ADMINISTRATIVE ORDER
No. 2012 - 0029

SUBJECT: IMPLEMENTING GUIDELINES ON THE
INSTITUTIONALIZATION OF PHILIPPINE PACKAGE OF
ESSENTIAL NCD INTERVENTIONS (PHIL PEN) ON THE
INTEGRATED MANAGEMENT OF HYPERTENSION AND
DIABETES FOR PRIMARY HEALTH CARE FACILITIES

I BACKGROUND AND RATIONALE

The National Policy on Strengthening the Prevention and Control of Chronic Lifestyle Related Non Communicable Diseases (Administrative Order No. 2011-0003 dated April 14 2011) prescribes the strategy or comprehensive approach the country has adopted in reducing the morbidity, mortality and disability rates due to chronic lifestyle-related non communicable diseases (NCDs). The policy also clearly defines the Action Framework for the Prevention and Control of the NCDs which consists of areas for intervention at three levels, i.e. environmental, lifestyle and clinical. To support the changes in these three levels of interventions, additional actions should be instituted in the areas of: 1) advocacy; 2) research, surveillance, monitoring and evaluation; 3) networking and coalition building across all sectors of the government and society, and 4) health system strengthening through primary health care to make it more responsive to chronic care. Moreover, service packages for clinical interventions of diabetes, cardiovascular diseases, cancers and chronic respiratory diseases must be provided in these settings.

Currently, the main focus of clinical health care for NCDs in the Philippines is hospital-centered acute care. Patients with NCDs usually seek treatment at the hospitals when cardiovascular disease, cancer, diabetes and chronic respiratory disease have reached the point of acute events or long-term complications. This is a very expensive approach that will not contribute to a significant reduction of the NCD burden. It also denies people the health benefits of taking care of their conditions at an early stage. A strategic objective in the fight against the NCD epidemic is the early detection and care using cost-effective and sustainable health-care interventions that are integrated in the primary health care facilities such as barangay health stations, rural health units, community health centers and the like.

The World Health Organization has endorsed a set of low-cost individual treatment protocol consisting of early screening and timely treatment in a primary health care setting (WHO PEN, Geneva 2010). The approach involves the financing and the strengthening of health care in order to improve access by high-risk individuals and by people with NCDs to essential technologies and medicines. These set of interventions are cost effective especially when compared to costly procedures that may be necessary when detection and treatment are late and the patient reaches advanced stages of the disease.
In consideration of the commitment to a 2% yearly reduction in mortality due to NCDs in the country and to contribute to the global reduction of 25% by 2025, the Philippines adapted the WHO PEN. It shall be called the Philippine Package of Essential Noncommunicable Disease Interventions (Phil PEN). The protocol for the Integrated Management of Hypertension and Diabetes (APPENDIX I) will be institutionalized in primary health care settings all over the country.

II POLICY STATEMENT

The provision of quality clinical interventions and services for lifestyle related non-communicable diseases in the country follows the policy statements espoused by the National Policy on Strengthening the Prevention and Control of Chronic Lifestyle Related Non Communicable Diseases (Administrative Order No. 2011-0003 dated April 14, 2011).

This states that the country shall adopt an integrated, comprehensive and community based response for the prevention and control of chronic, and lifestyle related NCDs, intensifying health promotion strategies to effect changes in lifestyle, environmental support and delivery of health care services while fostering complementary accountabilities of all stakeholders.

III GOAL AND OBJECTIVES

This policy and guide aims to ensure the appropriate provision of quality clinical interventions and services for lifestyle-related NCDs in the country: Specifically, it aims to:

1. Guide health workers and providers at primary health care facilities in implementing the Phil PEN to identified population groups and client needs

2. Define the roles and responsibilities of the different DOH offices, the Philippine Health Insurance Corporation, the LGUs and other agencies in the implementation of the Phil PEN, including higher level referral facilities.

3. Generate the support of various stakeholders in implementing the Phil PEN policy and guidelines in the country.

IV SCOPE AND COVERAGE

This policy applies to all units and instrumentalities including attached agencies of the DOH and local government units (LGUs). It also applies to non-government organizations, professional organizations, private sector, and other relevant partners in the health sector.
V DEFINITION OF TERMS

1. **Diabetes mellitus** – a group of metabolic disorders characterized by high blood sugar levels, i.e. a fasting plasma glucose concentration above 7.0 mmol/l (126 mg/dl) or a postprandial (approximately 2 hours after a main meal) plasma glucose concentration above 11.0 mmol/l (200 mg/l) on two separate occasions.

