dyspnea, cough, wheezing, chest discomfort) • temporal waxing and waning and/or nocturnal occurrence of symptoms • a history of any of the following: symptoms triggered by exogenous factors, a family history of asthma or allergy, a personal history of asthma, allergic rhinitis or atopy; an improvement of symptoms with bronchodilator use			

and promote positive lifestyle change.
- **MONITOR** and follow-up based on recommended schedule.
- **REFER** for confirmation of diagnosis especially if screening was done by a non-doctor to a medical specialist or center if condition warrants specialized diagnosis and treatment.

7.2.4 Management and Treatment of NCDs

The major NCDs, namely, cardiovascular diseases, cancers, diabetes mellitus and chronic respiratory diseases are discussed here in terms of objective of treatment and general management/treatment procedures. Physicians based in primary care facilities are expected to provide initial management and refer to higher level facility as needed. Algorithm, classification or staging of diseases, and drugs for the major NCDs are presented in Appendix E for further information.

7.2.4.1 Cardiovascular Diseases

This section deals with the management and treatment of the following common forms of cardiovascular diseases: hypertension, coronary artery disease (angina pectoris and myocardial infarction) and cerebrovascular accident (stroke) and transient ischemic attack (TIA).

7.2.4.1.1 Hypertension

The objective of treatment is to prevent the onset of coronary artery disease and stroke as well as to halt its progression into an end organ involvement. Management and treatment procedures include the following:

- Encourage healthy lifestyles for all individuals. Components of lifestyle modifications include weight reduction, dietary salt reduction, aerobic physical activity, and moderation of alcohol consumption.
  - Maintain an ideal body weight. Reduce weight if overweight.
  - Eat foods low in fat and high in fiber, high in potassium, calcium and magnesium.
  - Reduce salt intake by using less salt when cooking and avoiding salty foods like processed meat, peanuts, and other commercial products.
  - Expend energy through physical activity and exercise.
- Identify stage of hypertension (see Appendix E for details). Prescribe lifestyle modifications for all patients with pre-hypertension (120/80-139/89 and hypertension (≥140/90).
- Treat BP<140/90 mmHg or BP<130/80 mmHg in patients with diabetes or chronic kidney disease.
- Improve adherence to drug therapy. Empathy increases patient's trust, motivation, and adherence to therapy. Consider patient's cultural beliefs and individual attitudes.
- Urgently refer patients in hypertensive emergencies or situations which that require urgent blood pressure reduction to prevent or limit organ damage (e.g. unstable angina, acute myocardial infarction, acute ventricular failure with pulmonary edema, aortic dissection, eclampsia, and hypertensive encephalopathy).

7.2.4.1.2 Coronary Artery Diseases

Two major coronary artery diseases are angina pectoris and myocardial infarction. In either case, drug therapy is still the main treatment. These medications work either by reducing the oxygen demand of the heart, by helping the supply of blood or both. Management and treatment include the following:

- **Angina Pectoris**
  - *Prevention of Acute Anginal Attack*
    - Use of nitroglycerin in different forms: sublingual, oral, ointment, patch
  - *Treatment of Acute Anginal Attack*
    - Use of any of the following drugs as may be indicated:
      - sublingual nitroglycerin
      - long-acting nitrates:
      - beta adrenergic antagonist (any)
      - calcium channel blockers
      - sedatives, tranquilizers and anti-depressants
      - digitalis and diuretics
      - anti-arrhythmic drugs

- **Myocardial Infarction (MI)**

As soon as a patient suspected of having suffered from a MI is brought in, the following measures must be immediately carried out:

- Provide oxygen through a face mask or nasal prong
- For patients experiencing fibrillation or arrhythmias, defibrillation should be done
- Drugs most commonly used in cases of acute MI include the following:
  - analgesics
  - nitrates
  - thrombolytic therapy
  - beta-blockers
  - anti-arrhythmic drugs
  - sedatives
  - laxatives

7.2.4.1.3 Cerebrovascular Accident (Stroke) and Transient Ischemic Attack (TIA)

Stroke is an emergency. It is important that it is recognized immediately and referred to a secondary or tertiary level care facility. The aim of management is to stop its progression and prevent recurrence.

- During the acute phase, it is important to maintain fluids and electrolytes (e.g. sodium and potassium), avoid low blood pressure and to avoid paralysis and secondary complications such as pneumonia, urinary tract infection, muscle contractures and bedsores.
- Surgery is usually not used to treat an acute stroke; however it may be indicated for hemorrhagic strokes in which evacuation of blood clots could be life-saving. Recent blockage coronary artery may also be managed surgically.
- Drug therapy can include the following:
  - anti-coagulant medications (for ischemic strokes)
  - anti-platelet medications
  - steroids
  - mannitol

7.2.4.1.4 Cancers

Prevention and control of cancers require the following major approaches:

1. Primary prevention – focuses on eliminating the conditions that cause cancer to develop and is being advocated as an important control strategy

2. secondary prevention – refers to early detection coupled with effective therapy

3. definitive diagnosis and management – refers to treatment and after cure of diagnosed cancers

4. supportive care (rehabilitation and pain relief) – refers to provision of continuing care and rehabilitation of post treatment cancer patients and the terminally ill

Treatment of cancer may include surgery, chemotherapy, radiotherapy, immunotherapy or combinations of these.

This section is focused on the treatment and management of cancers, primarily of the leading specific sites which include: lung, breast, and cervix.

- **Lung Cancer**
  - Classify and identify the stage of lung cancer.
  - Follow the recommended protocols for treating lung cancer.
  - Refer to Appendix E for the algorithm on screening for lung cancer and treatment

protocol.

- **Breast Cancer**
  - Identify the stage of breast cancer.
  - Follow the recommended protocols for treating breast cancer.
  - Refer to Appendix E for the staging for breast cancer and treatment protocols.
- **Cervical Cancer**
  - Perform clinical evaluation for possible staging of cancer.
  - Follow the recommended protocols for treating cervical cancer.
  - Continue patient education to encourage patient follow-up.

7.2.4.1.5 Diabetes Mellitus

Management of diabetes mellitus includes team-based care, patient education, nutrition, physical activity, pharmacologic treatment, and monitoring of glycemic control.

- *Team-based care*. Diabetes mellitus is best managed by a team which includes not only the health care professionals but also the patient. The team-based approach allows flexibility in delivery of care and improves communication among the health care professionals. Standard members of the core team should ideally include the physician, diabetes educator, and nutritionist/dietitian but need to be tailored to local situations. Additional members of the team can be added when necessary and available, e.g. ophthalmologist, nephrologist, cardiologist, obstetricians, psychologists, etc.
- *Patient education*. Patient education is more than helping people with diabetes monitor their blood glucose or take their medications as prescribed. It must be an ongoing process rather than a one time event because a person's health status and need for support changes over time. The patient with diabetes should be educated on the following:
  - nature of the disorder
  - symptoms of diabetes
  - risk of complications (and in particular the importance of foot care)
  - individual targets of treatment
  - individual lifestyle requirements and meal planning
  - importance of regular exercise
  - interaction of food intake, physical activity, and oral hypoglycemic drugs, insulin, or other drugs
  - self monitoring of blood or urine glucose, the meaning of blood glucose results, and what actions need to be taken
  - how to cope with emergencies e.g. illness, hypoglycemia, stress and surgery
  - women with existing diabetes require special attention during pregnancy
- *Nutrition*. Effective management of diabetes cannot be achieved without proper attention to diet and nutrition.
  - The goal of nutritional management should be focused on: (1) achieving and maintaining optimal blood glucose levels; (2) reducing vascular risk factors, including dyslipidemia and hypertension; and (3) providing a balanced diet
  - Advise patients to eat a balanced diet, with sufficient variety which the whole family can follow and enjoy.
    - ***Eat most***: Use one or more of these foods as the basis of every meal; e.g. vegetables, legumes, noodles, rice, bread, grains, wholegrain cereals, non-sweet fresh fruits
    - ***Eat moderately***: have small servings of protein-rich foods; e.g. fish, seafood, eggs, lean meat, skinless chicken, low-fat cheese, low-fat yoghurt, low-fat milk, nuts
    - ***Eat least***: Minimize fats, sugar, salt and alcohol; e.g. butter, oil, cream, coconut milk and cream, processed meat, fried foods, preserved or processed foods, pastries, sweets, biscuits, soft drinks
  - Advise overweight patients to lose weight of about 5-10% of the body weight over 3 to 6 months by reducing total energy intake by reducing portion sizes and avoiding excessive intake of fats and sugar; and to maintain achieved weight loss and prevent regaining of weight
  - Fat intake should be no more than 30% of total energy intake. Restrict saturated fat to less than 10% of total energy intake. Avoid or limit the following: fatty meals, full cream dairy products, palm oil, coconut oil and processed foods. Use monosaturated and polyunsaturated fats in place of saturated fat.
  - Carbohydrate should provide 50-55% of the total energy intake. Meals should contain mostly carbohydrate with an emphasis on high fiber foods such as vegetables, legumes, whole grain cereals, yams, and fruits. Sucrose should provide no more than 10% of total food intake. Small amounts of sugar can be consumed as part of a healthy eating plan and non nutritive sweeteners can be used to replace larger quantities of sugar. Eat three meals daily to distribute carbohydrate intake during the day.
  - Protein should provide 15-20% of total energy intake. Good sources of protein are fish, seafood, lean meat, chicken, low-fat dairy products, nuts and legumes.
  - Restrict salt intake to less than 6 grams per day, particularly in people with hypertension. Limit foods which are high in salt such as preserved and processed foods and sauces (e.g. soy, oyster and fish sauces).
- Physical Activity. Physical activity plays an important role in the management of diabetes. It improves insulin sensitivity, thus improving glycemic control and may help with weight reduction.
  - The common goal of physical exercise should be to achieve at least 150 minutes of moderate intensity physical activity each week.
  - Physical activity program/s have to be appropriate for the patient's age, social, economic, cultural and physical status.
  - Advise patient to undertake physical activities and adopt healthy lifestyle practices within daily living
    - ***Do everyday***: Adopt healthy lifestyle habits; e.g. walk to the shops instead of driving, use the stairs rather than the elevator, walk to the office of colleagues instead of using the telephone, walk the dog
    - ***Do regularly***: Participate in leisure – time physical activity and recreational sports activities; e.g. brisk-walking, tai-chi, cycling, golf, strength training, ball games
    - ***Do sparingly***: Avoid sedentary activities; e.g. watching television, using the internet, playing computer games
  - Careful attention should be paid to potential physical activity hazards such as cuts, scratches, and dehydration, and special care of the feet should be taken.
  - If physical activity is sudden and/or vigorous, advise patient to adjust their food intake or medications in order to avoid hypoglycemia
- *Pharmacological Treatment*
  - Drug treatment should be added only when diet, physical activity and education have not achieved the treatment targets. If the patient is very symptomatic or has very high blood glucose level, diet and lifestyle changes are unlikely to achieve the target values. In this instance, pharmacological therapy should be started without delay.
  - The pharmacological treatment of hyperglycemia is based on the two key metabolic abnormalities in diabetes mellitus: (1) insulin resistance; and (2) impaired insulin secretion. Each hypoglycemic agent targets one of these abnormalities, and combination therapy is often required to address both components. See Appendix E for details on pharmacologic treatment
  - Pharmacological treatment of diabetes should be tailored for patients in special situation. These include the children and adolescents, the pregnant women, those undergoing surgery, the elderly and those with psychiatric disorders.
- *Monitoring of glycemic control*
  - The gold standard for assessment of long-term glycemic control is glycosylated hemoglobin (HBA1c) and this should be measured every 3-6 months.
  - Monitoring of glucose levels can be done by either blood or urine testing. Blood testing is optimal, but if this is not available, urine testing is an acceptable compromise. Urine testing does not detect hypoglycemia and is not useful where the renal threshold is elevated. The frequency of monitoring depends on the available resources.
  - Self-monitoring of blood glucose levels should be regarded as essential to improve the safety and quality of treatment for those who are treated with insulin and during pregnancy

Management of diabetes requires active partnership between patients, their families, and the health care team. Every one, thus, has a role

to play in improving health outcomes for people with diabetes.

7.2.4.1.6 Chronic Respiratory Diseases

Common Chronic Respiratory Diseases include asthma and the chronic obstructive pulmonary diseases (COPD) such as chronic bronchitis and emphysema. Attacks of CRDs may vary from gradually increasing respiratory distress to sudden or acute respiratory distress with feelings of suffocation, inability to speak, chest tightness, wheezing and cough with thick, clear or yellow sputum.

- Asthma
  - The goal of the management of asthma is to achieve control of asthma, which is defined as:
    - minimal chronic symptoms, including nocturnal symptoms
    - minimal exacerbations
    - minimal need for prn beta-2 agonist, ideally none
    - no limitations on activities, including exercise
    - normal PEFR
    - PEF variability is < 20%
    - Minimal adverse effects from medications

  - Control Triggers of Asthma.
    - Triggers are risk factors involved in the development of asthma exacerbations by inducing inflammation or provoking acute broncho-constriction or both. Triggers vary from person to person and from time to time. They include: (1) further exposure to causal factors allergens and occupational agents that have already sensitized the airways of the person with asthma, and (2) exposure to irritant gases, weather changes, cold air, exercise, respiratory infections, certain foods, additives, drugs. Taking a careful history is necessary in attempting to identify each individual's trigger.
    - Some control measures include avoidance of exposure to these triggers. In particular are the house dust mites which are the most common cause of asthma worldwide.
      - encase mattresses in allergen-nonpermeable cover such as plastic
      - either encase pillows or wash them weekly
      - soak beddings, such as bed sheets, pillow cases, blankets weekly in hot water 55 degree C or more for at least 7 minutes
      - avoid sleeping or lying on furniture upholstered with fabric
      - remove carpets. If not possible, spray 3% tannic acid once a month
      - use chemical agents, if available to kill mites or alter the mite antigens in the house
  - Pharmacologic Therapy of Asthma
    - The choice of management should be guided by the severity of the patient's asthma, and the benefits, risks, cost and availability of the various forms of asthma treatment
    - A stepwise approach to pharmacologic therapy, in which the number and frequency of medications increase as asthma severity increases, is recommended. The aim is to accomplish the goal of therapy with the least possible medication
    - Inhalation therapy is the optimal form of treatment. In instances where the ideal is not practical, a stepped-care approach using oral formulations is an alternative.
    - Rational drug therapy of asthma necessitates the use of the right mix of CONTROLLER medications (those that can keep asthma under control) and RELIEVER drugs (those than quickly reverse airway obstruction and its associated symptoms) for the degree of asthma severity. See Appendix E for list of controller and reliever drugs in asthma

  - Patient Education for Asthma
    - The aim of patient education is to provide the asthma patient and his/her family with suitable information and training so that the patient can maintain good health and adjust treatment according to a medication plan developed with the clinician.
    - The patient should be made to understand that he/she shares the responsibility of managing his/her condition with his physician and is eventually responsible for leading a normal, active life.
    - Patient education can be achieved in two ways: (1) through individualized education by the physician or the counselor; and (2) through group education.
    - Further details on patient education can be found in Appendix E.

- Chronic Obstructive Pulmonary Disease
  - COPD is a preventable and treatable disease that is characterized by airflow limitation that is not fully reversible. This airflow limitation is usually progressive and associated with an abnormal inflammatory response of the lung to noxious particles or gases.
  - The most common risk factor is tobacco smoke. Other factors include chronic exposure to occupational dusts and chemicals (vapors, irritants, and fumes), indoor air pollution (from burning of wood and other biomass fuels) and sometimes outdoor air pollution.
  - Diagnosis of COPD depends on the presence of dyspnea, chronic cough or sputum of production, and/or history of exposure to the above risk factors. Diagnosis should be confirmed by spirometry.
  - The goal of COPD management include:
    - Relieve symptoms
    - Prevent disease progression
    - Improve exercise tolerance
    - Improve health status
    - Prevent and treat complications
    - Prevent and treat exacerbations
    - Reduce mortality
    - Prevent or minimize side effects from treatment

  - Management of COPD includes:
    (1) Assess and monitor disease - Get detailed medical history:
      - Exposure to risk factors including intensity and duration
      - Past medical history, including asthma, allergy, sinusitis, or nasal polyps, respiratory infections in childhood, and other respiratory diseases
      - Family history of COPD or other chronic respiratory disease
      - Pattern of symptom development
      - History of exacerbations or previous hospitalizations for respiratory disorder
      - Presence of comorbidities, such as heart disease, malignancies, osteoporosis, and musculoskeletal disorders, which may also contribute to restriction of activity.
      - Appropriateness of current medical treatments
      - Impact of disease on patient's life, including limitation of activity, missed work and economic impact, effect on family routines, and feelings of depression or anxiety
      - Social and family support available to the patient
      - Possibilities for reducing risk factors, especially smoking cessation

    (2) Reduce risk factors
      - Smoking cessation is the single most cost-effective intervention to reduce the risk of developing COPD and slow its progression
      - Counseling to quit smoking (follow 5As)
      - Pharmacotherapy, such as nicotine replacement, buproprion/ nortryptiline, and/or varenicline) is recommended when counseling is not sufficient to make patient stop smoking
      - Encourage comprehensive tobacco control policies and programs
      - Eliminate or reduce exposures to various substances in the workplace, causes of indoor and outdoor air pollution

    (3) Manage stable COPD
      - Patient education can help improve skills, ability to cope with illness and health status. It is an effective way to accomplish smoking cessation, initiate discussions about end-of-life issues and improve responses to acute exacerbations.
      - Pharmacologic treatment can prevent and control symptoms, reduce the frequency and severity of exacerbations, improve health status and improve exercise tolerance. Drugs can include bronchodilators and glucocorticosteroids. See Appendix E for details on drug therapy.
      - Non-pharmacologic treatment includes rehabilitation, oxygen therapy and surgical intervention.

    (4) Manage exacerbations
      - An exacerbation of COPD is defined as an event in the natural course of the disease characterized by a change in the patient's baseline dyspnea, cough, and/or sputum that is beyond normal day-to-day variations, is acute in onset, and may warrant a change in regular medication

7.2.5 Rehabilitation

Chronic diseases are major causes of disability,

including blindness, lower limb amputation, motor and sensory dysfunction following stroke, chronic pain, and impaired functioning following heart attack. Rehabilitation is intended to enable people to continue to live full lives as part of society. In some conditions, notably after heart attack, rehabilitation reduces mortality.

Rehabilitation services are ideally provided by a team of specialized personnel, including medical doctors, dentists, prosthetists, physiotherapists, occupational therapists, social workers, psychologists, speech therapists, audiologists, and mobility instructors. In many communities, this may not be feasible owing to shortage of health workers and other resource constraints.

In these situations, community-based rehabilitation is a viable alternative, using and building on the community's resources as well as those offered at district, provincial, and central levels. Community-based rehabilitation is implemented through the combined efforts of people with disabilities, their families, organizations and communities, as well as the relevant governmental and nongovernmental health, education, vocation, social and other services. The focus has expanded to health care, education, livelihood opportunities, and participation/inclusion.

7.2.6 Palliative Care and Pain Relief

7.2.6.1 Guidelines for Palliative Care

- The primary aim of palliation is the relief of pain and discomfort. The next objective is to improve functional status as much as possible, further restoring to the patient her dignity and self-esteem. Only when the first two objectives have been achieved can one aim to prolong survival, when an acceptable quality of life has been restored.
- Rehabilitation is concerned mainly with the physical recovery and psychosocial support.
- In the palliative treatment of patients with advanced cancer, the therapeutic imperatives lean heavily in favor of symptomatic patients. Something must be done, and as a rule, something can be done. Pain must be relieved, and anxiety must be reduced. Definitive therapy in symptomatic patients is not primarily concerned with the objective measures of response such as decrease in size or number of lesions, but rather in the association of measurable response with actual relief of symptoms. When resources are a problem, which is usually the case, prioritization must tilt in favor of the adequate care of symptomatic patients.
- The treatment of asymptomatic patients with advanced cancer is approached from an altogether different perspective, and the therapeutic imperatives are neither urgent nor as clear. In these cases, the purpose of treatment is to contain and reduce the existing lesions, thus delaying the emergence of symptoms and the disability which will inevitably come, if the patient is left untreated.

7.2.6.2 Guidelines for Pain Relief

- Cancer pain can and must be treated.
- A thorough history must first be obtained and the patient examined carefully. Acute conditions that require specific treatment should be excluded.
- While the nature and the cause of the pain are being assessed, therapy should be started with an appropriate analgesic drug. Drugs usually give good relief, provided that the right drug is administered in the right dose at the right intervals. An appropriate drug should be selected and treatment should be started at once;
- It is advisable to follow the 2-step analgesic ladder: (1) non-opioid analgesics; and (2) strong opioid analgesics. See Appendix E for list of drugs for cancer pain relief.
- Anti-neoplastic treatment analgesic and adjuvant drug therapy should be considered the primary treatment for cancer pain. It is necessary to be familiar with one or two

Box 3. Cardiovascular Program by the District Health Board in Cavite Province

MagNaMarTe ILHZ: Kapuso Kasi Kapamilya!

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In the Municipalities of Magallanes, Naic, Maragondon and Ternate collectively called MagNaMarTe Inter-Local Health Zone (ILHZ) of Cavite Province, cardio vascular disease ranks first (1st) among the leading causes of death and third (3rd) among the leading cause of illness.