2. **Phil PEN Protocol on the Integrated Management of Hypertension and Diabetes.**


3. **Protocol on the Integrated Management of Hypertension and Diabetes.** The first clinical protocol developed under WHO PEN that makes use of the total risk approach using hypertension, diabetes and tobacco use as the entry points. It specifically involves the use of the WHO/ISH risk prediction charts to determine the risk of developing a cardiovascular event, i.e. heart attack or stroke over a ten period and management guidelines for risk reduction appropriate referral, regular follow-up, core set of technologies and essential medicines.

4. **Risk Factor Assessment** is the key process of evaluating individuals for the presence or absence of common risk factors that expose them to increased likelihood of developing NCDs.

5. **Risk Screening** is the presumptive identification of unrecognized disease or the presence intermediate risk factors by the application of test and procedures which can be applied rapidly.

6. **Risk Stratification** estimating the level of risks of individuals for a fatal or non-fatal cardiovascular event in 10 years.

7. **Total Risk Approach** is a structured method to identifying, assessing and managing the major risk factors shared by cardiovascular diseases (CVD), cancer, diabetes and chronic respiratory disease.

8. **WHO PEN** World Health Organization Package of Essential Noncommunicable Disease Intervention provides a minimum set of interventions for detection, prevention, treatment and care of CVD and risk factors (heart disease, stroke, hypertension), diabetes, chronic respiratory disease (asthma and COPD) and cancer deemed feasible for implementation even in low resource settings with a modest increase in investment, that can be delivered by primary care physicians and non-physician health workers in primary health care settings.
VI: GENERAL GUIDELINES:

1. The Phil PEN Protocol on the Integrated Management of Hypertension and Diabetes shall be used in all primary health care facilities in the country, i.e. barangay health stations, rural health centers, community health centers, and the like.

2. All relevant health care providers shall undergo training on the use of the protocol to be provided by the DOH-NCDPC in coordination with NCPAM and PhilHealth.

3. The National Center for Pharmaceutical Access Management shall support the implementation of the Phil PEN by providing the complete treatment packs for lifestyle related diseases pursuant to Administrative Order 2011-0013 dated September 12, 2011 (Implementing Guidelines on the DOH Complete Treatment Pack (COMPACK) to Ensure Sustainable Access to Essential Drugs and Medicines for the Marginalized Sector) until such time that the PhilHealth benefit packages shall have been fully instituted.

4. The PhilHealth benefit packages shall be provided for the long term support of the implementation of the Phil PEN Protocol on Integrated Management of Hypertension and Diabetes.

5. The referral system must be established and duly guided, while higher referral centers must be properly equipped to deal with referrals coming from the primary care level facilities.

6. All primary health care facilities in the country should be reorganized to address chronic long term care of patients taking into account patient load, logistical requirements and recording and reporting accountabilities.

VII SPECIFIC GUIDELINES AND PROCEDURES:

These specific guidelines and procedures shall be instituted at the primary health care level facilities all over the country, i.e. barangay health stations, rural health units, community health centers and the like, whatever is appropriate. A manual of operation will be issued containing more details.

1. Target Population
   All individuals aged 25 years old and above with no established cardiovascular disease (angina pectoris, coronary heart disease, myocardial infarction and transient ischemic attacks), cerebrovascular disease (CeVD) or peripheral vascular disease (PVD) or have not undergone coronary revascularization or carotid endarterectomy will undergo Risk Factor Assessment. (WHO 2007)
2. Flow of Activities or Service Pathway
The flow of activities (service pathway) in the assessment, screening and management of potential clients at risk of NCD shall follow the algorithm illustrated in Appendix 2.

3. List of Essential Devices
The following equipment, devices and supplies are needed in the implementation of the Phil PEN protocol on the management of hypertension and diabetes and should be made available at the health care facility:
- Stethoscope
- Blood Pressure measurement device, non-mercurial
- Measuring Tape, non-extensible
- Height Board
- Weighing Scale
- Glucometer with test strips*
- Cholesterol Meter with test strips
- Test tube or glass container for the urine
- Tests strips for checking urine ketones and protein

4. List of Essential Drugs/Medicines
The following drugs and medicines are needed in the implementation of the Phil PEN protocol on the management of hypertension and diabetes and should be made available at the health care facility:
- Thiazide diuretics
- Beta blockers
- Angiotensin converting enzyme inhibitors
- Calcium Channel blockers (sustained release formulations)
- Aspirin
- Metformin
- Glibenclamide
- Gliclazide
- Simvastatin