As an inter-local health zone, the MagNaMarTe enjoined hands to reduce the morbidity, disability and mortality from CVD in their zone. Specifically, the ILHZ aimed to make available a comprehensive prevention and control intervention program on CVD to their catchment population by implementing 5-pronged strategic measures:

1. Promotive Measures which entailed the (a) the promotion of Healthy Lifestyle, (b) Advocacy; and (c) Social Mobilization of the various stakeholders.
2. Preventive Measures which placed focus on (a) conduct of HL activities and regular exercise programs; (b) BP screening; (c) laboratory screening; (d) electrocardiogram examination; and (e) re/training of BHWs and health staff.
3. Curative Services which required the (a) establishment of CVD and Diabetes clinics; (b) making available medicines and supplies; (c) renovation and expansion of laboratory services; and (d) installation of the referral system.
4. Comprehensive Physical Therapy (PT) Services through the (a) establishment of PT clinic; (b) re/training of BHWs, midwives and RHU staff on Community Based Rehabilitation Program (CBRP); and (c) implementation of the CBRP.
5. Resource Generation drawn from (a) forming multi-sectional linkages; (b) fund raising; (c) LGU contributions; and (d) charging of user's fees.

These efforts have paved the way for the following positive results:

- CVD cases and deaths decreased by 57% and 15% respectively from 2000 -2002, (before program implementation) to its full implementation in 2003-2005.
- Knowledge on prevention of CVD was put into practice primarily through community initiated and managed regular exercise programs and HL activities with CVD clubs and Diabetes clubs.
- The populace of MagNaMarTe gained access and availed of PT services which at the same time generated increase in income that resulted to sustainability and self reliability of the program.

This localized NCD prevention and control program has proven that the ILHZ with community-managed activities is an effective strategy in the improvement of the delivery of priority health services. The MagNaMarTe Inter-Local Health Zone attribute their success to the following factors:

- the unwavering commitment and resolute spirit of local health workers particularly the PHO and MHOs
- the supportive local chief executives of each participating municipality
- the very active district health board
- the provision of technical assistance by the DOH, CHD IV-A
- committed and active NGOs and people's groups; and
- active and sustained participation of the community

alternatives for use in patients who cannot tolerate the standard preparation.

- If the recommended dosage and frequency is not effective in relieving the pain, a drug in the strong opioid group should be given. Adjuvant drugs should be added to the opioid and non-opioid drugs, if required for specific indications. Only one drug from each of the groups should be used at the same time. If a drug ceases to be effective, do not switch to an alternative drug or similar strength but prescribe a drug that is definitely stronger.
- Analgesics should be given on a regular basis. The dose of an analgesic should be titrated against the patient's pain being gradually increased until the patient is comfortable. The next dose is given before the effect of the previous one has fully worn off. In this way, it is possible to relieve the pain continually. For persistent pain, the drugs should be taken regularly "by the clock" and not as "required".
- For mild to moderate pain, the patient should be prescribed a non-opioid drug and the dose adjusted to the optimum level. If necessary, an adjuvant drug should be used. If and when these no longer relieve the pain, the patient should be prescribed a strong opioid, together with a non-opioid adjuvant drug if appropriate.
- The patient must be supervised as often as possible to ensure that treatment continues to match the pain and to minimize side effects.
- The following is a list of alternative treatment for patients with difficult or specialized pain problems unresponsive to conventional anti-neoplastic or drug treatment. These patients should be treated in consultation with physician specialized in pain treatment: (1) anesthetic techniques; (2) neurosurgical techniques; and (3) behavioral techniques.

Section 8: Strengthening Program Management

This section presents key components of governance to ensure the effective and efficient implementation of NCD prevention and control, which include: (1) training/ capacity building , (2) supervision, (3) surveillance, monitoring and evaluation. These are essential in ensuring a unified direction of efforts, maximizing outcomes given limited resources, and instilling an open, coordinative and participative spirit among stakeholders.

8.1 Training/Capacity Building

In order to equip and strengthen capacity of health workers and other key partners on the prevention and control of NCD, there is a need to:

- Conduct healthy lifestyle training among health service providers and key partners in the public and private sectors
- Provide special training to selected service providers; e.g. training on smoking cessation, nutrition and diet counseling, etc.
- Orient volunteer workers (e.g., BHWs, BNS and day care workers) on healthy lifestyle

8.1.1 Principles of Adult Learning

- Adults have many previous experiences that are pertinent to any educational activity. Ignoring them cause resistance to learning.
- Adults have a great many preoccupations other than what you are trying to teach them. If you waste their time, they will resent it.
- Adults are faced with real decisions to make and real problems to solve. If training does not help them with either, it may be wasted.
- Adults react to authority by habit according to their experiences. You cannot force someone to learn.
- Adults are proud and self-directing. Learning is most efficient when it is the learner's idea, and meets his specific needs
- Adults have real things to lose. Learning must enhance their position, their esteem, or their self-actualization, otherwise there is too much risk.

8.1.2 Training Guidelines

The following are the steps in developing a training program. Refer to Appendix G for specific guide on developing an Instructional Plan for NCD prevention and control.

- Identifying Training Needs
- Identifying Goals and Objectives
- Developing Learning Activities
- Conducting the Training
- Evaluating the Training

8.1.2.1 Identifying Learning Needs

Identify what the health worker is expected to do and areas of work that need improvement. This information can be obtained by conducting focus group discussion or interview. Learning needs can be met by revising an existing training program or appropriate training content can be developed. Some questions that may guide in identifying learning needs are:

- Who are the targets? Who will benefit the most?
- What behavioral components are amenable to change?
- Learning needs of the targeted groups of knowledge, beliefs, attitudes, skills?
- Resources/services available to them?
- Barriers to behavior change?

8.1.2.2 Identifying Goals and Objectives

For an objective to be effective it should identify as precisely as possible what the individuals will do to demonstrate what they have learned, or that

the objective has been reached. They should also describe the important conditions under which the individual will demonstrate competence and define what constitutes acceptable performance.

8.1.2.3 Developing Learning Activities

Learning activities enable learners to demonstrate that they have acquired the desired skills and knowledge. To ensure that employees transfer the skills or knowledge from the learning activity to the work, the learning situation should simulate the actual work as closely as possible. The determination of methods and materials for the learning activity can be as varied. Practicum can be used as a method for testing demonstration of skills.

8.1.2.4 Conducting the Training

An effective training program allows learners to participate in the training process and to practice their skills or knowledge. They should be involved in the training process by participating in discussions, asking questions, contributing their knowledge and expertise, learning through hands-on experiences, and through role-playing exercises.

8.1.2.5 Evaluating the Training

Evaluation will help determine the amount of learning achieved and whether a health worker's performance has improved. The ultimate success of a training program may be changes throughout the workplace that result in proper implementation of the program. Evaluation can also help decide whether the training session should be offered again at some future date or whether it is necessary to revise the training program or provide periodic retraining.

8.2 Supervision

Supervision is the process of directing and supporting staff in order that they may effectively perform their mandated functions and tasks. It is an essential component in the provision of quality healthy lifestyle interventions by improving the performance of service providers in the various aspects of HL promotion, particularly in (1) assessing clients for high-risk factors to NCDs, (2) determining appropriate interventions in response to their identified needs; (3) helping clients modify their lifestyle; and (4) referring those that need further treatment and follow-up care.

The following guide on supervision is limited only to settings or health facilities where there is an administrative link between the supervisor and the supervisee. In the public health network, this may apply to the RHU nurse supervising the work of the midwives in the main health center or at the BHS level. This may also apply to city health district supervisors handling the Healthy Life Style program over health center staff administratively under them. In other clinic settings, e.g. school clinics, the supervising doctors/nurses at the district level may apply the same to the school clinic staff.

8.2.1 Principles in Supervision

Supervision, if applied properly and purposively, is an effective mechanism of improving the quality of NCD services and care. Mentoring service providers to follow protocols and standards ensure that clients are assessed appropriately, given proper information and counseling and referred for further treatment and care. Supervision must therefore adhere to the following principles:

- Supervision must be done in a supportive and enabling spirit for staff to improve performance rather than in a fault-finding manner;
- Supervision must be prioritized to service providers that require the most assistance and guide. These could be service providers who are just new in the HL Program, newly-hired or those that have not attended previous orientation or training on HL. However, supervision must also be undertaken among those trained staff to follow the application of what they learned in the training and to further hone their knowledge, attitude and skills which cannot be developed during the training period.
- Supervision is a one-on-one interaction between the supervisor and the staff administratively under her/him. Supervision is not done by group as this requires focused attention to a particular staff allowing freer interaction between him/her and the supervisor and ensure privacy and confidentiality.
- Supervision must be planned in advance and purposive. The supervisor must know specifically who among the staff that need closer supervision and what particular aspect the staff would require help or assistance;
- All supervisory interactions need to be documented as basis for monitoring progress on the part of the staff and to guide the supervisor further actions to take;
- Results or findings of the supervision must be kept confidential between the staff and the supervisor.

8.1.2 Guide in Supervision

- It is advisable that the supervisor will dedicate a separate logbook where to write the supervisory plan and record the results of the supervision.
- The supervisor must develop a supervisory plan reflecting the purpose and schedule of the supervisory sessions. The supervisory plan can be designed in the following manner. Supervision of staff on HL can be done at least once a quarter or as often as needed.

Name of Staff to be Supervised	Date of Supervision	Focus of Supervision

- The supervisor will select the most appropriate method to adopt in her supervisory session with the staff. Supervision may be done in different forms. A supervision interaction though may include the following:
  - actual observation how the staff delivers the service to a client;
  - review of records and documents;
  - an open discussion of issues and concerns affecting the staff performance of her tasks
  - mentoring or coaching of how service can be improved;
  - joint planning of key actions to be undertaken
  - recording of findings and agreements
- The supervision activity must be able to focus if the service provider appropriately carried out the following:
  - applying risk assessment to all clients making consults in the facility regardless of the initial complaint or presentation;
  - results of risk assessment are appropriately recorded and diagnosed
  - intervention/s provided are appropriate for the identified risks or disease
  - clients requiring further diagnosis or treatment are properly referred
  - education and/or counseling provided to clients are consistent with standard messages
  - services are provided in a customer-friendly manner
  - clients are reminded when to come back for follow-up check-up or intervention
- The supervisor may use the Observation Checklist in conducting the supervision. See Appendix F.
- The Supervisor checks the completeness and accuracy of the client's records and other related documents;
- The Supervisor discusses the results of the observations and records validation with the supervisee and helps identify areas where improvements are needed;
- If possible, the Supervisor may already provide immediate intervention to the supervisee

(coaching or mentoring);
- The supervisor plans with the staff key actions to be carried out; and the specifies the type of assistance needed by the supervisee.
- The Supervisor records own the findings and recommendations on the Supervisory Logbook.

Date	Findings	Actions Taken	Recommendations (Further Actions Needed)

8.3 Surveillance, monitoring and evaluation

Surveillance tracks the magnitude and trends in mortality and morbidity due to NCDs and their risk factors. It is an on-going, systematic collection, analysis, and interpretation of health-related data essential to the planning, implementation, and evaluation of the program.

Monitoring and Evaluation oversee progress toward achieving the goals, demonstrate effectiveness of program or activity, determine if program components are producing the desired effects, will justify for funding and support, and will guide how to improve the program. The goal of evaluation is to improve a program, and evaluation is not useful unless the findings are used to make a difference. ***Monitoring*** tracks changes in program outcomes over time. ***Evaluation*** seeks to understand specifically why these changes occur.

8.3.1 Principles of Surveillance, Monitoring and Evaluation System

Establishing a surveillance and monitoring and evaluation system need to consider the following factors:

1. **Utility**. Monitoring and Evaluation system must be clear who need the information and what information they need. Monitoring and Evaluation must serve the information needs of the intended users.

2. **Feasibility**. In designing the Monitoring and Environment and surveillance, there must be a clear estimate of how much money, time, and effort are to be put into it. The system or scheme must be realistic, prudent, diplomatic, and frugal.

3. **Propriety**. Measures must be undertaken to ensure that the evaluation is ethical or follows the basic principles of human rights like confidentiality, privacy, etc. The Monitoring and Environment must be within legal and ethical grounds and has regard for the welfare of those involved and those affected.

4. **Accuracy**. The Monitoring and Evaluation system must be designed to generate accurate, timely and complete information which must be shared, revealed and conveyed appropriately to those concerned.

8.3.2 Steps in Monitoring and Evaluation Practice

Step 1- Engage stakeholders

Engaging stakeholders may come in the form of fostering input, actual participation, and power-sharing among those persons who have investment and stake in the results and findings of the M and E and surveillance system. This will help increase the chance of the evaluation results to be most useful. This improves the integrity and credibility of the M and E system, clarify the roles and responsibilities of those involved, enhance cultural competence, help protect human subjects, and avoid real or perceived conflicts of interest.

Step 2- Describe the program

This step entails scrutinizing the features of the program being evaluated, including its purpose and place in a larger context. M and E description

includes specifying the information on how the M and E program is intended to function and the way it will actually be implemented. It must also describe the contexts that are likely to influence conclusions regarding the program. This helps improve the fairness and accuracy of the M and E system, permits a balanced assessment of strengths and weaknesses and helps stakeholders understand how program features fit together and relate to a larger context.

Step 3- Focus the monitoring and evaluation design

This step entails planning in advance where the M and E is headed, what direction it will go and the steps to be undertaken to reach this direction. This helps keep the project on track.

Step 4 - Gather credible evidence

This step requires the need for set of indicators, identifying the sources of these indicators, both quantitative and qualitative in scope. Logistics support to collect, process and consolidate these information must also be taken into consideration. This step is vital in enhancing the utility and accuracy of the M and E, guides the scope and selection of information and gives priority to the most defensible information sources.

Step 5 - Justify conclusions

Justifying conclusions requires a set of standards, an analysis and synthesis of data collected, correct interpretation and judgment as well as making the right recommendations. Conclusions are justified when they are linked to the evidence gathered and consistent with agreed on values or standards of stakeholders. This step is essential as it reinforces the conclusions central to the M and E's utility and accuracy. It clarifies values, involves analysis and synthesis of qualitative and quantitative data, allows a systematic interpretation, and provides appropriate comparison against relevant standards for judgment.

Step 6 - Ensure use and share lessons learned

Feedback, follow-up and dissemination of the results of the M and E ensure that: (1) stakeholders are aware of the evaluation procedures and findings; (2) the findings are considered in decisions or actions that affect the program (findings use); and (3) those who participated in the evaluation have had a beneficial experience (process use). This helps ensure that the M and E achieves its primary purpose of being of use.

8.3.3 Areas for Monitoring and Evaluation

The purpose of NCD Prevention and Control Program's surveillance, monitoring and evaluation is to document if the participating local programs are achieving their goals and progressing toward their intended long–term outcomes.

Evaluation goals for NCD prevention and control program include the following:

- Document changes in local capacity to address NCD's;
- Systematically document NCD burden using surveillance data;
- Document changes in NCD policies and environmental factors that support NCD's; and
- Document the process of implementing interventions and the impact of interventions at the state and local level, in particular settings, and in priority populations.

The evaluation methodology of the local NCD Prevention and Control Program involves separate evaluations of capacity building, surveillance, and policy and environmental interventions. Evaluation does not have to include comparison communities or quasi–experimental designs but should rely upon existing data systems for comparison data.

Local government units (LGU's) are encouraged to use process evaluation methods to:

- Evaluate how policy and environmental strategies are implemented
- Evaluate the extent to which their program is being implemented as intended
- Determine whether their program is appropriately focusing its NCD efforts, especially toward priority populations.

1. Evaluating Capacity Building Programs

Purpose:

To determine whether local health agencies have increased their capacity to perform tasks needed to address NCD's in a comprehensive manner and to reach the long–term goals of the NCD Prevention and Control Program.

Evaluation Question(s):

What progress has been made in addressing the capacity building?

Expectations for Capacity Building and LGU's Basic Implementation:

Demonstrate an increasing ability over time to perform the eight core capacity building activities, as measured by the Monitoring and Evaluation for Equity and Effectiveness (ME3).

Data Collection:

DOH has developed a suggested LGU's ME3 scorecard that local governments can use to track their capacity building. The reporting form includes information on the core capacity building activities discussed in the program description.

2. Evaluating Disease Burden through Surveillance

Purpose:

a. To collect (i) epidemiologic data from the Behavioral Risk Factor Surveillance System- Adult (national sources: National Nutrition and Health Survey, BRFSS) and Youth (Global School-based Student Health Survey or Youth Behavioral Risk Factor Survey), (ii) mortality and morbidity reports (civil registry and FSHIS), hospital discharge data, and other state–based data sources so changes in a population's NCD burden and related risk factors and conditions can be tracked;
b. To aggregate years of NNHeS and or BRFSS core data for priority populations to determine whether NCD rates have changed or if NCD disparities have been reduced at least at the provincial level;
c. To collect data on existing policies and environmental changes across regions using established indicators; and
d. To monitor use of secondary prevention strategies (through Peer Reviewed Organizations data and other appropriate data sources).

Evaluation Questions:

a. What changes are occurring in the local population's NCD burden and risk factors over time?
b. What changes are occurring specifically in priority populations over time?
c. What policy and environmental changes have taken place over time?
d. What changes are occurring on the use of secondary prevention strategies over time?

Expectations for Capacity Building

a. Demonstrate scientific capacity to define NCD burden (at least core risky behaviors, incidence and prevalence of, and top leading mortality) in their locality.
b. Demonstrate the ability to track the following trends in NCD's in the general population and priority populations over time: NCD mortality, morbidity, disability, and risk factors; patients' age at onset of NCD's, and the disparity in these factors between general and priority populations. Regions and provinces should collect NCD–related data using the protocols and time line (STEPS, BRFSS, NNHeS). Regions and provinces are recommended to collect data using the STEPS and or BRFSS modules on hypertension awareness, cholesterol awareness, and cardiovascular disease. Likewise, LGU's provided external funding especially the provinces are recommended to collect data using the BRFSS Module on heart attack and stroke signs and symptoms at least every five years or, if possible, every three years.
c. Publish a document describing the regional, provincial NCD burden every 5 years and collect burden data at least every 3 years or as needed for program planning.

Expectations for LGU's Basic Implementation

Basic Implementation (province level) should meet the three expectations plus the following:

a. Demonstrate that they have collected and analyzed indicators of NCD–related policies and environmental supports for NCD.
b. Demonstrate that they can collect data on secondary prevention strategies at least every three years or as needed for program planning.

Data Collection

The following are the main variables to consider when measuring a populations' NCD burden:

- Age
- Gender
- Socioeconomic status (SES)
- Deaths due to heart disease and stroke, other NCD
- NCD prevalence and average age of NCD patients at disease onset
- NCD disability rates
- Prevalence of NCD risk factors:
  - High blood pressure
  - High blood cholesterol
  - Tobacco use
  - Poor nutrition
  - Physical inactivity
  - NCD-related conditions:
    - Obesity
    - Diabetes, etc.
- Knowledge of signs and symptoms
- Secondary Prevention

3. Evaluating Program Intervention

Purpose

To monitor the implementation and outcomes of the program interventions.

Evaluation Questions

- Did NCD program interventions influence policy or environmental supports?
- Did educational interventions increase public awareness of NCD (e.g., its signs and symptoms)?
- Were interventions implemented as expected?
- Were program evaluation results used for program improvement and to identify "models that work?"
- Were interventions conducted in priority populations using culturally appropriate strategies?

Expectations for LGU's Capacity Building:

Capacity Building are not expected to implement major population–based interventions. If Capacity Building chooses to conduct pilot interventions or receive supplemental funds for interventions, the interventions should be evaluated.

Expectations for LGU's Basic Implementation

a. Develop and implement population–based intervention strategies for general and priority populations.
b. Show that interventions result in policy

and environmental changes. Educational interventions should increase public awareness of NCD issues, increase support for policy and environmental changes to improve people's health, and increase public knowledge about the signs and symptoms of NCD's. Over time, LGU's should address policy and environmental changes at the local level, in all four settings, in the general population, and in all priority populations. In addition, they should document anticipated and unanticipated outcomes, lessons learned, and "models that work" and use these findings for program improvement.

Data Collection:

Basic Implementation should provide process and outcome data and other information regarding setting– and local–level interventions. Information to be provided includes the following:

- A brief description of the intervention
- Program objectives
- Documentation of whether the objective was met
- Demographic characteristics of the population served by the intervention
- Settings for the intervention (community, school, worksite, health facility)
- The geographic region in which the intervention was conducted
- Materials developed
- The target disease (e.g., heart disease, stoke)
- Risk factors addressed (e.g., hypertension, high cholesterol, tobacco use, obesity, nutrition)
- National Objectives for Health 2010 addressed

Table 7. Summary of NCD Program Components and Related Activities

Program Component	Activities
LGU's Capacity Building	• Develop the scientific capacity to define the NCD burden and to evaluate programs. • Develop an inventory of policies and environmental supports. • Develop or update a local NCD or Healthy Lifestyles plan. • Provide training and technical assistance. • Develop population–based strategies. • Develop culturally competent strategies for priority populations. • Develop an NCD infrastructure within the local government health units
Surveillance	• STEPS (Core) and/or Behavioral Risk Factor Surveillance Survey ▸ Hypertension ▸ Cholesterol ▸ Heart Attack and Stroke Signs and Symptoms ▸ Tobacco ▸ Nutrition ▸ Physical Activity ▸ Obesity ▸ Diabetes • Peer review organization data • Policy and environmental indicators • Mortality data • Hospital discharge data
Program Intervention	• Regional–level and local–level interventions • Setting–level interventions • Interventions in different contexts including priority population interventions, and culturally appropriate interventions

- Policy changes achieved
- Environmental changes achieved
- Outcome measures to be used
- Lessons learned
- The intervention's impact on participants and setting
- The theoretical model used for the intervention

8.3.4 Data Sources

Data for surveillance of chronic disease indicators are derived from multiple sources.

- Step1 of WHO's NCD STEPS Surveillance, i.e., NNHes and or BRFS. Core STEPS, a major source of data, is a national household survey conducted by the National Nutrition and Health Survey as Step 1 of the NCD STEPS Surveillance at the national level, and/or from the DOH's BRFSS. This is conducted nationwide with regional and provincial representation with assistance from DOH. Data are collected by using standard procedures through periodic every-five year household interviews with adults aged >18 years.
- Cancer Registries. National cancer registries collect information about the incidence of cancer, the types of cancers that occur and their locations within the body, and the extent of cancer at the time of diagnosis. These data are reported to a central registry from sentinel sites in Manila, Rizal, Cebu and Davao.
- Current Population Survey. The Family Income and Expenditure Survey (FIES) and Labor Force Survey (LFS) of the National Statistics Office, are the primary source of information on the household and labor force characteristics of the Filipino population. The sample is scientifically selected to represent the civilian non-institutional population. Estimates obtained from FIES include employment, unemployment, earnings, hours of work, and other indicators, and are available by different demographic characteristics, including age, sex, race, marital status, and educational attainment (10).
- Hospital Discharge Data. Hospital discharge data are the abstracted records associated with a patient's stay in a short-term hospital. These data typically contain diagnosis, treatment, and payment information. Region or provincial-based hospital discharge data are collected, maintained, and analyzed by individual provinces and regions. Hospital discharge data for Medicare beneficiaries are handled by the Philippine Health Insurance Corporation.
- Death Certificates. Philippine laws require death certificates to be completed for all deaths, and mandates national collection and publication of deaths and other vital statistics data. The Philippine Health Statistics is the result of the cooperation between National Statistics Office and the DOH to provide access to statistical information from death certificates. Mortality data are used to monitor the underlying and contributing causes of death for persons dying and to determine life expectancy.
- Tobacco Data Sources. The Global Tobacco Surveillance System of the WHO and CDC, is an electronic data warehouse containing up-to-date and historic national-level data on tobacco use prevention and control. The GTS System is designed to integrate multiple data sources, provide comprehensive summary data, and facilitate research with consistent interpretation of data. National and regional revenue agencies are an alternative source of information on national and local tobacco sales.
- Renal Disease Data Sources. The National Kidney and Transplant institute's Renal Disease Registry is a national data system that collects, analyzes, and distributes information about end-stage renal disease (ESRD)
- Youth Risk Behavior Surveillance System (or Global School-based Student Health Survey). Monitors priority health risk behaviors that contribute markedly to the leading causes of death, disability, and social problems among youth and adults in the country. These behaviors, often established during childhood and early adolescence, include

tobacco use, unhealthy dietary behaviors, inadequate physical activity, alcohol and other drug use, risky sexual behaviors, and behaviors that contribute to unintentional injuries and violence. Conducted as a school-based survey every 3 years, includes national, regional representative samples of students in high school years.

Section 9: Ensuring Sustainable Health Care Financing

Chronic NCDs are a major cause and a huge economic burden to individuals, their families and society. They cause disability, premature deaths and undermine the economic development of the country.

Health care in the country is mainly financed through family out-of-pocket payments which account for 47.4 percent of total health expenditures in 2003. National and local governments' contributions were all-time low although social health insurance' share is slightly picking up. This financial burden of paying for services is a major obstacle to the access to health care, most especially the poor.

9.1 Health Care Financing Strategy

Health care financing provides the mechanism by which the burden of payment for chronic disease prevention and control can be made equitable to ensure that every individual has access to quality care and services regardless of their capacities to pay. It is also central to sustaining health operations and service delivery over the long term.

Health care financing requires the raising, pooling and allocating of revenues or resources to purchase health services. It is important that localities are guided how financing mechanisms can be established and how resources can be maximized to support the prevention, management and treatment of chronic diseases.

The principal strategy of the Philippines in health financing reform is to transfer the burden of health expenditures from out-of-pocket payments to the National Health Insurance Program (NHIP) as the major payor of health services. Another mechanism in financing NCD prevention and control is creating a separate line item in the national and local government budgets. Local financing schemes (e.g. user fees, paluwagan, piso for health, etc.) can be tapped as possible sources for financing NCDs while the private sector remains a viable source of shared funding for these needs.

9.2 Principles in Establishing Health Care Financing Schemes

- Financing decisions must be based on equity and effectiveness of interventions to ensure adequate health care access and coverage for all;
- Funding must be increased as appropriate for NCD prevention and control programs, particularly those that favour health promotion, primary care and population approaches to prevention;
- Financing schemes that require collecting fees at public health facilities, or charging fees as part of licensing permit/s or registration fees should be supported by local ordinance;
- Mechanisms must be put in place to ensure that revenue generation should not burden the poor and deter them from accessing the health services;
- Caution and care should be exercised in seeking sponsorship from business establishments in support to financing NCD prevention and control measures. Health promotion activities should not be associated with companies selling unhealthy products (e.g. tobacco, soft drinks, etc.);
- Financing schemes should not violate existing health and health-related laws (e.g. Milk Code, Salt Iodization Law, Food Fortification Law, etc.).

9.3 Local Health Care Financing Schemes

Health care financing schemes that can be implemented at the local level include the following:

1. Create a separate budget line item for NCD prevention and control in the LGU's annual health budget

Existing budget structure in most LGUs does not provide for a separate line item for NCD prevention and control nor any specific public health programs. In most cases, budget for health services are lumped under the Maintenance Operating Expenses (MOE), mainly as drugs/ medicines or supplies, traveling expenses, utility services, etc.. This applies to the provincial, city and municipal budget structure. The absence of a specific line item for NCD prevention and control in the local health budget limits the implementation of appropriate interventions. The following provides some guide in establishing a separate budget line item for NCD prevention and control in the annual health budget of the LGUs.

- Budget line item for NCD prevention and control must first be supported with an annual plan which specifies the different activities that the LGU intent to implement for the next year. This must be part of the planning done by the local health office on an annual basis;
- Include health promotion activities and specify basic NCD services such as the procurement of equipment for risk assessment, for essential drugs such as diuretics and anti-hypertensives or for reproduction of IEC materials, etc.;
- Based on this Work Plan, budgetary requirements are estimated and incorporated in the annual budget submitted by the local health office;
- It is advisable that the line item be part of the regular LGU budget over that from 20% development fund or supplemental budget, since the last two options require special ordinance on an annual basis. Priorities on the use of the 20% Development Fund or Supplemental Budget may change from year to year or from one administration to another;
- Advocacy must be undertaken among the local chief executives and members of the Sangguniang body, particularly the Chair of the Sangguniang for Health on the importance of the NCD prevention and control plan and budget request;
- If this cannot be accommodated within the regular budget of the local health office, budget requirements for NCD prevention and control must be advocated annually to the 20% development fund or supplemental budget. An ordinance supporting this allocation must be worked out annually by the local health office.
- The establishment of a budget line item for NCD prevention and control is not limited to the municipal or city levels. The assistance of the provincial government as well as the barangay councils can be tapped. Health staff should lobby for a share of the barangay development funds during the annual budget preparation in the barangays.
- In addition, other local government departments outside the health office may also be encouraged to include in their Work Plan and Budget, funding for activities that promote and support healthy lifestyle such Sports Fest/Leagues, celebration of Healthy Lifestyle Week or other month themes (Cancer Control Week, Nutrition Month, etc.).
- Public schools may be able to use the Economic Support Fund (ESF) (1/2 of the real property taxes collected annually) for healthy lifestyle activities for teachers and students.
- It is best that the Work and Financial Plan for NCD prevention and control is prepared and endorsed by the multisectoral coalition created for HL promotion.

2. Mobilizing Resources from the Private Sector

The private sector remains a viable source of resources for the prevention and control of chronic diseases. These resources may come in the form of actual funds, their participation in service delivery or provision of technical expertise. Their contributions could be significant if they are properly oriented and enlightened of their roles.

- The private sector may include non-government organizations, the church, professional societies, socio-civic groups, private companies or corporations, the pharmaceutical industry or support groups or associations;
- Be prepared with the presentation of the NCD situation in your locality. Orientation may be done as a whole group or can be carried out by individual organizations;
- It is advisable to project in advance the areas or form of assistance that the following private sector groups can contribute:
  - *a. Private Companies/Corporations*
    - Business establishments may be sought for sponsorship, e.g. sports meet, marathons,
    - Private companies are mandated by the Department of Labor and Employment to have a health program for their employees, i.e. occupational and health program. The local health executive may advocate for a health promotion program, i.e. "Healthy Lifestyle in the Workplace Program" and subsidies for medical check-up, etc.
  - *b. Private Practitioners*. May accept clients with special needs which the public health facilities cannot handle
  - *c. Private Schools*. Can finance healthy lifestyle promotion activities for the students and the faculty. Parents-Teachers Associations in schools can be encouraged to sponsor HL promotion activities for their children and their association.
  - *d. Church Organizations/Socio-Civic Groups*. May be tapped to sponsor healthy lifestyle promotion activities (e.g. Sports fest/ leagues, provision of drugs/medicines or necessary equipment)
  - *e. Pharmaceuticals*: Establish partnership for the right kind of drugs/medicines to be made available and work out discounts in prices for clients already with chronic diseases (e.g. members of the Diabetic Club/Association)

- In order to sustain the participation and contributions of these private organizations, they can be encouraged to become members of the coalition. If not, they must be given progress reports on the utilization and results of their assistance

3. Establish Local Health Financing Schemes

Each LGU can come up with their own local financing schemes to support the NCD prevention and control activities in their locality. These may come in the form of user fees, the pooling of contributions from private individuals with common NCD concern or among organized members of the community.

- **User Fees**. These refer to the fees or payments collected from the individual clients availing services from health facilities or service providers. In the private sector, these are usual payments made by the individual clients out of pocket. Several LGUs have began to establish user fee collections for certain services offered in the public health facilities from clients who are able to pay. The following are the steps in setting up user fees for certain NCD prevention and control services:
  a. Identify specific NCD prevention and control services which can be charged to the paying public. In many LGUs, user fees are usually applied for clinical and x-ray laboratory and dental services. Because of the recurring cost of medications, only starter doses, when available, are provided without cost. But due to limited funds of the LGUs, the subsequent doses are paid for by the clients;
  b. This cost-recovery scheme must be supported with an ordinance or as part of the local taxation code of the LGU;
  c. Ensure that the imposition of user fees will only be applied to clients with the capacity to pay. In this regard, the LGU must be able to come up with a system to segment their clients who are really poor and needy from those who have means to pay;
  d. Massive orientation must be undertaken among concerned segment of the population, particularly clients who are

expected to pay for these services. The same must be done among the poor to prevent misunderstanding of their right to avail of said services for free;

e. Support of the barangay and municipal/city officials and community leaders must be harnessed;
f. All charges or collections must be properly receipted;
g. In designing the scheme, it must be made clear under which specific account the user fees will be deposited as well as the conditions when and how these can be used.

- **Pooling of Resources Among Patients with Similar Situation and Interests**. Patients with suffering from similar chronic diseases may be organized and as a group, can pool their funds in order to buy medicines or other health services by bulk, thus lowering the cost. An example is a Diabetic Association where members can bargain a bigger discount of drugs and medicines. Pooling of resources may also apply to members of an organization or community to finance the conduct of their common interests related to HL promotion. Example of this will be pooling of funds to pay for trainer during a physical activity sessions, i.e. dance exercise, aerobics, taebo, etc. or inviting resource persons to give them seminar or orientation on special topics of interest.

4. Philippine Health Insurance

As mentioned earlier, the Philippine Health Insurance Corporation (PhilHealth) is considered as the primary financing mechanism for health care in the country. However, reimbursement of NCD-related expenditure from PhilHealth is still very limited. Those mentioned in the DESIRED Financing Milestone may be too early for the Philippine government to mount up. At present, the following are the existing benefit packages which the enrolled PhilHealth member can avail of for NCD-related services:

a. *In-Patient Package*. Any client enrolled in PhilHealth requiring in-patient management and treatment for any NCD-related problems is entitled to reimbursement from PhilHealth. Amounts to be reimbursed differ according to the type of interventions provided, length of stay in the health facility, etc. These are governed by PhilHealth guidelines and provisions.
b. *Out-Patient Benefit Package*. This entitles indigent family members avail of outpatient services from PhilHealth-accredited health facilities. Among the preventive services covered are for the promotion of healthy lifestyle practices as well as screening services of various risk factors. PhilHealth Circular #13, s. 2002 specify the following preventive services under its Out-Patient Benefit (OPB) Package:

Preventive Services with minimal or no cost implications such as health screening activities, health education and counseling including:

(1) Visual Acetic Acid Screening for cervical cancer
(2) Regular blood pressure measurements
(3) Annual digital rectal exam
(4) Body measurements
(5) Periodic clinical breast examination
(6) Counseling for cessation of smoking
(7) Lifestyle modification counseling

The OPB operates on the partnership between the LGU and the national government. Under the Indigency Sponsored Program, the premium amount of Php 1,200 per family per year is shared by PhilHealth and the LGU. In some LGUs, member families also share with the cost of premium payment. A capitation fund of 300 pesos per beneficiary for outpatient benefit is provided to the LGU provided that it meets the following requirements: at least 200 families enrolled, health facility is accredited by PhilHealth for outpatient

benefit package and an ordinance on the PhilHealth capitation fund. This capitation fund may be mobilized to support HL promotion activities in the locality. Four-fifths (80%) of the capitation fund received by the LGUs may be used for operating expenses.

At present, DOH in collaboration with PhilHealth is working on the benefit package for hypertension and diabetes mellitus. Much can be done to further strengthen sustained financing through PhilHealth:

(1) advocate among local officials to expand the coverage and sustain the enrollment of indigents to PhilHealth;
(2) campaign even among non-indigent families to enroll in PhilHealth;
(3) inform PhilHealth enrolled clients of the benefit packages they can avail of;
(4) establish network with other PhilHealth accredited health facilities where clients can be referred for other advanced management and treatment;

5. Fund Generation Schemes

The following are certain schemes where additional funds for NCD prevention and control can be generated. The Tobacco law provides for the allocation of 20 percent of the annually collected "sin taxes" from the tobacco industry to be filtered back to support health promotion. This has not been in effect yet since the passage of

Box 4. Financing of NCD Prevention and Control Services in the Municipality of Pateros

Dr. Francisca Cuevas, Municipal Health Officer

The Municipality of Pateros has established several financing mechanisms to support and sustain the delivery of health care and services to its clients, including care and services for NCD prevention and control.

1. Beginning the full adoption of the Integrated Community-based NCD Prevention and Control Program in 2004, the Municipality of Pateros has included in its annual health budget provisions for health promotion activities and NCD needs. Of the total municipal health budget in 2007, Pateros has allotted Php 14,500 for health promotion in its regular budget. Since its inception in 2004, this budget for NCD has remained intact.
2. In 2004, Pateros adopted through a municipal ordinance, a fee-for-service program for cost recovery. This scheme involves the payment of minimal fees for all services. Community preparation was vital in the success of this resource generation scheme. The community was informed of the need to set up the system and consulted in determining the fees. It was clearly conveyed to them that no service will be withheld from anyone who cannot afford to pay. So, the scheme has no opt-out mechanism or client segmentation and all services are provided regardless of the client's capacity to pay. Towards the end of service provision, a summary of charges similar to a billing statement is given to the client, and he/she may pay whatever amount he/she is able. Outreach services were intensified to follow-up clients who may have been repelled by the charges. Later the fees were incorporated in the Local Tax Code.
3. The patients of the diabetes clinic of Pateros organized themselves and formed the Diabetes Lay Association of Pateros. Because of their big number, their bargaining power was likewise big, such that from the funds they pooled, they were able to purchase drugs from pharmaceutical companies at a low cost. At the same time, these companies regularly sponsor clinic days and provide clients with drug samples and free FBS determination and other services such as bone scan, ECG, health education classes, lipid profile, etc.
4. The member agencies of the Healthy Pateros Task Force have been actively involved in the promotion of healthy lifestyle and have earmarked funds for this. They sponsor community-based activities such as sports and exercise clinics, annual risk screening (including clinical breast and cervical cancer screening) and medical check up and have financed reproduction of health promotion materials such as flyers and posters.
5. Pateros partnered with PhilHealth to modify its Outpatient Benefit Package in order to widen the services covered. This has led to the inclusion of FP, immunization, oral prophylaxis, maternal care and Php 800 worth of drugs and medicines. The PhilHealth-enrolled clients continue to avail said services.

As of December 2006, Pateros has earned a total amount of Php 441,279.58 under its capitation fund and collected a total of Php 6.2 M from user fees over a period of 5 years. The Municipal Health Office, through an ordinance is the only authorized body to make use of these funds.

the Law in 2003. At the local level, the following mechanisms may also be established:

a. Some LGUs have legislations to regulate the sale of tobacco and alcohol. One ordinance is the payment of additional fees by store owners for license to sell tobacco, tobacco products and alcoholic beverages. These fees are paid annually during the renewal/ issuance of the LCE's permit. These fees may be channeled to health promotion programs, through a clear provision in the local ordinance.
b. Likewise, penalties from violations of ordinances on tobacco and alcohol sale/ use may also be used to finance NCD services. In the City of Makati, for example, owners of food establishments (restaurants) that choose to put up a smoking section pay an annual fee of 10,000 pesos. These fees are used by the Makati Health Department to support their HL promotion program and other health-related activities.

Box 4 describes the different financing schemes the Municipality of Pateros has introduced in support for NCD prevention and control in their locality.

Section 10: Sustaining Initiatives and Planning for the Future

Noncommunicable diseases will likely persist as a major public health problem brought about by globalization, urbanization and continued exposure to and uptake of unhealthy lifestyles by the population. It is thus important that the momentum of relevant and productive work be sustained by the health sector and other key stakeholders. Noncommunicable diseases should continue to be included in the health and development agenda of national and local governance.

To ensure that various interventions are having a sustained positive impact on intended population targets, and to make sure that only relevant cost-effective interventions are continued, promoted, and scaled-up, monitoring and evaluation should be institutionalized and adopted as regular activities of the program. Results of monitoring and evaluation should eventually serve as evidences for reviewing and updating national and local plans and policies as necessary.

It is important that evidence from research be continuously generated, and results of various studies be disseminated and utilized for enhancement of policies and programs on NCD prevention and control. Due diligence in documenting best practices and lessons learned allow the progressive evolution of the program and encourage innovation and shared learning from partners and colleagues.

Population awareness and support for healthy lifestyle should continue to be cultivated via health education and promotion initiatives. Partnership with media can play a powerful role in continuously raising awareness and informing the public, persuading and motivating people towards healthy lifestyle.

Generating support from partners, particularly from policy and decision-makers, donors, and development partners should be continuously done. Well-written reports and documentation of activities will inform stakeholders of significant accomplishments, and can provide the evidence base for relevance and worthiness of investments, and can support resource generation in the long run.

The strategies discussed in the previous sections have been proven to be effective in many settings and instances. Especially when program assessment affirms their cost-effectiveness, these should be continued and adopted as important elements of program sustainability. Sustained complementary actions at all levels (from national to local) and from various sectors should be ensured. If we succeed in all of these, many lives can be saved, and diseases and disabilities can be averted.

Appendix A: Integrated NCD Prevention and Control Program Framework

The design and implementation of the integrated NCD Prevention and Control Program are guided by the following policy and strategic framework, which contains: vision, mission, goal, objectives, guiding principles, policy directions and key strategies.

Vision: Improved quality of life for all Filipinos

Mission: To ensure that quality prevention and control NCD services are accessible to all Filipinos especially to the vulnerable and at-risk population

Goal: To reduce the burden of disease and death due to NCDs

Objectives:

1. To reduce the exposure of population to risks related to NCDs

2. To increase the proportion of NCD cases given appropriate treatment and care

Guiding Principles of the NCD Prevention and Control Program:

1. **It uses the integrated approach.** NCD approaches should cover a multitude of relevant risk factors which include tobacco use, unhealthy diet, physical inactivity, alcohol use, hypertension, high blood sugar, overweight and obesity, and impaired lung function. Similarly, NCD activities should be linked to other health programs and health-related initiatives to more effectively address NCDs and their social, and economic determinants.

2. **It provides comprehensive services along the continuum of care.** Health care settings should provide complementary services that collectively span the care continuum. Package of services on the following should be made available or accessible: (a) prevention and health promotion; (b) lifestyle interventions to modify risk factors; (c) screening; (d) clinical interventions for high-risk individuals and groups; (e) rehabilitation; and (f) palliation. System for referral to other health facilities should be in place to facilitate access and ensure continuity of care across health facilities at various levels.

3. **It promotes the primary health care approach and encourages community-based implementation.** Appropriate services, particularly on primary prevention, should be made available in primary health care facilities, where individuals and communities are often initially able to establish contact with the health system. Community participation should also be sought to strengthen awareness on NCD prevention and control and to provide a social environment conducive for behavior change towards healthy lifestyle.

4. **It addresses equity concerns.** Non-communicable diseases often affect the poor, who are more exposed to risks and have less access to health services. NCDs hinder economic development and can trap individuals, families, and communities in the vicious cycle of poverty and poor health. Planned interventions should therefore address the needs of the most vulnerable and marginalized sectors, to give them a fairer chance to escape from the clutches of poverty and exclusion and be able to cultivate their potentials and realize more fully their human development.

5. **It provides continuity of services throughout the human life cycle**. Risk factors accumulate from fetal life through adulthood. As such, NCD services catering to various age groups and addressing age-related needs should be made available. Healthy habits start early, and should be encouraged during childhood and adolescence. Maternal conditions (e.g low birth weight) and social conditions (e.g. adverse childhood experiences) have been associated with the development of NCDs in later life; programs and services that address these risks should be strengthened.

6. **It encourages evidence-based program management**. Research should be encouraged to provide the knowledge base for the development of appropriate policies and actions on NCDs. Surveillance, monitoring, and evaluation should be institutionalized, as data from these activities contribute to sound policy formulation, planning of actions, designing interventions and making appropriate decisions concerning NCD-related issues and concerns. Capability of stakeholders to collect, analyze, disseminate, and utilize evidences must be enhanced.