5. Risk Assessment and Screening
Risk Factor Assessment is the key process of evaluating individuals for the presence or absence of common risk factors that expose them to increased likelihood of developing NCDs. Risk factor assessment involves asking specific questions to determine the individual’s age, sex, family history of diseases associated with NCDs among first degree relatives, the use of alcohol and tobacco, physical inactivity and diet. Risk Screening is the presumptive identification of unrecognized disease or the presence of intermediate risk factors by the application of tests and procedures which can be applied rapidly. The primary goal of risk 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 individual’s chances of becoming unhealthy. (DOH, 2009) This involves tests to measure central
adiposity and obesity, raised blood pressure, raised blood glucose and raised blood cholesterol.

Following the service pathway in Appendix 2, risk assessment will be performed on individuals 25 years old and above. Only those with any of the following will undergo risk screening:

- Age greater than 40 years
- Tobacco/Cigarette Smoking
- Central Adiposity
- Raised Blood Pressure
- Diabetes
- Family History of Hypertension, Stroke or Heart Attack
- Family History of Diabetes or Kidney Disease

At the primary health care facilities, the NCD Risk Assessment and Screening Form (refer to Appendix 3) will be used to record the results of the risk assessment and screening. The questionnaire to determine probable angina, heart attack, stroke & TIA (WHO, 2002) and the tests to determine the presence of urine protein and urine ketones are incorporated in this form in order to determine individuals who need to be referred to a higher level of care for further diagnosis and management.

In filling-out the NCD Risk Assessment and Screening Form, an individual is considered at risk if he or she:

- has a first degree relative with any of the following conditions: hypertension, stroke, heart attack, diabetes and kidney disease.
- currently smokes or stopped smoking for less than a year or is exposed to cigarette smoke (passive smoker)
- consumes excessive alcohol. Excessive alcohol intake is defined as having more than 2 drinks for males and more than 1 drink in females or having 5 drinks in one occasion.
- consumes high fat/high salt food frequently
- consumes less than 3 servings of vegetables and 2 servings of fruits daily
- has less than 2 1/2 hours of moderate intensity physical activity weekly
- has a body mass index (BMI) equal to or more than 23
- has a waist circumference equal to or more than 90 centimeters in males or 80 centimeters in females
- has a blood pressure reading above 120 mmHg systolic or 80 mmHg diastolic, taken as the mean of two readings on each of two occasions
- has a fasting blood glucose concentration above 7.0 mmol/l or 126 mg/dl or a random blood glucose concentration above 11.0 mmol/l or 200 mg/dl
- has a total blood cholesterol concentration above 5.3 mmol/l or 200 mg/dl
6. Referral
Coordination mechanisms with the next referral level should be established for clients who need specialist or hospital care. Following Action 3 of the WHO PEN Protocol for the Integrated Management of Hypertension and Diabetes, individuals with any of the conditions below will be referred to a higher level facility:

- Blood Pressure of $\geq 140$ (systole) or $\geq 90$ mmHg (diastole) in people below 40 years old (to exclude secondary hypertension)
- Known heart disease, stroke, TIA, DM, kidney disease (for assessment as necessary)
- Angina, claudication
- Worsening heart failure
- Raised Blood Pressure $\geq 140/90$ (in DM above 130/80 mmHg) in spite of treatment with 2 or 3 agents
- Any proteinuria
- Newly diagnosed diabetes with urine ketones 2+ or in lean person of below 30 years old
- DM with fasting blood glucose $>14$ mmol/l despite maximal metformin with or without sulphonylurea
- DM with severe infection and/or foot ulcers

7. Risk Stratification
Following risk assessment and screening, the level of risks of individuals who are not referred to a higher level facility will be estimated using the WHO/ISH Risk Prediction Charts for the Western Pacific Region (refer to Appendix 3).