7. **It encourages partnerships and advocates for whole-of-government and whole-of-society approaches.** Many of the critical interventions to prevent and control non-communicable diseases lie outside of the direct sphere of influence of the health sector. Thus, in addition to collaborative undertakings within the health sector, multi-sectoral partnerships are essential. Working in partnership ensures synergies, avoids overlapping and duplication of activities, and prevents unnecessary competition.

8. **It ensures sustainability.** NCD programs should work for sustained funding and institutionalized roles of stakeholders within and outside the health sector. Commitment of stakeholders to the national plan of action on NCDs should be strengthened. Monitoring and evaluation mechanisms should be put in place to ensure effective implementation and planning for next actions.

Key Local Strategies:

1. **Localize Healthy Public Policy.** Supportive laws to healthy lifestyle have been passed; however, implementation and compliance to these laws is weak. Policies from the national level hardly reach the localities, and appreciation of the provisions is rather low. Laws and policies need to be localized and adopted according to the specific needs and requirements of the different localities. Review and discussion of the provisions of these laws and policies are to be encouraged and supported. Areas for consideration for local policy/legislation include the following: (1) declaration of public places as non-smoking areas, (2) prohibition in the sales of cigarettes near schools following certain parameters provided for in the law; (3) local restaurants and street food vendors to serve healthy food to their clients; (4) mandating school health boards to prevent the selling of food low in nutritive value, e.g. soft drinks and junk food in schools; (5) requiring all local government agencies to establish regular physical exercise among the employees; and (6) declaring a certain day/week/month of the year to celebrate Healthy Lifestyle to raise the consciousness of the public and sustain their interest in supporting and practicing healthy lifestyles.

2. **Build Coalition for NCD Prevention and Control.** The prevention and reduction of NCDs requires interventions beyond the health sector. Coalition among concerned sectors must be established to ensure a unified and well-coordinated action. The participation of the education, social welfare, labor both formal and informal, agriculture and industrial sectors is critical if NCD prevention and reduction is to be approached on a holistic and comprehensive manner. Alliance between the government and the private sectors has to be fostered for better complementation of inputs and resources. At the national level, the Coalition for c evolved from among groups

and institutions bound by common purpose and dedication to address NCD mortality and morbidities in the country.

3. **Enhance Community Participation.** The promotion of healthy lifestyle is heavily anchored on the participation and involvement of community members. Enhancing community participation is aimed at making the community members more receptive to changing their lifestyles. It could make them better advocates and supporters for others to follow. They can also become a source of financial support or other resources as they become involved in various campaigns and activities. At the end, the community members will be instrumental in bringing more members to avail of services, thus begin to develop and adopt new healthy lifestyle and practices.

4. **Create a Supportive Organizational and Physical Environment.** NCD prevention and control services are traditionally delivered through the network of public health facilities. A supportive organizational environment requires not only strengthening the capacities of the network public health facilities but also expanding the service delivery points to other health units in the private sector and in other institutions like that of the schools and corporations. Likewise, healthy lifestyle promotion must be integrated into the existing programs and activities of the LGUs, the church, academe and the community. Meetings and assemblies of formal and informal groups alike (e.g. professional societies, interest groups, informal sector – transport associations, market vendors, street vendors, etc.) can serve as delivery points for promotive and preventive care. Correspondingly, a supportive physical environment must also be put in place. These may come in different forms as in providing a space for staff or community members to do their physical exercise or physical activity (e.g. sports tournament), decongesting walk pavements to encourage the populace take a walk rather than ride, ensuring continuous traffic flow to ensure safety of pedestrians, providing lot and space for planting fruits and vegetables, and others.

5. **Intensify Health Education and Public Information.** Prevention of NCDs banks largely on the success of changing poor health habits and practices into healthy lifestyle. Health promotion efforts will take various forms in order to effect change in lifestyle and behavior. These include: (a) information, education and communication (IEC) intervention measures both for the individuals and the general public, (b) social mobilization that include the generation of participation and involvement of the community, service providers, program managers and other partners in making key decisions, assessment and planning, implementation and monitoring of NCD related efforts, and (c) advocacy among mandated agencies or institutions and concerned officials for direction and support. Key messages appropriate for each target group must be defined and geared to changes in behavior that are desired.

6. **Strengthen Clinical Preventive Services.** Clinical services must complement health promotion efforts. Critical to NCD prevention and control is the identification of the major common risk factor/s that exposes the individuals or groups of individuals to increased likelihood of developing NCDs. It is imperative that an assessment and screening of these risks in individuals and communities must be done in every opportunity using a simple tool. Results of the risk assessment must be used to guide the proper selection of appropriate lifestyle modification interventions for the concerned individuals and groups. Lifestyle modification interventions (which may come in different forms) must comply with the set standards and protocols to ensure quality of service provided to the clients. In this regard, competencies of service providers

along the delivery of these standard services must be developed while appropriate logistics/supplies, equipment and facilities must be in place. Critical to the strengthening of clinical prevention is the identification and referral of individuals needing advanced or more specialized care to a clinic or facility with established expertise in providing said management, treatment and care. Referral system be established and strengthened to ensure continuum of care and support of those needing secondary or tertiary care.

7. **Institutionalize Planning for Promotion of Healthy Lifestyle.** Assessment and Planning is a precursor to an effective implementation of NCD prevention and control program at the local level. Every locality is encouraged to undertake their own assessment of the current situation of NCDs in their area and identify the major risk factors exposing their population to NCD diseases. This is critical in the selection of interventions in response to their identified needs and particular situations. The plan for Healthy Lifestyle must be integrated into the current development plan of the LGUs, and inputted into their Philippine Health Investment Plan (PHIP) in F1 areas in order that efforts for HL will gain equitable support from various investments. LGUs must be provided with a guide on how to assess NCD-related issues and planning parameters to consider in selecting and designing appropriate interventions.

8. **Expand Capability Building.** Training on Healthy Lifestyle has been undertaken nationwide in the past. The coverage however was limited only to the network of public health facility staff. There is a need that this training be expanded to other groups of service providers outside the public health network and be offered to private practitioners those working in NGOs, church, private and public schools and the corporate institutions. Training will be expanded to include building competencies not only of service providers but also of program managers on other aspects of health promotion, particularly advocacy, social mobilization and communication. An advanced training on Course for Program Managers on NCD Prevention and Control has been developed and provided to the regional NCD Program Coordinators and Health Education Program Officers (HEPOs). This training needs to be cascaded down to the local levels to enable them become better managers and advocates for NCD prevention and control.

9. **Reinstall Supervision.** Supervisory system needs to be reinstalled at each locality to ensure that the delivery of NCD prevention and control services follow the desired protocols and standards. Supervision must be purposive, planned in advance and the results of which are properly documented and tracked. Supervision calls for on-site training, problem solving and monitoring by the health facility supervisor on a regular basis. This component requires the supervision to be done in the context of enabling spirit rather than as a fault-finding mission. It requires the identification of actions, reaching an agreement with the supervisee what need to be done, and documenting these actions. Guide of supervision for the delivery of NCD prevention and control services has been initiated under the SS Certification Supervisory Package. LGU supervisors must be given special orientation on the said package.

10. **Establish Financing Schemes.** The implementation of NCD prevention and control measures requires substantial amount of resources. Financing options must be explored to sustain support for delivery of NCD services, promotion and other supportive mechanisms. Three tracks will be pursued to improve financing for healthy promotion activities. First is advocate for LGUs to increase budget allocation for NCD prevention in the health department and in other government offices (e.g. DILG, DSWD,

LCEs' office, etc.) from the province to the barangay level. Second, entail mobilization of resources from the private sector, particularly the professional societies (e.g. church, corporations, clubs/ associations, and other NGOs), as well as contributions from the community, and external sources. Third, explore PhilHealth coverage of selected NCD prevention and control services, including mobilization of capitation funds for healthy lifestyle promotion.

11. **Install Regulatory Mechanisms.** Advocacy must be undertaken to prompt LGUs designate offices or organizations accountable for instilling compliance to national laws and policies related to NCD prevention and control. More importantly, the political will of local chief executives to adopt and implement the laws and policies must be harnessed. Officials and staff from these duly designated offices must be provided with proper orientation on the laws and policies, and should be helped in developing their guidelines and procedures for monitoring compliance. Prominent officials or celebrities can be tapped to champion the cause of NCD prevention and control. The role of BFAD in ensuring healthy food products must be strengthened, and support of sanitary inspectors must be maximized. Support of the various agencies and participation of NGOs in monitoring compliance must be mobilized.

12. **Unify Monitoring and Evaluation Efforts.** Just as assessment and planning is a precursor to an effective NCD intervention implementation, monitoring and evaluation is equally vital in ensuring that intervention measures are properly implemented, regularly enhanced and focused to their targeted beneficiaries. Monitoring NCD status and progress of interventions as well as evaluating the results of initiatives are helpful in facilitating and redirecting focus and attention. Surveillance is one component of NCD monitoring and evaluation where there is a pro-active identification of people at risk to NCDs. This requires coordinated efforts between community and the implementing agencies in a given locality and must be strongly linked with higher level of administration. LGUs must be oriented on surveillance systems and monitoring efforts must be aligned with the M3 system (monitoring for equity, effectiveness and efficiency) being implemented by the Department of Health.

Appendix B: The Western Pacific Regional Action Plan for Noncommunicable Diseases

Vision and Focus

Vision: A Region free of avoidable NCD deaths and disability

Focus: The Western Pacific Regional Action Plan is focused on practical, cost-effective and evidence-based interventions that Member States can adopt to achieve a reduction in NCD risk factor prevalence, and NCD mortality and morbidity.

Key principles

The Western Pacific Regional Action Plan is built around eight key principles:

1. **People-centred health care** – Interventions and initiatives must adhere to the principles and values outlined in the People-centred Health Care policy framework of the Western Pacific Region (http://www.wpro.who.int/sites/pci/).

2. **Cultural relevance** – Policies, programmes and services must respect and take into consideration the specific cultures and the diversity of populations within the Region.

3. **Focused on reducing inequities** – The Regional Action Plan recognizes that the burden of chronic diseases is disproportionately borne within countries, by the poorer and less advantaged sectors, and across countries, by those at the lower stages of economic development. Other social determinants of health, such as race and gender, can also influence differential health outcomes from noncommunicable diseases. Thus, interventions must address the need to reduce inequities across and within countries by considering the social determinants of health to enable the attainment of healthy outcomes by all.

4. **Encompassing the entire care continuum** – The Regional Action Plan affirms the importance of a balanced approach to noncommunicable diseases, beginning with prevention and health promotion, lifestyle interventions to modify risk factors, screening, clinical interventions for high-risk individuals and groups, all the way through to chronic care, rehabilitation and palliation. This implies that the active participation of the entire health system is fundamental to creating impacts on population health.

5. **Involving the whole of society** – Many of the critical interventions to prevent and control chronic diseases lie outside of the direct sphere of influence of the health sector. Thus, multisectoral partnerships are essential to successful NCD prevention and control.

6. **Integral to health systems strengthening** – Noncommunicable diseases impact on the health care system not only in terms of increased service utilization and the associated costs, but also in the nature of the demands on service delivery to meet the needs of patients requiring long-term care. Health systems, in general, are designed to provide acute illness care, not chronic care. As such, most health systems fall short in the following areas:

   a. the patient's responsibility and role in disease management are not emphasized;
   b. follow-up is sporadic;
   c. community services tend to be ignored; and
   d. prevention is underutilized and underemphasized.

As the NCD burden grows, ensuring that health systems can adequately address noncommunicable diseases becomes integral to augmenting the capacity of health systems

to meet evolving health challenges. For this to occur, integrating NCD prevention and management into primary health care is essential.

7. **Consistent with the Global Action Plan, and supportive of existing regional strategies and action plans** – Recommended actions are in line with the objectives of the Global Action Plan, and with the strategies and principles of previous regional plans. This plan utilizes the best available science in selecting strategic actions while acknowledging the current limitations of research into the effectiveness of NCD interventions.

8. **Flexibility through a phased approach** – Recognizing that countries and areas are at different stages of capacity for NCD prevention and control, the Regional Action Plan aligns its strategic actions along a continuum consistent with the NCD causation pathway. This phased approach allows countries to intervene at different points along the continuum depending on their local situation, capacity and resources.

Strategic Approach

The Western Pacific Regional Action Plan for Noncommunicable Diseases utilizes a comprehensive approach that simultaneously seeks to effect change at three levels:

1. at the environmental level, through policy and regulatory interventions;

2. at the level of common and intermediate risk factors, through population-based lifestyle interventions; and

3. at the level of early and established disease, through clinical interventions targeted at the entire population (screening), high-risk individuals (risk factor modification) and persons with established disease (clinical management).

To support change in these three levels, additional actions are needed in the following areas:

1. advocacy;

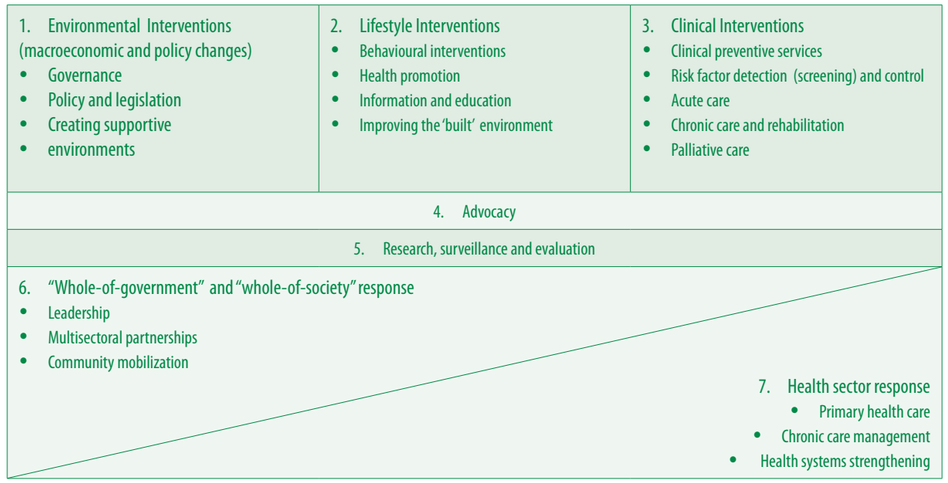
2. research, surveillance and evaluation;

3. leadership, multisectoral partnerships and community mobilization; and

4. health systems strengthening.

In summary, the approach recognizes seven strategic action areas (Figure 2) along an intervention pathway that corresponds to the NCD causation pathway

Figure 2. Strategic approach and action areas in the Western Pacific Regional Action Plan for Noncommunicable Diseases



Specific regional actions under each of these action areas were mapped to the Global Action Plan. Where appropriate, specific actions from established regional and global frameworks and plans of action are included, demonstrating that these various disease and risk factor-specific action plans can be systematically integrated into one comprehensive strategy. Indeed, these various frameworks should be considered as "pieces of a puzzle", which, when assembled, provide components of a coherent and organized response to the challenge of chronic diseases.

The process consists of four major steps: (1) profiling; (2) planning and priority setting; (3) putting into practice (implementation); and (4) evaluation. Using an iterative process, countries move from their baseline situation in relation to noncommunicable diseases to progressively higher levels of capacity and action.

Scope and considerations

Research indicates that four noncommunicable diseases are responsible for the majority of mortality and disease burden in developing countries. These four are cardiovascular disease (coronary heart disease and stroke), cancer, chronic respiratory disease and diabetes. Because these four diseases, and their shared risk factors, make the largest contribution to the Region's mortality, they are the major focus of this Regional Action Plan.

However, other noncommunicable diseases, including blindness, deafness, oral diseases, certain genetic diseases and a number of infectious diseases that have a chronic nature, such as HIV/AIDS and tuberculosis, remain priority health problems in the Western Pacific Region. Noncommunicable diseases also include injuries that have an acute onset but are followed by prolonged convalescence and impaired function, as well as chronic mental diseases and substance abuse disorders. This Regional Action Plan recognizes that Member States must assess, and health systems must respond to, the health burden specific to each country's situation, realizing that many of the interventions specified in this strategy have broad application and utility.

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Objectives and Actions

Consistency with the Global Action Plan

This Regional Action Plan is intended to fully support the Global Action Plan. The objectives and major strategic actions are, therefore, taken directly from the Global Action Plan. Specific regional actions are listed as subsets of the major strategic actions, and are indicated in italics. Global actions that have lesser relevance or applicability at the regional level are indicated in brackets. Where additional regional actions have been identified, these are listed in a separate section following the global actions. Discussion in the Western Pacific Region strongly emphasized the importance of health system strengthening as a fundamental aspect of an effective approach to noncommunicable diseases in the Region. However, for consistency, recommended strategic actions for health systems strengthening are situated under Objective 2 of the Global Action Plan.

OBJECTIVE 1: To raise the priority accorded to noncommunicable disease in development work at global and national levels, and to integrate prevention and control of such diseases into policies across all government departments.

Recommended actions for Member States

1. Assess and monitor the public-health burden imposed by noncommunicable diseases and their determinants, with special reference to poor and marginalized populations.

2. Incorporate the prevention and control of noncommunicable diseases explicitly in poverty-reduction strategies and in relevant social and economic policies.

   a. Increase awareness among regional, national and community leaders and other partners of the magnitude of the NCD burden, and the wider societal benefits of addressing it in terms of economic and social development, and advocate for their commitment to whole-of-government and whole-of-society approaches to control noncommunicable diseases and their risk factors
   b. Engage with other Member States and relevant regional and international bodies to address NCD risk factors and disease issues that cross national borders. As examples, consider the public health impact on respiratory health during cross-country discussions on haze control, and incorporate health impacts of unhealthy products in trade agreements, such as those arising from the Association of South East Asian Nations (ASEAN) and the Pacific Island Countries Trade Agreement (PICTA).

3. Adopt approaches to policy development that involve all government departments, ensuring that public-health issues receive an appropriate cross-sectoral response.

4. Implement programmes that tackle the social determinants of noncommunicable diseases with particular reference to the following: health in early childhood, the health of the urban poor, fair financing and equitable access to primary health care services.

   a. Identify and utilize opportunities to merge NCD prevention and control into related health and non-health policy areas relevant to the Western Pacific Region, such as those that address urban development (e.g. Healthy Cities), poverty alleviation, gender and health, workers' health (e.g. Healthy Workplaces) and sustainable development (e.g. Healthy Islands).

Recommended actions for WHO

1. Raise the priority given to the prevention and control of noncommunicable diseases on the agendas of relevant high-level forums and meetings of national and international leaders.

   a. Actively advocate for governments and other regional stakeholders to support efforts to integrate NCD prevention and control into the global development agenda, and to allocate resources for the expansion of the implementation of chronic disease prevention and control strategies regionally at forums such as the Pacific Islands Forum and the annual meeting of ASEAN heads of state and government.
   b. Coordinate and expedite efforts by Member States to reduce the burden of noncommunicable diseases in the Region.
   c. Develop regional leadership programmes to support country-level leadership initiatives that promote political champions for NCD prevention and control, building on existing models such as Pro-Lead[1] , and using existing venues such as the annual Saitama NCD training course.

2. Work with countries in building and disseminating information about the necessary evidence base and surveillance data in order to inform policy-makers, with special emphasis on the relationship between noncommunicable diseases, poverty and development.

1 Pro-Lead (http://www.prolead.org) is a leadership development programme that focuses on applied leadership and management in health promotion intended for advocates, practitioners and partners in the health sector, government and private sector and civil society, for the promotion of health.

a. Facilitate dialogue among relevant stakeholders at the regional level to ensure that regional, multilateral and bilateral policies and other regulatory agreements are consistent with the evidence base for NCD prevention and control.

3. Develop and disseminate tools that enable decision-makers to assess the impact of policies on the determinants of, risk factors for, and consequences of noncommunicable diseases; and provide models of effective, evidence-based policy-making.

   a. Provide countries with technical assistance in the development, implementation and assessment of effective advocacy campaigns for the prevention and control of noncommunicable diseases.
   b. Work with WHO collaborating centres and other partner institutions and agencies to establish and maintain a repository or clearinghouse of best practices and successful strategies for policies to reduce prevalence of NCD risk factors and to promote the adoption of healthier lifestyles.
   c. Provide technical guidance to countries in formulating and implementing policy and regulatory interventions designed to create supportive environments for NCD prevention and control based on existing guidance documents.

Recommended actions for international partners and WHO collaborating centres

1. Include the prevention and control of noncommunicable diseases as an integral part of work on global development and in related investment decisions.

   a. Work with WHO to facilitate regional collaborative partnerships among countries, WHO collaborating centres and relevant partners to advocate for investments in regional NCD prevention and control initiatives as part of the regional development agenda. For example, consider the model used by the Western Pacific Declaration on Diabetes as a partnership model for WHO, International Diabetes Federation Western Pacific Region, Secretariat of the Pacific Community (SPC) and Member States.

2. As appropriate, work with WHO to involve all stakeholders in advocacy in order to raise awareness of the increasing magnitude of the public-health problems posed by noncommunicable diseases, and of the fact that tackling the determinants of and risk factors for such diseases has the potential to be a significant method of prevention.

   a. Provide technical assistance to countries and areas through a regional clearinghouse of best practices and successful strategies for NCD advocacy.

3. Support WHO in creating forums where key stakeholders – including nongovernmental organizations, professional associations, academia, research institutions and the private sector – can contribute and take concerted action against noncommunicable diseases.

OBJECTIVE 2: To establish and strengthen national policies and plans for the prevention and control of noncommunicable diseases.

Recommended actions for Member States

National multisectoral framework for the prevention and control of noncommunicable diseases

1. Develop and implement a comprehensive policy and plan for the prevention and control of major noncommunicable diseases, and for the reduction of modifiable risk factors.

   a. Design and implement an advocacy campaign to mobilize political and grassroots support for the national action plan for NCD prevention and control.
   b. Support the integrated approach to NCD prevention and control through policy statements and official guidelines. As an example, consider Japan's "People's Health Promotion Campaign for the 21st Century (Health Japan 21)," which endorses a comprehensive approach to NCD as a core element of Japan's national public health agenda.

2. Establish a high-level national multisectoral mechanism for planning, guiding, monitoring and evaluating enactment of the national policy with the effective involvement of sectors outside health.

3. Conduct a comprehensive assessment of the characteristics of noncommunicable diseases and the scale of the problems they pose, including an analysis of the impact on such diseases of the policies of the different government sectors.

4. Review and strengthen, when necessary, evidence-based legislation, together with fiscal and other relevant policies, which are effective in reducing modifiable risk factors and their determinants.

   a. Establish fiscal policies that reinforce healthy lifestyle choices through pricing, taxation, subsidies and other market incentives.
   b. Regulate[2], to the fullest extent possible, the sale, marketing, advertising and promotion of unhealthy commodities to create a social and media environment supportive of healthy lifestyles.
   c. Regulate the built environment to promote physical activity and social interaction and to protect people from hazardous exposures such as second-hand smoke.

Integration of the prevention and control of noncommunicable diseases into the national health development plan

1. Establish an adequately staffed and funded noncommunicable disease and health promotion unit within the ministry of health or other comparable government health authority.

2. Establish a high-quality surveillance and monitoring system that should provide, as minimum standards, reliable population-based mortality statistics and standardized data on noncommunicable diseases, key risk factors and behavioural patterns, based on the WHO STEPwise approach to risk factor surveillance.

3. 3. Incorporate evidence-based, cost-effective primary and secondary prevention interventions into the health system with emphasis on primary health care.

Reorientation and strengthening of health systems

1. Ensure that provision of health care for chronic diseases is dealt with in the context of overall health system strengthening and that the infrastructure of the system, in both the public and private sectors, has the elements necessary for the effective management of and care for chronic conditions. Such elements include appropriate policies, trained human resources, adequate access to essential medicines and basic technologies, standards for primary health care, and well-functioning referral mechanisms.

2 "Regulate" refers to a variety of social and legal instruments to govern behaviour, and is not intended to refer exclusively to legislation

a. Reorient and reinforce health systems, using the six "building blocks",16 to enhance responsiveness and capacity to address the challenges of NCD prevention and control, guided by the recommendations of the 2007 WHO Regional Meeting on Strengthening Health Systems to Improve Chronic Disease Prevention and Control. One example is Mongolia's "Master Plan for Health System Development 2006–2015", which uses an integrated approach to NCD prevention and control as an anchor for health systems strengthening. Another is the Republic of Korea's "Comprehensive Preventive National Health Management System", which incorporates lifecycle-specific services for health promotion and NCD prevention into the national health-service delivery system.
b. Strengthen primary health care to respond to all chronic diseases regardless of aetiology, using the Chronic Care model.
c. Explore innovative service delivery models that encompass both population-based preventive and behavioural services and clinical services for chronic disease management. For example, consider the Sentrong Sigla[3] model of the Philippines.

2. Adopt, implement and monitor the use of evidence-based guidelines and establish standards of health care for common conditions like cardiovascular diseases, cancers, diabetes and chronic respiratory diseases, integrating, whenever feasible, their management into primary health care.

   a. Disseminate health service frameworks, clinical practice guidelines and evidence-based decision-making support tools to health care providers to ensure timely screening, diagnosis, and treatment of noncommunicable diseases, consistent with country-specific burden and taking into account the health infrastructure and capacity.
   b. Implement and scale up proven cost-effective NCD interventions, beginning with: (i) tobacco control, (ii) salt reduction, (iii) multidrug treatment for individuals with high risk for cardiovascular disease.
   c. Promote clinical practice guidelines that use the integrated disease model, such as those issued by the International Diabetes Federation (IDF) Western Pacific Region.

3. Implement and monitor cost-effective approaches for the early detection of breast and cervical cancers, diabetes, hypertension and other cardiovascular risk factors.

4. Strengthen human resources capacity, improve training of physicians, nurses and other health personnel and establish a continuing education programme at all levels of the health care system, with a special focus on primary health care.

   a. Use innovative approaches to health workforce development to equip health care providers with the necessary skills, knowledge and attributes to deliver effective, people-centred care for chronic diseases regardless of aetiology.
   b. Foster leadership for noncommunicable diseases within the health care sector by building on existing models such as Pro-Lead, and using existing venues such as the annual Saitama NCD training course.

5. Take action to help people with noncommunicable diseases to manage their own conditions better, and provide education, incentives and tools for self-management and care.

   a. Promote the people-centred approach to health care, as outlined in the recent WHO publication, People at the Centre of Health Care: Harmonizing Body and Mind, People and Systems.17
   b. Establish programmes to empower individuals and communities to develop health literacy, to take on self-care responsibilities and to become resources for themselves and others in disease management and prevention.
   c. Adopt interventions to improve the quality of life of individuals with noncommunicable diseases.

6. Develop mechanisms for sustainable health financing in order to reduce inequities in accessing health care.

   a. Establish financing mechanisms to channel sustainable funding to NCD prevention and control initiatives, such as through earmarking tobacco and alcohol taxes for health promotion, as was done in Australia by the Victorian Health Promotion Foundation (VicHealth) and in the Republic of Korea, and was initiated in Malaysia, Mongolia and Tonga.
   b. Promote equitable access to and rational use of cost-effective medical products and commodities related to NCD disease management.

Recommended actions for WHO

National multisectoral framework for the prevention and control of noncommunicable diseases

1. Conduct a review of international experience in the prevention and control of noncommunicable diseases, including community-based programmes, and identify and disseminate lessons learnt. [Action to be led by WHO Headquarters.]

2. Recommend, based on a review of international experience, successful approaches for intersectoral action against noncommunicable diseases. (a) Build on previous intersectoral initiatives in the Region, such as the WHO/FAO Meeting on Food Standards to Promote Health and Fair Trade in the Pacific (December 2007) and the WHO Healthy Cities and Healthy Islands Initiative. (b) Highlight successful national examples of intersectoral strategies that address noncommunicable diseases and their risk factors, such as New Zealand's "Healthy Eating – Healthy Action"[4].

3. Provide guidance for the development of national policy frameworks, including evidence-based public health policies for the reduction of risk factors, and provide technical support to countries in adapting these policies to their national context.

Integration of the prevention and control of noncommunicable diseases into the national health development plan

1. Expand, over the time frame of this plan, the technical capacity of WHO's regional and country offices and develop networks of experts and collaborating or reference centres for the prevention and control of noncommunicable diseases in support of national programmes.

2. Develop norms for surveillance and guidelines for primary and secondary prevention, based on the best available scientific knowledge, public-health principles and existing WHO tools. [Action to be led by WHO Headquarters.] (a) Disseminate to Member

3 Sentrong Sigla is a quality improvement programme of the Philippines Department of Health that confers recognition to health centres and hospitals for excellence in health service delivery, including the use of an integrated approach to disease management.

4 "Healthy Eating – Healthy Action" is the New Zealand Ministry of Health's strategic approach to improving nutrition, increasing physical activity and achieving healthy weight for all New Zealanders. It uses a "whole-of-society" approach to address NCD risk factors in the population (www.moh.govt.nz/healthyeatinghealthyaction).

States existing surveillance standards and clinical practice guidelines, such as WHO's "Prevention of Cardiovascular Disease: Guidelines for Assessment and Management of Cardiovascular Risk" and the International Agency for Research on Cancer's "Handbooks of Cancer Prevention".

3. Review and update diagnostic criteria, classifications and, where needed, management guidelines for common noncommunicable diseases. [Action to be led by WHO Headquarters.]

4. Provide support to countries, in collaboration with international partners, in strengthening opportunities for training and capacity-building with regard to the public-health aspects of the major noncommunicable diseases.

    a. Support countries and areas with periodic technical assistance and training at the national and regional level, including training in the selection of appropriate clinical interventions that are feasible to implement even within a developing country setting, and in the people-centred approach to noncommunicable diseases.

Reorientation and strengthening of health systems

1. Ensure that the response to noncommunicable diseases is placed at the forefront of efforts to strengthen health systems.

    a. Promote a regional framework for health systems strengthening in relation to noncommunicable diseases (building on the Chronic Care model and similar concepts) that is relevant to and adaptable for the Region.
    b. Support Member States in their efforts to strengthen their health systems and re-orient their systems of care to address chronic diseases, as guided by the "Strategic Plan for Strengthening Health Systems in the WHO Western Pacific Region".
    c. Reinforce the integrated approach to noncommunicable diseases by articulating this in policy statements and guidelines.

2. Provide technical guidance to countries in integrating cost-effective interventions against major noncommunicable diseases into their health systems.

    a. Provide countries with technical assistance regarding service delivery models for chronic disease, with an emphasis on integrating NCD prevention and control interventions into primary health care. For example, consider integration of brief interventions for tobacco cessation into all clinical encounters.
    b. Encourage and assist Member States to develop appropriate national health care guidelines that incorporate noncommunicable diseases and other chronic disease care into the overall health care package.

3. Provide support to countries in enhancing access to essential medicines and affordable medical technology, building on the continuing WHO programmes promoting both good-quality generic products, and the improvement of procurement, efficiency and management of medicine supplies [2008–2009].

    a. Disseminate guidelines for rational use of medicines and technology for NCD prevention and control, as an integral part of health systems.

4. Assess existing models for self-examination and self-care, and design improved affordable versions where necessary, with a special focus on populations with low health awareness and/or literacy.

Recommended actions for international partners and WHO collaborating centres

1. Support the development and strengthening of international, regional, and national alliances, networks and partnerships in order to support countries in mobilizing resources, building effective national programmes and strengthening health systems so that they can meet the growing challenges posed by noncommunicable diseases.

    a. Expand and build upon regional (e.g. Western Pacific Declaration on Diabetes, Framework Convention Alliance Asia-Pacific) and national alliances for NCD capacity-building (e.g. Singapore's Civic Committee on Healthy Lifestyle).
    b. Disseminate technical resources relevant to noncommunicable diseases to countries and areas. For example, ensure that all countries and areas have the publication, "Acting on Noncommunicable Diseases: An Advocacy Guide for the Western Pacific", developed by La Trobe University, Australia.

2. Support implementation of intervention projects, exchange of experience among stakeholders, and regional and international capacity-building programmes.

OBJECTIVE 3: To promote interventions to reduce the main shared modifiable risk factors for noncommunicable diseases: tobacco use, unhealthy diets, physical inactivity and harmful use of alcohol. Recommended actions for Member States

Tobacco control

1. Consider implementing the following package of six cost-effective policy interventions (the MPOWER package), which builds on the measures for reducing demand contained in the WHO Framework Convention for Tobacco Control:

- monitor tobacco use and tobacco prevention policies;
- protect people from tobacco smoke in public places and workplaces;
- offer help to people who want to stop using tobacco;
- warn people about the dangers of tobacco;
- enforce bans on tobacco advertising, promotion and sponsorship; and
- raise tobacco taxes and prices.

In particular:

    a. Delineate and implement interventions to reduce the demand for and limit the supply of tobacco, including chewing tobacco with betel nut.
    b. Introduce interventions to facilitate and increase access to smoke-free facilities.

Promoting healthy diet

1. Implement the actions recommended in, but not limited to, the Global Strategy on Diet, Physical Activity and Health.

In particular:

    a. Delineate and implement interventions to reduce the demand for and limit the supply of unhealthy foods.
    b. Promote the consumption of healthy local foods, as is happening in some Pacific island countries (e.g. promotion of local bananas rich in vitamin A in the Federated States of Micronesia).

Promoting physical activity

1. Implement the actions recommended in, but not limited to, the Global Strategy on Diet, Physical Activity and Health.

    a. Increase access of communities to

exercise facilities (e.g. Tonga's "Walking Path", Malaysia's "ProActive Scheme"[5]).

Reducing the harmful use of alcohol

1. Respond effectively to the public-health challenges posed by harmful use of alcohol – in accordance with existing regional strategies and guided by the outcome of current and future WHO global activities to reduce harmful use of alcohol.

   a. Adopt and begin implementation of the Western Pacific Regional Strategy and Regional Action Plan to Reduce Alcohol-related Harm.

      Additional recommended regional actions (1) Utilize media and social marketing to promote healthy choices and to increase knowledge and awareness of NCD risk factors. Apply lessons learnt from previous initiatives, such as the WHO Regional Office's "It's OK to Say You Mind" campaign on second-hand smoke, using culturally relevant messages.

2. Incorporate NCD prevention and control interventions into the "Healthy Settings" approach. As an example, consider Papua New Guinea's pilot obesity and physical activity programme for workplaces, conducted jointly by the Ministry of Health and the Papua New Guinea's Sports Federation.

Recommended actions for WHO

1. Use existing strategies such as the WHO Framework Convention on Tobacco Control, the Global Strategy on Diet, Physical Activity and Health, and the Global Strategy for Infant and Young Child Feeding, which have been the subject of resolutions adopted by the World Health Assembly, in order to provide technical support to countries in implementing or strengthening nationwide action to reduce risk factors for noncommunicable diseases and their determinants. (a) Develop and disseminate appropriate technical guidelines on population-based strategies to motivate behaviour change, when none currently exist.

2. Guide the development of pilot or demonstration community-based programmes of intervention. (a) Consider support to countries for pilot or demonstration projects for promising interventions that have not been extensively studied for applicability and relevance to the Region. (b) Document and disseminate lessons learnt and assist countries to replicate and scale up proven interventions. For example, share lessons learnt from community-based interventions for salt reduction as implemented in the Tianjin Study, China with other Member States.

3. Support the development of networks of community-based programmes at the regional and global levels.

4. Provide support to countries in implementing the MPOWER package and provide technical support to implement other measures contained in the WHO Framework Convention on Tobacco Control in response to specific national needs.

   a. Support countries and areas with periodic technical assistance and training at the national and regional level, including training in the use of evidence to guide the selection, development and implementation of population-based lifestyle interventions.

5. Ensure synergy with the work of the Convention Secretariat and the implementation of the WHO Framework Convention on Tobacco Control in applying the tobacco-control component of this plan. [Action to be led by WHO Headquarters.]

Recommended actions for international partners and WHO collaborating centres

1. Provide support for and participate in the development and implementation of technical guidance and tools in order to reduce the main shared modifiable risk factors for noncommunicable diseases. (a) For funders: Invest in national programmes to reduce modifiable risk factors, such as what Bloomberg Philanthropies is undertaking with tobacco control in China, Viet Nam and the Philippines.

5 "Malaysia's ProActive scheme engages sports organizations and communities to develop community-based physical activities and active recreational projects, making physical activities attractive and accessible to community members who do not normally participate or are currently inactive (www.healthpromo.gov.my/healthpromo.asp?val=scheme2).

to oversee and manage national research initiatives for noncommunicable diseases. (c) Work with partners and academic institutions to prioritize implementation research for noncommunicable diseases. (d) Consider innovative approaches to behavioural research, such as community-based participatory research methods, for shifting population behaviour towards healthier choices

2. Encourage the establishment of national reference centres and networks to conduct research on socioeconomic determinants, gender, cost-effectiveness of interventions, affordable technology, health system reorientation and workforce development. Additional recommended regional action (1) Disseminate research findings through participation in existing information dissemination venues such as the Mobilization of Allies on Noncommunicable Disease Action (MOANA)[6] and ProCOR[7].

OBJECTIVE 4: To promote research for the prevention and control of noncommunicable diseases

Recommended actions for Member States

1. Invest in epidemiological, behavioural, and health-system research as part of national programmes for the prevention of noncommunicable diseases and develop – jointly with academic and research institutions – a shared agenda for research, based on national priorities. (a) Establish or strengthen and expand national research infrastructure and capacity to enable robust data collection for NCD prevention and control. (b) Consider designating a lead agency or designated lead within the ministry or department of health

Recommended actions for WHO

1. Develop a research agenda for noncommunicable diseases in line with WHO's global research strategy, collaborate with partners and the research community and involve major relevant constituencies in prioritizing, implementing, and funding research projects. A prioritized research agenda for noncommunicable diseases should generate knowledge and help to translate knowledge into action through innovative approaches in the context of low- and middle-income countries. [Action to be led by WHO Headquarters.] (a) Assist Member States to develop relevant and practical research agendas to support NCD prevention and control.

6 "MMOANA is an NCD network in the Western Pacific Region, with an active web-based information dissemination and discussion group.
7 ProCOR (www.procor.org), a programme of the Lown Cardiovascular Research Foundation, is an ongoing, e-mail and web-based electronic conference aimed at addressing the epidemic of cardiovascular diseases in the developing world

2. Encourage WHO collaborating centres to incorporate the research agenda into their plans and facilitate collaborative research through bilateral and multilateral collaboration and multicentre projects.

Recommended actions for international partners and WHO collaborating centres

1. Include the prevention and control of noncommunicable diseases as an integral part of work on global development and in related investment decisions.

2. As appropriate, work with WHO to involve all stakeholders in advocacy in order to raise awareness of the increasing magnitude of the public-health problems posed by noncommunicable diseases, and of the fact that tackling the determinants of and risk factors for such diseases has the potential to be a significant method of prevention.

3. Support WHO in creating forums where key stakeholders – including nongovernmental organizations, professional associations, academia, research institutions and the private sector – can contribute and take concerted action against noncommunicable diseases.

OBJECTIVE 5: To promote partnerships for the prevention and control of noncommunicable diseases.

Recommended actions for Member States

1. Participate actively in regional and subregional networks for the prevention and control of noncommunicable diseases

2. Establish effective partnerships for the prevention and control of noncommunicable diseases, and develop collaborative networks, involving key stakeholders, as appropriate. (a) Encourage and promote community participation and grassroots mobilization to establish a broad base of support for the prevention and control of chronic diseases and to ensure acceptability and effectiveness of policy and population-based interventions. For example, promote the growth of community coalitions for noncommunicable diseases, such as the Philippine Coalition for the Prevention and Control of NCD. (b) Explore working with appropriate partners, such as the food industry, to establish public health interventions for NCD prevention and control. For example, consider Singapore's Nutrition Labelling programme[8] and New Zealand's Food Industry Group (FIG)[9].

Recommended actions for WHO

1. Establish an advisory group in 2008 in order to provide strategic and technical input and conduct external reviews of the progress made by WHO and its partners in the prevention and control of noncommunicable diseases. [Action to be led by WHO Headquarters.]

2. Encourage the active involvement of existing regional and global initiatives in the implementation and monitoring of the global strategy for the prevention and control of noncommunicable diseases, and of related strategies.

   a. Actively promote collaborative relationships with international stakeholders and regional funders of health programmes to support the work in NCD prevention and control within the Region, commensurate with the burden.
   b. Assist Member States to establish and use cross-country alliances, networks and partnerships for NCD capacity-building, advocacy, research and surveillance (e.g. Alliance for Healthy Cities, MOANA). Cross-country alliances can also facilitate unified responses to transnational issues that affect noncommunicable diseases, such as trade issues and global marketing of unhealthy lifestyles. For example, follow up on the conclusions of the Meeting of the Ministers of Health of the Pacific Island Countries in Vanuatu, which call for engagement with the food and trade sectors to ensure that the health impact of trade agreements on diet is minimized.

3. Support and strengthen the role of WHO collaborating centres by linking their plans to the implementation of specific interventions in the global strategy.

4. Facilitate and support, in collaboration with international partners, a global network of national, regional, and international networks and programmes such as the WHO regional networks for noncommunicable disease prevention and control. [Action to be led by WHO Headquarters.]

Additional recommended regional actions for WHO

1. Advise Member States on ways of engaging constructively with appropriate industries. (2) Provide technical assistance and other support to countries to promote social mobilization and community participation in NCD prevention and control.

Recommended actions for international partners and WHO collaborating centres

1. Collaborate closely with and provide support to Member States and the Secretariat in implementing the various components of the global strategy for the prevention and control of noncommunicable diseases. (a) Actively encourage international and appropriate private partners to support NCD prevention and control in the Region.

2. Give priority to noncommunicable diseases in international and regional initiatives to strengthen health systems based on primary health care.

OBJECTIVE 6: To monitor noncommunicable diseases and their determinants, and evaluate progress at the national, regional and global levels

Recommended actions for Member States

1. Strengthen surveillance systems and standardized data collection on risk factors, disease incidence and mortality by cause, using existing WHO tools. (a) Regularly participate and implement standard global and regional surveys, such as the WHO STEPS survey and the various surveys comprising the Global Tobacco Surveillance System, and use the data to guide NCD policy and programme development.

2. Contribute, on a routine basis, data and information on trends in respect of noncommunicable diseases and their risk factors disaggregated by age, gender, and socioeconomic groups; and provide information on progress made in implementation of national strategies and plans

Recommended actions for WHO

1. Develop and maintain an information system to collect, analyse and disseminate data and information on trends in respect of mortality, disease burden, risk factors, policies, plans and programmes using currently available data sources like the WHO Global InfoBase and other existing global information systems. This database will be expanded to handle new information

8 "Singapore's Nutrition Labelling Programme (www.hpb.gov.sg/hpb) is a programme whereby the Ministry of Health works with the food industry to provide nutrition information on food packaging at the point of sale.

9 The Food Industry Group of New Zealand (www.fig.org.nz) was formed to encourage food companies to work with the Government and the community to solve the problem of obesity.

on subjects such as health services coverage, related costs, and quality of care. [Action to be led by WHO Headquarters.]

a. At the regional level, maintain a STEPS survey database, including use of STEPS data for policy.
b. Make use of existing global databases and inform Member States of the availability of these databases. For example, promote the global cancer database of the International Agency for Research on Cancer (IARC).

2. Establish a reference group for noncommunicable diseases and risk factors, made up of experts in epidemiology, in order to support the work of the Secretariat and advise countries on data collection and analysis. [Action to be led by WHO Headquarters.]

3. Strengthen technical support to Member States in improving their collection of data and statistics on risk factors, determinants and mortality. (a) Continue to support STEPS training within the Region.

4. Convene a representative group of stakeholders, including Member States and international partners, in order to evaluate progress on implementation of this action plan. The group will set realistic and evidence-based targets and indicators for use in both the mid-term and final evaluations.

   a. Promote existing evaluation frameworks for Member States to utilize, such as the Diet and Physical Activity Strategy (DPAS) Framework to Monitor and Evaluate Implementation.
   b. Develop relevant indicators and milestones for the Region, where none currently exist, and encourage countries to develop and monitor indicators and milestones at the national level.

5. Prepare progress reports in 2010 and 2013 on the global status of prevention and control of noncommunicable diseases. [Action to be led by WHO Headquarters.]

   a. Within existing frameworks and mechanisms, contribute to global NCD progress reports by collating data on pertinent indicators at a regional level.

Recommended actions for international partners and WHO collaborating centres

1. Work collaboratively and provide support for the actions set out for Member States and the Secretariat in monitoring and evaluating, at the regional and global levels, progress in prevention and control of noncommunicable diseases.

2. Mobilize resources to support the system for regional and global monitoring and evaluation of progress in the prevention and control of noncommunicable diseases.

Final Word

This Regional Action Plan presents a way to operationalize the reduction of the burden of chronic disease in the Western Pacific Region. It integrates various frameworks, strategies and action plans addressing specific risk factors and particular diseases into a holistic and definitive approach to NCD prevention and control. The NCD burden within the Western Pacific is largely an avoidable burden. Current evidence indicates that a significant proportion of NCD morbidity, disability and premature deaths within the Region can be averted through prevention, lifestyle modification and the judicious control of a few common risk factors that underlie the major categories of chronic disease.

Member States are requested to seriously consider the strategic actions put forward in the Regional Action Plan in light of their particular situation and national context.

Member States are also urged to use this guide in creating and implementing locally relevant policy and regulatory interventions, population-based lifestyle interventions, targeted clinical interventions and supporting strategic actions to build healthy populations and communities living in environments that support healthy choices.

The Regional Action Plan is a work in progress. Its success will depend on the applications in this document, and on the collective ability of the countries and partners in the Region to learn from each other and share expertise, knowledge and resources, and demonstrate political commitment and leadership in effecting change for better health.

Appendix C: Package of Intervention for NCD Prevention and Control by Level of Care and Standards and Requirements

Table 8. Package of Intervention for NCD Prevention and Control by Level of Care and Standards and Requirements

Level of Care	Intervention Package	Minimum Staffing	Training/ Competencies	Drugs/ Medicines	Equipment/ Supplies	IEC and Recording Forms
Primary Level 1 • Barangay Health Station (BHS) • Other similar clinics in other government agencies, or in the private sector	**Risk Assessment and Screening** • Blood Pressure • Weight • Waist circumference, body mass index (BMI) • Healthy Lifestyle check on smoking, alcohol intake, physical activity, fruits and vegetable intake, stress level • Clinical breast exam **Healthy Lifestyle Modification** • Education and counseling on proper diet, regular physical activity, tobacco use cessation, avoidance of alcohol **Referral and Follow-up**	Midwife	Training on healthy lifestyle promotion	None	Stethoscope Non-mercurial BP apparatus Weighing scale Tape measure Examining table Counseling room	• Risk assessment tool • BMI standard chart • Food pyramid poster • Diet counseling slips/sheet/ manual • Common household measurements • Nutritional guidelines • for Filipinos • Food exchange list • Physical Activity • Pyramid Poster • Manual on • clinical breast • examination • Nine cancer WARNING • signal posters • Reporting forms • Referral form • Healthy Lifestyle • IECs

Level of Care	Intervention Package	Minimum Staffing	Training/ Competencies	Drugs/ Medicines	Equipment/ Supplies	IEC and Recording Forms
Primary Level 2 • RHU • Other similar clinics in other government agencies, or in the private sector	Above Plus: **Screening** • Visual inspection using acetic acid (VIA) or Pap smear • Digital-Rectal Exam (DRE) • CBC • Urinalysis • Access to FBS **Management and Treatment** • hypertension • diabetes • chronic respiratory disease • smoking cessation **Palliative Care** pain management for cancer patient **Other Preventive Services** • Hepa B Immunization • Treatment STIs **Counseling/ Behavioral Therapy** Support Groups	Above Plus: Nurse Nutritionist or equivalent Medical Doctor Medical Technologist (or an agreement with a referral laboratory)	Above Plus: • Training on VIA/Pap Smear • Orientation on CPGs on diabetes, hypertension, COPD • Training on Smoking Cessation • Training on Nutrition and Diet Counseling for: • diabetes • CVD • Obesity • Cancer • COPD/CRD Training on CPR Orientation on Establishing Support Groups	For CVD: • Thiazide diuretics • Betablockers • Calcium Channel Blockers (sustained • released • formulations) • Angiotensin • converting • enzyme inhibitors • Statins (optional) • salbutamol/ B2 agonist drugs For Cancer -non-opiod analgesics Diabetes: • Thiazolidines (TZD) • Metformin • Alpha- • Glucosidase I • inhibitors (AGI) • Sulfonylureas (SU) Vaccines for EPI and medicines for STIs	Above Plus: Access to: • Spirometer • Glucometer/ Wet method for blood glucose determination Microscope/ slides/ reagents Examining Table Vaginal Speculum (different sizes) Droplight Kelly pad Ovum forceps Kidney basin Cotton swab/ pledget Sterilizer 3-5% acetic acid	Above Plus: Forms for: • VIA/Acetic Acid Wash • Pap Smear • DRE Diabetes Registry Stroke Registry Registry for Hypertension, Asthma, and Smoking/Tobacco Use Recording Forms Referral Forms

Level of Care	Intervention Package	Minimum Staffing	Training/ Competencies	Drugs/ Medicines	Equipment/ Supplies	IEC and Recording Forms
Secondary Level 1 • Community or district hospital	Above Plus: **Screening/ Diagnosis:** • Chest X-Ray • Blood Chemistry • FBS • ECG **Treatment for:** • heart attack • stroke • RF/RHD • diabetes with complications • COPD • Cancer • diet therapy **Palliative Care** pain management (morphine, opioids) **Rehabilitative Care** - Maintenance care and follow up	• X-ray technician • Dietitian	In-Service Training on the Management of : • Diabetes • Stroke • Hypertension • Cancer	• Benzatine penicillin, 1.2 million IU • Nitrates • Morphine • Other opioids • IV meds • Other meds	Ophthalmoscope X-ray equipment ECG machine Spirometer Glucometer/ wet method for blood glucose determination	RF/RHD Registry Form
Secondary Level 2 • Provincial Hospital	Above Plus: **Screening/ Diagnosis:** • Blood Chemistry (SGOT, ASO, ESR, lipid profile, electrolytes) • Access to pathological diagnosis, including sputum cytology for lung cancer **Treatment**: surgery **Physical & Psycho-educational** rehabilitation requiring trained therapist	Above Plus • Physician specialists in various fields	Above Plus • Specialized Training • Continuing medical specialty education	Above Plus: Drugs/meds in Specialty CPGs	Above Plus: Colposcope Ultra Sound Machine	
Tertiary • Regional Hospitals • Medical Centers in both public and private sector • Specialty Hospitals	Above Plus **Advanced Diagnosis** • CT scan/MRI • angiography, • mammography • cardiac catheterization **Treatment and Management** • Radiation Therapy • Chemotherapy • complete emergency treatment for AMI-CVA hypertensive crisis and other CV emergencies • insertion of pace-maker • pericardio-centesis • cardiovascular surgery	• Pathologist • PT/OT Thoracic Surgeon • Neurologist • Other specialists	• Specialty Training	Drugs/meds in Specialty CPGs	Above Plus • Doppler Machine • Advanced diagnostic imaging equipment (e.g. CT scan, MRI, eco-cardiogram etc.) • Treadmill Exercise Test • mammogram	Registries

Appendix D: Risk Assessment Form and Guide

Part I. Risk Assessment Form and Guide

Date of initial Assessment:	Birthday:	Age:
Name:	Civil Status:	Sex:
Address:		

A. Non-Modifiable Risk Factors

Family History of:			**Cancer Screening: (date service last given)**
Hypertension			For Females:
Cardiovascular disease	___ yes	___ no	Pap Smear: _____
Diabetes mellitus	___ yes	___ yes	Acetic Acid Wash: _____
Asthma	___ yes	___ yes	Clinical Breast Exam: _____
Cancer	___ yes	___ yes	For Males:
	___ yes	___ yes	Digital Rectal Exam:_____

B. Modifiable Risk Factors

Cigarette/Tobacco Smoking: ☐ Never smoked ☐ Passive smoker ☐ Current smoker No. of cigarettes per day:_____ Age started smoking: _____ No. of Attempts to Quit: _____ Any desire to quit?: ___ Yes ___ No ☐ Ex-smoker Age started smoking: _____ Age quit smoking: _____ No. of cigarettes per day: _____	**Alcohol Drinking:** ☐ Never ☐ Alcohol Drinker (i) In the past month, how many times did you have 5 drinks in one occasion? _____ (ii) Type of Alcohol (iii) Frequency of Intake beer _____/day wine _____/week distilled spirits _____/month
Physical Activity: Type of work/occupation: _____ Means of travel to work:_____ Activities other than work: _____ _____ ☐ Sedentary ☐ Active	**Intake of High Fat/high Salt Foods:** How often do you eat fast foods (e.g. instant noodles, hamburgers, french fries, fried chicken skin, etc.) and ihaw-ihaw (e.g. isaw, adidas, etc.)? _____ times per _____
Diabetes Mellitus: Have you been diagnosed with diabetes mellitus? __Yes __No Date: _____ FBS: _____	**Dietary Fiber Intake:** (i) Servings of fruits per day : _____ adequate inadequate (ii) Servings of vegetables per day: _____ adequate inadequate
Stress: Do you often feel stressed? _____Y _____N What are the sources of your stress? _____ _____ _____	**Hypercholesterolemia:** ☐ elevated total cholesterol ☐ elevated LDL ☐ elevated triglycerides ☐ Low LDL

Date	Ht cm	Wt kg	BMI	Waist cm	Hip cm	W/H Ratio	Nutritional Status			BP	Hypertension	
							< N	N	> N		Y	N

Part II. Guide in Using the Risk Assessment Form

A. Who shall undergo risk assessment?
   1. All adults/youth except emergency cases who are seeking consultation at the health facility;
   2. All adults/youth accompanying children or other adults/youth;
   3. All adults/youth attending the specialty (diabetes/cardiovascular clinics)

B. When is the risk assessment done?
   1. The risk assessment is done at least monthly or not more than once a month;
   2. The client shall undergo risk assessment after registering.

C. Who does the risk assessment?
   The service provider who admits the client completes the Risk Assessment Form. However, the height, weight and waist circumference can be done by the barangay volunteer workers.

D. How is the risk assessment done?
   1. Issue one risk assessment form per client.
   2. Record the date – month, day and year.
   3. Ask for the client's complete name: (Last name, First name and Middle initial) and record.
   4. Ask for the client's date of birth (month/day/year) and age of his/her last birthday and record.
   5. If the client is a female, ask for the date of the first day of her last menstrual period and record. If client has missed a period and is not aware that she may be pregnant, proceed to confirm the pregnancy and provide prenatal care – issue Mother and Child Book and complete prenatal form.
   6. If client is married or has sexual partner, ask for FP method they are using and where they access FP services and record. If none, ask if he/she desires to practice FP and proceed accordingly.
   7. With the use of the clinical thermometer, take the client's axillary temperature and record.
   8. Take the client's radial pulse in one full minute and record.
   9. Take the client's BP (make sure he/she is fully rested for at least 5 minutes) and record. If BP is above 135/80, put a check mark on the box for at risk and manage accordingly. If the blood pressure is equal or below 135/80, put a check mark on the box for not at risk.
   10. Using the adult height board, take client's height in centimeters and record. Using the Detecto Weighing Scale, (beam balance), take client's weight in kilograms and record. Compute for the Body Mass Index, and categorize based on the formula below:

Classification	BMI
Underweight	< 18.5
Normal	18.6 – 22.9
Overweight	> 23.0
At risk	23.0 – 24.9
Obese I	25.0 – 29.9
Obese II	> 30.0

If the client is overweight (BMI is > 23), check the box for at risk and counsel accordingly.

11. With the use of tape measure, take the client's waist circumference in centimeters and record.

Sex	Waist Circumference	
	Not At Risk	At Risk
Male	< 90	> 90
Female	< 80	> 80

If the client's waist circumference falls under the at risk classification, check the appropriate box and counsel accordingly.

12. Ask the client if he/she regularly smokes cigarettes. Check appropriate box. If he/she smokes, and has made attempts to quit smoking, put a check mark on "Attempts to Quit Smoking."
13. Ask client if he/she is exposed to second hand cigarette smoke at work and/or at home. If yes, put a check on the appropriate box.
14. Ask client if he/she regularly consumes alcoholic beverages and check the corresponding box.
15. Ask the client if he/she indulges in physical activity for at least 30 minutes per day three or more times a week. If yes, check the box on physically active. If not, check the box for sedentary.
16. Ask the client for the dates of her latest clinical breast examination and acetic acid wash. If he/she is due for these, provide the services if the timing is appropriate. If not, give her an appointment for these services.
17. Print your name and sign over it.
18. After completing the Risk Assessment Form and counseling, proceed to deliver the services for which the client came to the health facility for.

Appendix E: Management of Major Noncommunicable Diseases

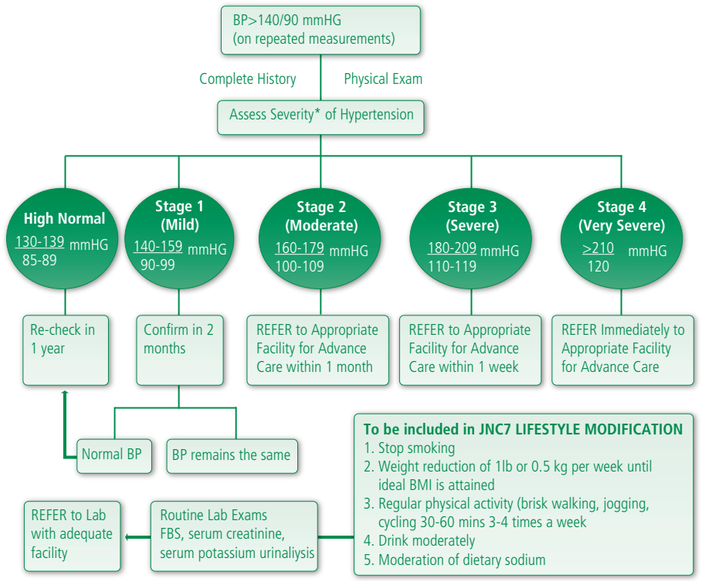
Management of Cardiovascular Diseases

Hypertension

Majority of patients will require two medications:

- Without compelling indications:
  - Stage 1 Hypertension (SBP 140-159 or DBP 90-99 mmHg): Thiazide-type diuretics for most; may consider ACE Inhibitor, Angiotensin Receptor Blocker, or Beta Blocker, Calcium Channel Blocker or combination
  - Stage 2 Hypertension (SBP >160 or DBP > 100 mm Hg): two-drug combination for most, usually thiazide-type diuretic, and ACE Inhibitor or Angiotensin Receptor Blocker or Beta Blocker, Calcium Channel Blocker
- With compelling indications: drugs for compelling indications and other hypertensive drugs (diuretics, ACE Inhibitor, Angiotensin Receptor Blocker, Beta Blocker, Calcium Channel Blocker) as needed
- Hypertensive emergencies can be managed with oral antihypertensive drugs. The initial goal of therapy is to reduce BP to between 160-180/ 100-110 mmHg within 2 hours, and to <160 and <100 by 6 hours. Excessive fall of BP that may precipitate coronary, cerebral

Figure 3. Proposed Algorithm for the Management of Hypertention in Adults (18 Years or Older) for Sentrong Sigla Health Facilities



and renal ischemia should be avoided. Diuretics, ACE Inhibitor, Beta Blocker, Calcium Channel Blocker, methyldopa can be used alone or in combination. Sublingual administration of fast-acting Nifedipine should be avoided as degree of fall of BP may be too rapid.

Angina Pectoris

- Prevention of Acute Anginal Attack
  - Sustained-release Nitroglycerin
  - Oral Nitroglycerin: 2.5 to 9 mg every 8-112 hours
  - 20% Nitroglycerin ointment applied to tape and attached to skin: average dose is 1-2 inches of tape given every 4-6 hours
  - Transdermal Patch: 2.5 – 15 mg daily

- Treatment of Acute Anginal Attack
  - Nitroglycerin, sublingual: 0.15-0.6 mg every 5-10 minutes for a total of three doses if pain is not relieved promptly.
  - Long-acting Nitrates:
    - Isosorbide dinitrate or tetranitrate tabs, sublingual: 2.5-10 mg q 3-4 hours;
    - tablets, oral 20-60 mg q 6 hours;
    - tablets sustained release 40-80 q 8-12 hours or q hours
  - Beta Adrenergic Antagonist (any)
    - Atenolol, 10 mg/d taken daily
    - Metroprolol, 150-300 mg/d with disease schedule of q 12 hours
    - Propanolol, 120-400mg/d with disease schedule of q 2 6-12 hours
  - Calcium Channel Blockers: taken either alone or combined with beta-blockers in treatment of chronic stable angina:
    - Nifedipine: 30-120 mg/d with dosage schedule of q 6-8 hours;
    - Verapamil: 240-480 mg/d with dosage schedule of every 8 hours;
    - Diltiazem: 120-360 mg/d with dosage schedule of every 8 hours
  - Sedatives, tranquilizers and anti-depressants
  - Digitalis and diuretics
  - Anti-arrhythmic drugs

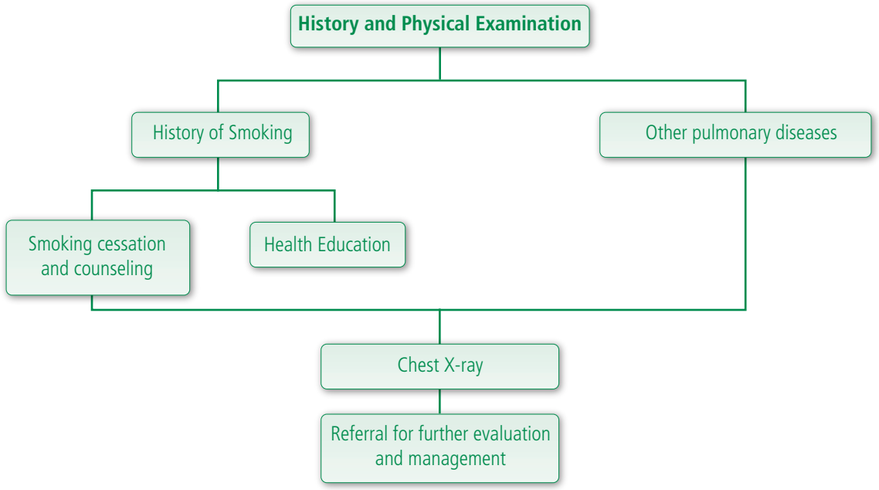
Myocardial Infarction (MI)

- Drugs most commonly used in cases of acute MI include the following:
  - Analgesics:
    - Morphine sulfate: 2-4 mg intravenous every 5 minutes as necessary
    - Meperidine/Pethidine: 50-100 mg IM or SC q 394 hours as necessary
  - Nitrates
    - Nitroglycerine – sublingual 0.3-0.8 mg initially by intravenous infusion at 10-20 mg/min gradually increase to 100-200 mg/min as necessary
    - Special precaution should be taken in cases with arrhythmias and heart blocks
  - Thrombolytic Therapy: recommended during the first 4-6 hours
    - Streptokinase 250,000 units loading dose, followed by 100,000 during initial hours
    - S-PA- 60 mg by iv bolus initially followed by 20 mg/hr for 2 hours for a total of 100 mg
    - Aspirin : 80 mg
  - Beta-Blockers
    - Special precaution should be taken in cases with pulmonary congestion and heart failure
    - Metoprolol 5 mg intravenous over 2 minutes every 5 minutes X 2 doses shift to oral. 50 mg q 6 hours X 2 days then 100 mg
  - Anti-arrhythmic drug drugs:
    - Prophylactic lidocaine: within first 6-12 hours at a dose of 2-3 mg/kg by IV bolus followed by intravenous infusion of 2-3 mg/min for 12-24 hours;
  - Sedatives: use mild sedatives
  - Laxatives

Management of Cancers

Lung Cancer

Figure 4. Algorithm on Screening for Lung Cancer



Classification of Lung Cancer

TNM Classi-fication	Definition
Primary Tumor (T)	
Tx	Primary tumor cannot be assessed or tumor proven by the presence of malignant cells in bronchopulmonary secretions but not visualized by radiography or bronchoscopy
To	No evidence of primary tumor
Tis	Carcinoma in situ
T1	Tumor more than 3.0 cm in greatest diameter, surrounded by lung visceral pleura and without evidence of invasion proximal to a lobar bronchus or bronchoscopy
T2	Tumor more than 3.0 cm. in greatest diameter or tumor of any size that either invades the visceral pleura or has associated atelectasis or obstructive pneumonitis extending into the hilar region. At bronchoscopy, the proximal extent of demonstrable tumor must be within the carina. Any associated atelectasis or obstructive pneumonitis must involve less than an entire lung, and there must be no pleural effusion
T3	Tumor of any size with direct extension into any of the following: the chest wall, diaphragm, mediastinal pleura, parietal pericardium, or 1 tumor of the main bronchus less than 2 cm. distal to the carina without involving it, or any tumor with associated atelectasis or obstructive penumonitis of the entire lung
T4	Tumor of any size with invasion of the mediastinum or involving any of the following: the heart, great vessels, trachea, esophagus, vertebral body, carina; or tumor with malignant pleural effusion.
Nodal Involvement (N)	
Nx	Regional lymph nodes cannot be assessed

TNM Classi-fication	Definition
No	No demonstrable metastasis in regional lymph node
N1	Metastasis in ipsilateral mediastinal nodes and/or ipsilateral hilar lymph nodes, including direct extension
N2	Metastasis in ipsilateral mediastinal nodes and/or subcarina lymph nodes
N3	Metastasis in contralateral mediastinal or contralateral hilar, or ipsilateral or contraletral scalene or supraclavicular lymph nodes
Distant Metastasis (M)	
Mx	Presence of distant metastasis cannot be assessed
Mo	No distant metastasis
M1	Distant Metastasis
Stage Grouping	
Occult Carcinoma	
TxNoMo	Occult carcinoma with bronchopulmonary secretions containing malignant sells but without other evidence of the primary tumor or evidence of metastasis to the regional lymph nodes or distant metastasis
• Stage I	
TisNoMo	Carcinoma in situ
T1NoMo	Tumor that can be classified T1 or T2
T2NoMo	Without any nodal or distant metastasis
• Stage II	
T1NoMo	Tumor classified as T1 or T2 with metastasis to the lymph nodes in the peribronchial or ipsilateral regiononly or both without distant metastasis
• Stage III	
T3NoMo	Tumor classified as T3 without nodal metastasis or with nodal metastasis confined
T3N1Mo	Peribronchial or ipsilateral hilar nodes without distant metastasis or any T1-3 tumor
T1-3N2Mo	Metastasis in the ipsilateral mediastinal or subcarinal nodes but without distant metastasis

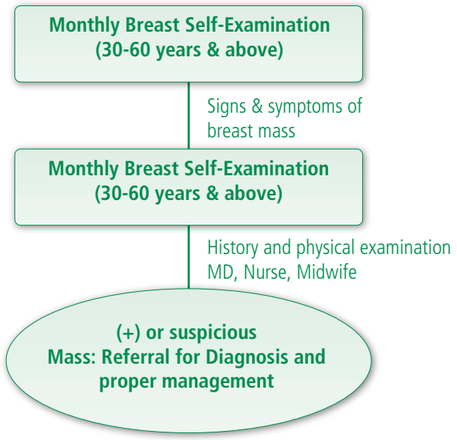
Recommended Treatment for Lung Cancer at Various Stages

Stage	Recommended Treatment
STAGE 1: T1NoMo; T2NoMo	
Squamous	Surgery: No adjuvant treatment
Adeno	
Large cell	
Small cell	Surgery and chemotherapy and optional prophylactic radiation of brain
Others	Surgery only. No adjuvant treatment
STAGE II: T1N1Mo	
Squamous	Surgery Plus Post Op radiation
Adeno	Surgery Plus Post Op radiation; Chemotherapy (optional)
Large cell	Surgery Plus Post Op radiation

Stage	Recommended Treatment
Small cell	Surgery Plus Chemotherapy
Others	Surgery Plus Post Op radiation
STAGE II: T2N1Mo	
Squamous	Treatment same as T1N1Mo
Adeno	
Large cell	
Small cell	
Others	
STAGE III – A – T3NoMo	
Squamous	Surgery Plus Post Op radiation to site
Adeno	
Large cell	
Small cell	
STAGE III: T1-3N2Mo	
Squamous	Surgery Plus Post op Mediastinum
Adeno	Radiation or Chemotherapy or both
Large cell	
Small cell	
STAGE III-B: Any TN3Mo; T4any NMo	
Small Cell CA	
Combination Therapy	Complete remission 6 courses and partial response after 3 courses Plus radiotherapy
	Palliative Radiation Therapy
Non-Small Cell CA	
	Chemotherapy
	Chemotherapy and radiation therapy with curative intent
	Radiation Therapy with curative intent
STAGE IV: Any TY any NM1	
Small Cell	
Combination Therapy	Complete remission 6 courses Partial response after 3 courses Plus radiotherapy
Non-Small Cell CA	Palliative chemotherapy
	Palliative radiation therapy
	Combined palliative chemotherapy and palliative radiotherapy

Breast Cancer

Figure 5. Algorithm on Screening for Breast Cancer



- Staging for Breast Cancer

1. TNM Staging

Stage	Definitions
Primary Tumor (T)	Definitions for classifying the primary tumor (T) are the same for clinical and for pathological classification. The telescoping method of classification can be applied. If the measurement is made by physical examination, the examiner will use the major headings (T1, T2, or T3). If other measurements, such as mammographic or pathologic are used, the telescoped subsets of T1 can be used.
TX	Primary tumor cannot be assessed
T0	No evidence of primary tumor
Tis* Carcinoma in situ, intraductal carcinoma, lobular carcinoma in situ or Paget's disease of the nipple with no tumor	
T1	Tumor 2 cm or less in greatest dimension. T1a 0.5 cm or less in greatest dimension. T2b more than 0.5 but not more than 1 cm in greatest dimension. T1c more than 1 cm but not more than 2 cm in greatest dimension.
T2	Tumor more than 2 cm but not more than 5 cm in greatest dimension.
T3	Tumor more than 5 cm in greatest dimension
T4**	Tumor of any size with direct extension to chest wall or skin. T4a Extension to chest wall. T4b Edema)including peau d'orange) or ulceration of the skin of the breast or satellite skin nodules confined to the same breast. T4c Both (T4a and t4b) T4d Inflamantory carcinoma.
Note: * Paget's Disease associated with a tumor is classified according to the size of tumor. ** Chest wall includes ribs, intercostals muscles, and seratus anterior muscles but not pectoral muscle	

Stage	Definitions
Regional Lymph Nodes(N)	
NX	Regional lymph nodes cannot be assessed (e.g. previously removed).
N0	No regional lymph node metastasis.
N1	Metastasis to movable ipsilateral axilary lymph node(s)
N2	Metastasis to ipsilateral axillary lymph node(s) fixed to one another or to other structures
N3	Metastasis to ipsilateral internal mammary lymph nodes.
Pathological Classification (pn)	
pNX	Regional lymph nodes cannot be assessed (e.g. previously removed or 10not removed for pathological study).
pN0	No regional lymph node metastasis.
pN1	Metastasis to movable ipislateral axillary lymph node(s). pN1a Only micrometastasis (none larger than 0.2 cm). pN2b Metastasis to lymph node(s), any larger than 0.2 cm. pN1bi Metastasis in 1 to 3 lymph nodes, anymore than 0.2 cm and all less than 2cm. in greatest dimension, pN1bii Metastasis to 4 or more lymph nodes, any more than 0.2 cm. and al less than 2 cm. in greatest dimension. pN1biii Extension of tumor beyond the capsule of a lymph node metastasis less than 2 cm. in greatest dimension. pN1biv Metastasis to a lymph node 2 cm. or more in greatest dimension.
pN2	Metastasis to ipsilateral axillary lymph nodes that are fixed to one another or to other structures.
pN3	Metastasis to ipsilateral internal mammary lymph node(s).
Distant Metastasis (M)	
MX	Presence of distant metastasis cannot be assessed
M1	No distant metastasis
M1	Distant metastasis (includes metastasis to ipsilateral supraclavicular lymph nodes)

2. Stage Grouping

Stage 0	Tis	N0	M0
Stage 1	T1	N0	M0
Stage IIA	T0 T1 T2	N1 N1* N0	M0 M0 M0
Stage IIB	T2 T3	N1 N0	M0 M0
Stage IIIA	T0 T1 T2 T3	N2 N2 N2 N1, N2	M0 M0 M0 M0
Stage IIIB	T4 Any T	Any N N3	M0 M0
Stage IV	Any T	Any N	M1

NOTE: The prognosis of patients with pN1a is similar to that of patients with pN(1)

Histopathologic Type. The histologic types are the following: Cancer, NOS (Not otherwise specified):

Ductal Intraductal (in situ)
Invasive with predominant
Intraductal component
Invasive, NOS (not otherwise specified)
Comedo
Inflammatory
Medullary with lymphocytic Infiltrate

Mucinous (colloid)
Papilary
Tubular
Other

Lobular
In situ
Invasive with predominant in sit
Component
Invasive

Nipple
Paget's disease, NOS (not otherwise specified)
Paget's disease with intraductal
Carcinoma
Other

Histopathologic Grade (G)
GX Grade cannot be assessed
G1 Well-differentiated
G2 Moderately well-differentiated
G3 Poorly differentiated
G4 Undifferentiated

Treatment for Locally Advanced Breast Cancer

- Locally advanced breast cancer refers to the following Primary Tumor (T) definition in the TNM Staging System:
  - **T4*** Tumor of any size with direct extension to chest wall or skin
  - **T4a** Tumor of an extension to chest wall
  - **T4b** Edema (including peau d'orange) or ulceration of the skin of breast or satellite skin nodules confined to same breast.
  - **T4c** Both T4a and T4b (Chest wall includes ribs, inter-coastal muscles, and serraus anterior but not pectoralis)

- It must be noted that in patients with locally advanced breast cancer, there is high probability that distant metastasis is present, even though it is still clinically undetected, and even in the occasional patient with negative axillary nodes. A combination of locoregional and systemic treatment should be given.

- The loco-regional control of T4 lesions poses a distinctly therapeutic problem in breast cancer. Such tumors cause a great deal of discomfort and inconvenience among otherwise healthy individuals, often getting in the way of a productive and meaningful life. If improperly and inadequately treated, local recurrence is quite frequent, posing greater therapeutic problems. The treatment objective is the eradication of loco-regional disease. Whatever treatment combination and sequence is used, principles of cancer cell biology should be considered. An important principle is that both radiotherapy and chemotherapy are most effective, safe and efficient when dealing with a low total tumor mass.

- For large and bulky T4 lesions, it is expecting too much from radiotherapy and chemotherapy, by themselves to eradicate all cancer cells. Surgery is still the better bulk exterminator. Whenever possible, and when safety and technical considerations allow, surgical excision should be the mainstay of loco-regional control. Systemic chemotherapy is necessary for the local as well as expected systemic disease. Radiotherapy is likewise important and can be given before and or after surgery.

Treatment for Breast Cancer

- Surgery remains to be the most widely acceptable modality of treatment for breast cancer.

  - **Stage I and II** – either modified radical mastectomy or lumpectomy or segmentory with auxiliary lymph node dissection plus comprehensive radiation therapy, which decreases the likelihood of local recurrence substantially. The selection depends on the extent of the primary lesion and therefore the cosmetic result, probability of multi-focal disease pathologic features and last but not least, the wishes of the patient.

  - **Stage III** – cleansing modified radical mastectomy is done if still operable followed by systemic chemotherapy and radiation therapy.

- Radiation therapy after lumpectomy calls for meticulous techniques to include the entire breast, underlying pectoralis muscle, chest wall and the intercostals lymphatics. If the axillary nodes are positive for metastasis, the axillary supraclavicular and internal mammary nodes are also irradiated. Irradiations for patients after modified radical mastectomy (MRM) must be carried out with justification and the technique is similar to that used after lumpectomy. Primary radiation therapy is given to patients who refuses surgery and chemotherapy or when both modalities are medically contraindicated.

- Axillary Nodal Sampling. The presence or absence of metastasis to the axillary nodes continues to be the most powerful influence on survival following treatment or curable breast cancer. Furthermore, knowledge on this prognostic variable is readily available, either from the mastectomy specimen, or by means of axillary nodal biopsy.

- Postmastectomy Adjuvant Chemotherapy for Negative Axillary Node. The value of postmastectomy adjuvant chemotherapy for patients with axillary nodal spread is well established although the benefit derived seems to be more significant among pre-menopausal women.

  - Current adjuvant chemotherapy is based on a widely tested CMF combination (cyclophosphamide, methotrexate, and 5-fluroiracil) given through 6 cycles. Although doxorubicin containing combinations have shown higher response rates than CMF in patients with advanced cancer, their use in the adjuvant setting is more for high risk, particularly pre-menopausal patients.

  - Adjuvant radiotherapy can be employed in order to reduce local recurrence. However it should be realized that in these patients radiotherapy is primarily concerned with preventing loco-regional recurrence and is not a substitute for chemotherapy which is concerned with eradicating systemic disease.

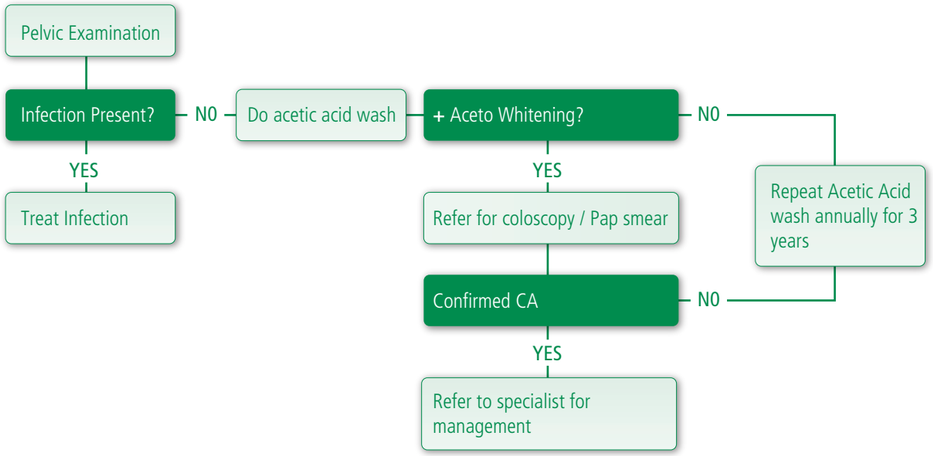
Cervical Cancer

- **Detection**. Any patient with a suspicious clinical lesion or a smear showing suspicious or neoplastic cells must have a definite tissue diagnosis before treatment can be given

- **Clinical Evaluation**. For patients with histopathological findings indicating cervical cancer, a complete evaluation, including clinical staging, must be done as soon as possible. The results of each patient's biopsies, x-rays and other tests, as well as a formal case summary should always be sent to the referral center. Clinical evaluation of all cervical cancers should be done by gynecologist in the referral hospital. In addition to the careful physical examination, chest x-ray, IVP, cytoscopy, photoscopy should be used as appropriate to define the stage.

- **Treatment**. Treatment of invasive cervical cancer should be based on the clinical stage and surgical risk involved. This may be in the form of radical hysterectomy in early cases with good surgical risk or radiotherapy in advanced cases or in early cases with poor

Figure 6. Algorithm on Screening for Cervical Cancer

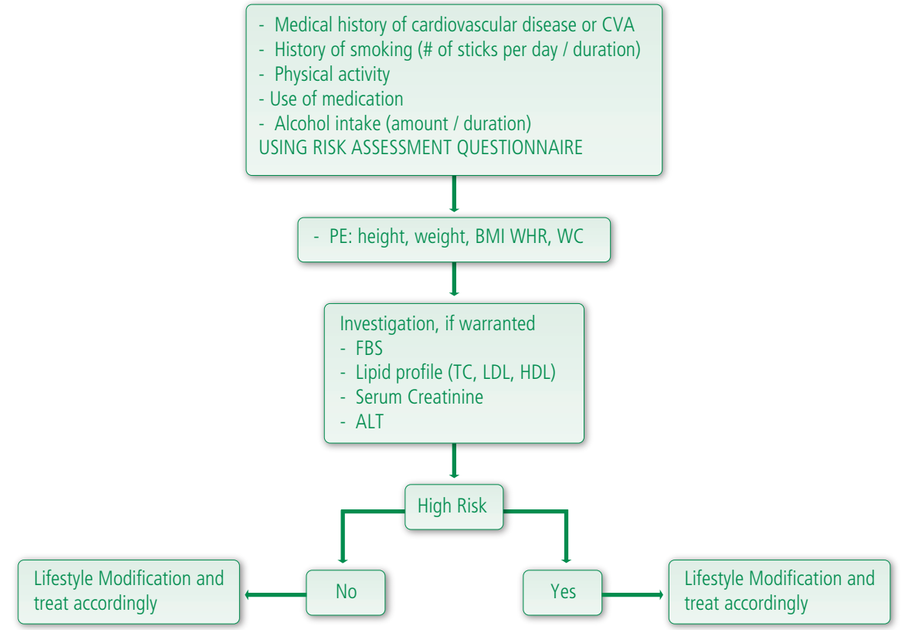


surgical risk. These must be done at a referral center with gynecological oncologist and radiotherapy facilities.

- **Radiation Therapy** is used to damage the cancer cells so they cannot reproduce. The two types of radiation therapy are:
  - **Intracavitary Radiation Therapy**. The client is hospitalized for a few days while a tiny metal cylinder containing a radioactive element is palced in or near the affected organ or tissue. This technique does not harm the surrounding tissue.
  - **External beam radiation therapy**. A radiation beam is directed at the cancer. This treatment is done on an outpatient basis, and is usually given 5 days a week for several weeks.
  - **Chemotherapy**. This uses anti-cancer drugs that circulate throughout the body. These drugs can reach and kill cancer cells in the original growth and those that may have broken off and moved elsewhere in the body. In the process of killing the cancer cells, the drugs also kill some healthy cells. This causes side effects like weakness, fatigue, nausea and hair loss.
  - **Hormone Therapy**. Doses of hormones are injected into the body to change some cell's activities and slow down or stop cancer growth.
  - **Surgery**. This is the surgical removal of the cancerous tissue or organ, like the uterus or ovaries. If a woman's uterus is surgically removed by hysterectomy, she will never be able to bear children because there will be no place for them to grow.
  - **Freezing Cancer Cells**. This is another treatment for cervical cancer by freezing the cancer cells, and sending an electric current through them.
- **Follow-up**. Cervical cancer can begin to develop at any time after a woman has become sexually active. A single cervical smear may be erroneously interpreted as negative even if it pre-malignant or if invasive disease exists. Therefore, all women should be systematically followed up. Continuing patient and community education are necessary to ensure good compliance with follow-up.

Diabetes Mellitus

Figure 7. Algorithm for Diabetes Mellitus



The following are the values for the diagnosis of DM and other categories of hyperglycemia:

Table 10. Categorization of Diabetes Mellitus

Categories	Plasma Venous Glucose mmol/L (mg/dl)
Diabetes Mellitus	
• fasting and/or 2 hour post glucose load/casual	> 7.0 (126) > 11.1 (200)
Impaired Glucose Tolerance (IGT)	
• Fasting concentration (if measured) and 2 hour glucose load	< 7.0 (126) 7.8 – 11.0 (140-199)
Impaired Fasting Glycemia (IFG)	
• fasting and 2 hour glucose load (if measured)	5.6 – 6.9 (100-125) < 7.8 (140)

- When taken in isolation, blood glucose levels are not useful for the classification of diabetes. Even ketoacidosis considered as the hallmark of Type 1 diabetes, sometimes occur in Type 2. If there is uncertainty in diagnosis, a provisional classification should be made and reassessed after initial response to therapy.
  - **Type 1**: Usually called juvenile diabetes because it occurs most frequently in children. It is an autoimmune disease- the body is unkind enough to react against a vital part of itself, namely the beta cells of the pancreas. This will lead to the destruction of the beta cells and cause absence of insulin. Because of the lack of insulin, these patients can develop ketoacidosis.

- **Type 2**: It is generally seen in older people although in recent years, more and more young individuals are getting it. Symptoms appear more gradually compared to Type 1. Patients are more likely to be overweight and obese. Type 2 diabetes runs in families. It is hereditary. Those with Type 2 diabetes are insulin-resistant, meaning their bodies resist the normal healthy functioning of insulin. This insulin-resistance combined with not enough insulin to overcome insulin resistance causes Type 2 diabetes.

- Drugs. Sulphonylureas and glinides directly stimulate insulin secretion, while thiazolidinediones and metformin improve insulin sensitivity.

  - **Metformin**: It is recommended as the first line therapy for obese and overweight patients, and is recommended as the first-line therapy among the non-obese patients in some countries. It is the only hypoglycemic agent that has been shown to reduce CVD. It does not cause hypoglycemia or weight gain but often leads to troublesome gastrointestinal side effects which are frequently dose-dependent.

  - **Sulphonylureas**. They stimulate insulin secretion by the beta cells and lower HBA1c by 1-2%. They usually lead to weight gain, and can cause hypoglycemia especially among the elderly and those with renal or liver disease. Hence, they must only be used as second or third hand line agents.

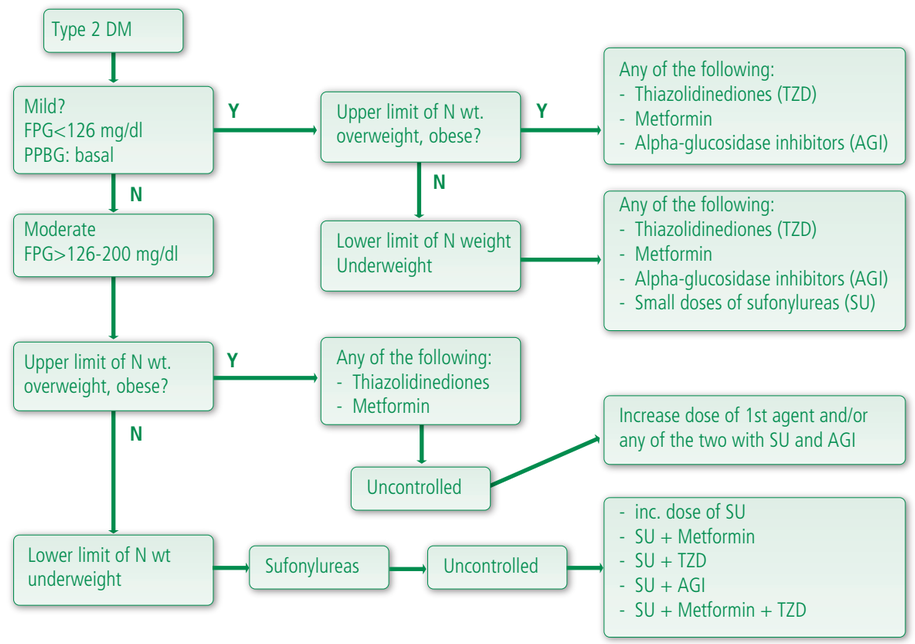
  - **Thiazolidinediones**. They improve insulin sensitivity by improving cellular response to insulin action. However, they do not enhance insulin production. They decrease HBA1c by 1-2% and do not cause hypoglycemia. One of the common side effects is weight gain, fluid retention may also occur, and may precipitate cardiac failure among those with pre-existing heart disease.
  - **Alpha-Glucosidase Inhibitors**. They slow down carbohydrate absorption from the jejunum, and hence decrease post-prandial blood glucose, and to a lesser degree fasting glucose, thus improving overall glycemic control. They have a weight-reducing effect, and can be used as first line therapy in association with diet, or in combination with sulphonyureas, metformin and insulin.

  - **Glinides**. These are a new generation of sulphonylurea-like agents. They may be used as monotherapy or in combination therapy with biguanides or thiazolidinediones. They resude post-prandial hyperglycemia, hence have to be taken with each meal.

  - **Combination Oral Therapy**. Metformin, suplhonylureas, thiazolidinediones and a-glucosidase inhibitors may be used in various combinations with each other or with insulin when treatment targets are not achieved. Combination therapy capitalizes on the complimentary modes of action of the different drug classes. There is some evidence to show that the use of combination therapy is superior to monotherapy in terms of glycemic control, with no increase in side effects.

  - **Insulin**. Insulin is often needed to achieve good glycemic control, and should be considered for all patients on maximum oral therapy whose HBA1c is > 6.5 %. Early treatment of insulin should be strongly considered when unintentional weight loss occurs at any time during the course of diabetes, including at the time of diagnosis. Insulin is administered SC wither through a syringe or pen. The following are several forms of insulin:
    - rapid-acting insulin analogues
    - short-acting regular insulin
    - intermediate-acting insulin
    - premixed insulin
    - long acting insulin analogues

Figure 8. Medical Management at Health Care Center



Chronic Respiratory Diseases

1. Initial Diagnosis using questionnaire

- Diagnose Asthma if yes to any of the following:
  Ever Asthma : Yes to a
  Current Asthma: Yes to any of b-g
  Diagnosed Asthma: Yes to h-j

  a. wheezing or whistling in the chest at any time in the past
  b. wheezing or whistling at any time in the last 12 months
  c. breathless during wheezing attack in the last 12 months
  d. whistling or wheezing in the absence of a cold time in the last 12 months
  e. feeling of tightness in the chest at anytime in the last 12 months
  f. woken up by an attack of shortness of breath at any time in the last 12 months
  g. woken by an attack of coughing at any time in the last 12 months
  h. diagnosis of asthma confirmed by a doctor
  i. currently taking any medicine for asthma prescribed by a doctor
  j. attack of asthma confirmed by doctor in the last 12 months

- Diagnose possible COPD if yes to a, b, and c. Need to be confirmed with spirometry

  a. Over 40 years old
  b. Yes to history of smoking
  c. Yes to any of the following item
  - cough as much as 4-6 times a day, 4 or more days out of the week
  - cough on most days for 3 consecutive months or more
  - cough for more than 3 years
  - phlegm as much as 2 times a day, 4 or more days out of the week
  - phlegm on most days for 3 consecutive months or more during the year
  - phlegm for more than 3 years
  - shortness of breath when hurrying on the level or walking up a slight hill
  - walk slower than people of your age on the level because of breathlessness
  - stop for breath when walking at own pace on the level
  - stop for breath after walking about 100 yards or after a few minutes on the level
  - breathless to leave the house or breathless on dressing or undressing
  - emphysema or chronic bronchitis or COPD diagnosed by a doctor

- Diagnose CURRENT ALLERGIC RHINITIS If yes to any of the following:
  a. sneezing in the last 12 months
  b. runny nose in the last 12 months
  c. blocked nose in the last 12 months

- If yes to the above three, and yes to nose problem accompanied by itchy-watery eyes in the last 12 months, this constitutes allergic conjunctivitis rhinitis.

2. Final Diagnosis

This is based on Spirometry Testing or documentation of Peak Expiratory Flow Measurement (PEF)

- Asthma (current asthma)
- COPD (confirmed with spirometry)
- Allergic Rhnitis (current allergic rhinitis)
- Other diseases (respiratory and non-respiratory)
- None

Spirometry: done to determine the degree of obstruction and client can be categorized as having restrictive, obstructive or mixed pattern of ventilatory defect. Spirometric values though vary with age, height, sex and race. Airway obstruction is evident if the FEV 1 is reduced to < 80 % of predicted values.

Peak Expiratory Flow (PEF) Meters: allow repeated measurements at home and useful in documenting the variability of airflow obstruction, particularly when daytime values are normal.

a. Fit disposable mouthpiece to peak flow meter
b. Ensure patient stands up and holds peak flow meter horizontally without restricting movement of the marker. Ensure that the marker is at the bottom of the scale.
c. Ask patient to breathe in deeply, seal lips around mouthpiece and breathe out as quickly as possible.
d. Record the result. Repeat Steps 2-4 twice more. Choose the highest of the three readings and compare with predicted values
e. Remind children to blow out through the meter rather like blowing out candles on a birthday cake

Diagnosis of CRD in Children 6 – 7 years old

1. Diagnose ASTHMA if yes to any of the following:

Ever asthma: if yes to a
Current Asthma: if yes to any from b to e
Current severe asthma: if yes to d
Current exercise induced asthma: if yes to e
Diagnosed Asthma: If yes to f

a. wheezing or whistling in the chest at any time in the past
b. wheezing or whistling in the chest in the last 12 months
c. with frequent wheezing in the last 12 months
d. severe wheezing limiting child's speech to only one or two words at a time between breaths in the last 12 months
e. . sounded wheezy during or after exercise in the last 12 months
f. asthma ever diagnosed by a doctor in the last 12 months

2. Diagnose ALLERGIC Current RHINITIS if yes to any of the following:

a. sneezing in the last 12 months
b. runny nose in the last 12 months
c. blocked nose in the last 12 months

Note that if the above three are yes, and has nose problem accompanied by itchy-watery eyes in the last 12 months, this constitutes allergic conjunctivitis rhinitis

Drugs

The CONTROLLER medications include the following group of drugs with examples that are available in the country:

- Corticosteroids
  - oral formulations: Prednisone, Prednisolone
  - inhaled formulations: Beclomethasone, Budesonide, Fluticasone

- Non-steroidal anti-inflammatory agents
  - sodium cromoglycate
  - nedocrimil sodium

- anti-allergic agents
  - ketotifen

- long-acting and sustained release bronchodilators
  - oral formulations: Bambuterol, sustained release formulation of short acting beta 2-agonist (salbutamol, terbutaline) and theophyllines

The RELIEVER medications include the following sub-classifications with examples that are available in the country

- Short-acting bronchodilators
  - beta-2 agonists: Fenoterol, Clenbuterol, procaterol, Metaproterenol, Sulbatumol, Terbutaline, Pirbutero
  - Non selective beta-agonist: Isoprenaline, Epinephrine (with alpha stimulation effect as well)
  - • Anti-cholinergic drugs: Ipatropium bromide (inhaled only) Atropine

- Systemic corticosteroids (used in high doses as

pulse therapy lasting for a few days)
  - oral formulations: Prednisone, Prednisolone
  - parenteral formulations: Hydrocortisone
- Management of Exacerbations. The overall objective in managing asthma exacerbations is rapid relief of symptoms and prevention of asthma death.
  - Pay particular attention to subgroup of patients who are particularly prone to life threatening asthma. These patients should be watched carefully since their conditions can quickly deteriorate. The following are their characteristics:
    - current use of or recent withdrawal from systemic corticosteroids
    - hospitalization for asthma in the past year
    - emergency room visit for asthma in the past year
    - prior intubation for asthma
    - psychiatric disease or psychosocial problems
    - non-compliance with anti-asthma medication plan
  - All patients should have a written action plan on how to recognize and grade the severity of the exacerbations and what to do next. The intensity of the treatment will depend on the initial severity score, the degree of response to initial therapy, and the presence or absence of factors associated with asthma deaths.
  - Emergency Room Treatment of Asthma Exacerbations. There is a need for the emergency room officer to make a rapid diagnosis and institute immediate treatment of asthma in the ER. A chest x-ray may be indicated in some instances to rule out pneumothorax. The intensity of treatment will depend on the severity score on arrival, the degree of response to initial therapy, and the presence or absence of factors associated with asthma deaths;
  - With ward admissions, the following are the recommended criteria for admitting patients to the regular rooms or wards:
  - inadequate response to therapy within 1-2 hours
  - persistent PEF < 50 % after 1 hour of treatment
  - presence of risk factors as previously defined
  - prolonged symptoms prior to emergency room consultation
  - inadequate access at home to medical care and medications'
  - difficult home conditions
  - difficulty in obtaining transport to hospital in the event of further deterioration
  - ICU admission is recommended if in addition to the criteria of admission is that the response to the initial therapy is poor, the patient's sensorium has deteriorated, and there is evidence of impending respiratory arrest;
  - Upon discharge, the patient's action plan must be re-explained and maintenance therapy must be well understood. Trigger avoidance must be re-emphasized.

COPD

- Stages of COPD
  - Stage I: Mild COPD - Mild airflow limitation (FEV/FVC < 70%; FEV1 >/= 80% predicted) and sometimes, but not always, chronic cough and sputum production.
  - Stage II: Moderate COPD - Worsening airflow limitation (FEV1/FVC < 70%; 50% </= FEV1 < 80% predicted) with shortness of breath typically developing on exertion
  - Stage III: Severe COPD - Further worsening of airflow limitation (FEV1/FVC < 70%; 30% </= FEV1 < 50% predicted), greater shortness of breath, reduced exercise capacity, and repeated exacerbations which have an impact on patient's quality of life.
  - Stage IV: Very severe COPD - Severe airflow limitation (FEV1/FVC < 70%; FEV1 < 30% predicted) or FEV1 < 50% predicted plus chronic respiratory failure. Patients may have Very Sever (Stage IV) COPD even if the FEV1 is > 30% predicted, whenever this complication is present.

- Differential Diagnosis

COPD	Asthma
• onset in midlife • symptoms slowly progressive • long smoking history • dyspnea during exercise • largely irreversible airflow limitation	• onset early in life (often childhood) • symptoms vary from day to day • symptoms at night/early morning • Allergy rhinitis and/or eczema also present • Family history of asthma • Largely reversible airflow limitation

- Bronchodilators are central to symptom management in COPD
  - Inhaled therapy is preferred
  - Give "as needed" to relieve intermittent or worsening symptoms, and on a regular basis to prevent or reduce persistent symptoms
  - The choice between beta2 agonists, anti-cholinergics, methylxanthines, and combination therapy depends on the availability of medications and each patient's individual response in terms of both symptom relief and side effects
  - Regular treatment with long-acting bronchodilators is more effective and convenient than treatment with short-acting bronchodilators
  - Combining bronchodilators of different pharmacologic classes may improve efficacy and decrease the risk of side effects compared to increasing the dose of a single bronchodilator

- Glucocorticosteroids
  - Regular treatment with inhaled glucocorticosteroids does not modify the long term decline in FEV1 but has been shown to reduce the frequency of exacerbations and thus improve health status for symptomatic patients with an FEV1 < 50% predicted and repeated exacerbations
  - Long term treatment with oral glucocorticosteroids is not recommended

- Vaccines - Influenza vaccines reduce serious illness and death in COPD patients by 50%
- Antibiotics - Not recommended except for treatment of infectious exacerbations and other bacterial infections
- Mucolytic agents - Patients with viscous sputum may benefit from mucolytics but overall benefits are very small. Use is not recommended.
- Antitussives - Regular use contraindicated in stable COPD

Palliative Care

List of Drugs For Cancer Pain Relief

Category	Parent Drug	Drug Formulation	Alternatives	Drug Formulation
Non-opioids	Acetylsalicylic acid (ASA)	Tablet, 325, 650 mg	Tenoxicam	Tablet, 20 mg Vial, 20 mg
	Paracetamol	Tablet, 250,500 mg	Naproxen	Tablet, 275,550 mg
	Ibuprofen	Tablet, 200,400, 600 mg	Diclofenac	Tablet, 25, 50, 75 mg
Strong opioids	morphine	Tablet (immediate release): 10, 20, 30, 50 mg. Tablet, (sustained release): 10, 20, 30, 60, 100 mg Injection, 16 mg/ml	Meperidine	Injection, 100 mg/ 2 ml
Opiod Antagonist	Naloxone	Injection, 4 mg/ml		
Anti-depressants	Amytriptyline	Tablet, 12.5 mg	Imipramine	Tablet, 25 mg
Anti-convulsants	Carbamazephine	Tablet, 200 mg		
Cortico-steroids	Predisolone	Injection, 40 mg/ml	Prednisone	Tablet, 5 mg.
	Dexamethasone	Tablet, 0.5, 0.75 mg		

Appendix F: Supervision Checklist on NCD Prevention and Control

Activity	YES	NO	NA
A. Client Walks In For Any Complaint 1. Does the service provider establish rapport with all clients walking in for any complaint by: a. providing privacy as much as possible? b. establishing pleasantries with client to start conversation? c. showing sincere concern in helping client improve health problems? d. being polite to client? e. allowing client to express ideas and feelings? f. answering client's inquiries? g. establishing eye contact?			
B. Risk Assessment by Service Provider *1. Modifiable Risk Factors* a. Does the service provider screen clients for hypertension by taking their BP? b. Does the midwife screen clients for cigarette/tobacco smoking by asking for:			
(1) Current smoker • number of sticks per day • age started smoking • number of quit attempts • any desire to quit			
(2) Ex-Smoker • age started smoking • age when he/she quitted • number of sticks smoked/day at time of regular smoking			
(3) Passive Smoker • where exposed • frequency			
c. Does the service provider screen clients for alcohol abuse by asking the following questions • type of alcohol (beer, wine, distilled spirit, etc.) • frequency of drinking (day, week, month) • usual amount of intake • no. of times clients had 5 drinks in one occasion in the past month • driving a vehicle while intoxicated in the past month • operating a machine while intoxicated in the past month			
d. Does the service provider screen clients for inactivity/sedentariness by asking the following questions: • type of work/occupation • activities other than work (e.g. hobbies, leisure, etc.) • means of travel to work • classify level of physical activity			
e. Does the service provider screen the clients for obesity by calculating the BMI (general nutritional status) and waist-hip ratio (central obesity)			

Activity	YES	NO	NA
2. Non-modifiable Risk Factors a. Does the service provider screen clients for non-modifiable risk factors by obtaining the following questions: (1) age in years (2) sex (male or female) (3) Family History for: • hypertension • cardiovascular diseases • diabetes mellitus • asthma • cancer			
C. Service Provider Promotes/Reinforces Positive Health Practices *1. Diet and Nutrition* a. Does the service provider promote the following messages on proper nutrition and diet? • Eating a complete diet according to one's age, height, weight, type of physical activity and physiological condition is good for health • Complete diet means eating a variety of food from each food group at the right amount needed by the body to maintain optimum health and nutrition • Eating the recommended daily requirements for dietary fiber – (3 servings of vegetables and 2 servings of fruits) • To prevent lifestyle related diseases, it is recommended that diet includes liberal amount of vegetables and fruits (> 5 servings per day) and reduce the amount of salt, sugar and animal/ saturated fat			
b. Does the service provider promote messages that correlate eating habits and prevention of diseases? • Reducing salt and animal/saturated fat (fats that solidify at room temperature) intake prevents hypertension • Reducing sugar and animal/saturated fat (fats that solidify at room temperature) intake prevents obesity and diabetes • Increasing consumption of fruits and vegetables prevents cancer and cardiovascular diseases			
c. Does the service provider promote diet in relation to physical activity? • Amount of food intake among children and elderly are less compared to adolescents and adults • To maintain ideal body weight, the amount of food consumed should be proportionate to level of physical activity • Sedentary individuals should consume les amount of food than those who are physically active			
2. Physical Activity a. Does the service provider promote the ff. messages on physical activity? • Be active in as many ways as you can • Put at least 30 minutes of moderate physical activity preferably everyday. This will provide you with many health and wellness benefits. • Moderate physical activity is any activity equal in intensity to a brisk walk • For extra health benefit and fitness, engage in more vigorous physical activities for at least 20 minutes, 3 to 4 times a week • Vigorous physical activities are those that make you "huff and puff • For those who have health problems or previously sedentary, consult your physician before you engage in vigorous physical activities • Regulate/reduce amount of TV for children and adults • Encourage active play in children			

Activity	YES	NO	NA
3. Alcohol Use Does the service provider promote the ff. health messages on alcohol use? • alcohol abuse is bad for health • seek professional help if you have difficulty controlling your alcohol consumption			
4. Tobacco Use Does the service provider discourage smoking with the following messages? • Don't smoke. If you do, Quit now • Smoking kills. Half of long term smokers die from smoking-related diseases • Don't smoke especially when there are children and other people around • Every cigarette smoked cuts at least 5 minutes of life on average. • Smoking is the prime factor in heart disease, stroke and chronic lung disease: causes cancer of the lungs, larynx, esophagus, mouth, and bladder; contributes to cancer of the cervix, pancreas and kidneys • You can quit smoking • Seek help if you want to stop			
D. Service Provider Counsels the Client (on Risk Factors) 1. Does the service provider counsel the identified at-risk patients in the following manner: • Establishes goal of the session with client • Asks the questions to elicit more information necessary in the assessment of risk factors relative lifestyle? • Shares with client identified risk factors • Discusses with client the need to do some changes in lifestyle relative to identified risk factors? • Makes a contract with client to do some changes in lifestyle relative to identified risk factors? • Reinforces client's positive health practices • Demands commitment from the client • Provides follow-up support • States correctly appropriate messages for specific lifestyle at risk			
2. Does the service provider counsel to identified at-risk clients? a. Overweight/Obesity • reduce weight • increase amount of physical activity • increase intake of high fiber diet: water, fruits, legumes, vegetables, whole grain cereals, lean meat, fish • limit intake of sugar, salt and fat • avoid high caloric low nutrient value and preserved food (e.g. junk foods, instant noodles, soft drinks, etc.) • seek the help of a nutritionist-dietitian for a more precise diet prescription			
b. Physical Activity • increases physical activity • evaluates type of activity being done everyday and start modifying them to include more instances of physical activities • starts with a walking regimen for at least 30 minutes daily • moderate physical activity of at least 30 minutes most days of the week • integrating physical activity and exercise into regular day to day activities			
c. Smoking • advises to stop immediately • assist patient using smoking cessation techniques.			
d. Alcohol Abuse • assist patient to seek professional help to stop alcohol abuse			

Activity	YES	NO	NA
E. Service provider refers clients in need for further evaluation/ management Does the service provider refer clients in need for further evaluation and management to appropriate HL practitioner/specialist?			
F. Service provider Schedules Follow-Up Visits Does the service provider discuss with the client the schedule when he/she will be expected to return for follow-up?			

Appendix G: Guide to Making an Instructional Plan

COMPETENCIES	MD	RN	MW	BHW	BNS	Others
A. Assess clients for risk factors of non-communicable diseases						
1. Obtain information about risk factors:						
▸ dietary intake of fat and salt						
▸ level of physical activity and exercise status						
▸ smoking and alcohol history						
▸ personal and family history of hypertension, diabetes, cancer, asthma						
2. Obtain/calculate measurements for obesity:						
▸ ideal body weight						
▸ body mass index						
▸ waist hip ratio						
▸ waist circumference						
B. Perform basic screening procedures for non-communicable diseases						
1. hypertension						
▸ blood pressure measurement						
2. diabetes mellitus						
▸ history						
▸ fasting blood sugar						
▸ oral glucose tolerance test						
3. cancer						
▸ self-breast examination						
▸ nine warning signs of cancer						
4. COPD and asthma						
▸ history						
▸ use of peak flow meter						
C. Make appropriate referrals.						
D. Educate clients on health promotion and risk factor modification						
1. State basic information needed by clients for health promotion and risk factor modification.						
▸ seven ways to a healthy heart						

COMPETENCIES	MD	RN	MW	BHW	BNS	Others
▸ proper/rational nutrition						
▸ benefits of physical activity						
▸ harmful effects of smoking and alcohol						
2. Provide information for early detection of NCD						
▸ breast self-examination						
▸ cervical screening						
▸ rectal examination						
▸ nine warning signs of cancer						
3. Demonstrate basic skills in:						
▸ interpersonal communication						
▸ basic nutritional counseling						
▸ formulating physical activity or exercise						
▸ techniques for smoking cessation						
E. Mobilize communities in the non-communicable disease prevention and control using the integrated approach						
1. Organizing support groups/clubs for specific group of patients						
2. Utilizing IEC materials						
3. Conducting health education/health promotion programs						
4. Modifying health programs according to community needs and resources.						
5. Disseminating information about health programs						
6. Soliciting participation to health programs						
7. Networking/linkage-building with other agencies/groups						

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