Classification of the 10-Year Risk of Fatal or Non-fatal Cardiovascular Event:

<table>
<thead>
<tr>
<th>Risk Level</th>
<th>Percentage of Risk</th>
<th>Color of the Cell</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low</td>
<td>$&lt; 10%$</td>
<td>Green</td>
</tr>
<tr>
<td>Mild</td>
<td>$10% \text{ to } &lt; 20%$</td>
<td>Yellow</td>
</tr>
<tr>
<td>Medium</td>
<td>$20% \text{ to } &lt; 30%$</td>
<td>Orange</td>
</tr>
<tr>
<td>High</td>
<td>$30% \text{ to } &lt; 40%$</td>
<td>Red</td>
</tr>
<tr>
<td>Very High</td>
<td>$\geq 40%$</td>
<td>Deep Red</td>
</tr>
</tbody>
</table>

Charts are not necessary for making treatment decisions in individuals who are at high cardiovascular risk because they have established cardiovascular disease or very high levels of individual risk factors. All of them need intensive lifestyle interventions and appropriate drug therapy. They include people:

- with established cardiovascular disease
- without established CVD who have a total cholesterol $\geq 8$ mmol/l (320 mg/dl) or low-density lipoprotein (LDL) cholesterol $\geq 6$ mmol/l (240 mg/dl) or TC/HDL-C (total cholesterol/high density lipoprotein cholesterol) ratio $\geq 8$
- without established CVD who have persistent raised blood pressure ($>160-170/100-105$ mmHg)
• with type 1 or 2 diabetes, with overt nephropathy or other significant renal disease
• with renal failure or renal impairment.

8. Risk Management

VIII IMPLEMENTATION ARRANGEMENT

The oversight in the implementation of the Phil PEN lies with the National Center for Disease Prevention and Control, Degenerative Disease Office in collaboration with the National Center for Pharmaceutical Access Management and the Philippine Health Insurance Corporation.

IX ROLES AND RESPONSIBILITIES

The following offices and institutions shall provide support to LGUs in the adoption of Phil PEN:

1. Department of Health
The DOH shall provide leadership in the adoption of Phil PEN by (1) promoting Phil PEN for nationwide adoption and formation of partnership among several stakeholders; (2) providing of technical support, logistics and financial assistance to LGUs; and (3) monitoring progress of nationwide implementation of Phil PEN.

National Center for Disease Prevention and Control (NCDPC)
The NCDPC shall be the over-all coordinator for the adoption of Phil PEN among LGUs. It shall:

• Provide policy directions in the adoption and institutionalization of Phil PEN for LGUs.
• Provide technical support to the CHDs in extending support to the LGUs.
• In collaboration with the CHDs, provide logistics and financial assistance to the LGUs.
• Develop a reporting and monitoring system in the adoption of Phil PEN among LGUs in collaboration with the National Epidemiology Center.
• Coordinate with other national centers and bureaus in the central office in the adoption of Phil PEN such as:
  • Development of IEC plans and materials with the National Center for Health Promotion (NCHP);
  • Coordinate with the National Center for Pharmaceutical Access and Management (NCPAM) in ensuring access and availability of affordable quality generic non-communicable disease medicines.
**National Center for Pharmaceutical Access and Management (NCPAM)**
The NCPAM in collaboration with the NCDPC and Centers for Health Development (CHD) shall:

- Set the policy direction in the provision of affordable quality generic non-communicable disease medicines particularly for the poor.
- Oversee and supervise the provision of affordable quality generic non-communicable disease medicines including the pre and post procurement activities.

**National Center for Health Promotion (NCHP)**
The NCHP shall:

- Provide the necessary IECs that will advocate the adoption of Phil PEN among LGUs as well as development of behavioral change communication schemes targeting various stakeholders in the community.
- Advocate with other government agencies, non-government, private sector, development partners and other relevant stakeholders for support on policy development and funding in the creation of an environment that will encourage healthy lifestyle.

**Health Policy Development and Planning Bureau (HPDPB)**
The HPDPB shall support the development of relevant policies in the adoption of Phil PEN as well as the facilitation of program evaluation studies and researches.

**National Epidemiology Center**
The National Epidemiology Center shall support the development of the indicators and possible sources

**Centers for Health Development (CHD)**
The DOH CHD shall serve as local coordinator in the adoption of Phil PEN. The roles of the CHDs shall be as follows:

- Ensure that the health systems at the local level are supportive and responsive to the essential elements required in the adoption of Phil PEN.
- Build local coalitions composed of local government, civil society, academe, private sector and other relevant partners in the health sector that would support adoption of Phil PEN.
- Promote the adoption of Phil PEN among LGUs in the region.
- Provide technical support to LGUs in the adoption of Phil PEN.
- Assist LGUs in accessing available financial grants and support of the DOH, development partners and donors.
2. PHILIPPINE HEALTH INSURANCE CORPORATION (PHIC)
In order to ensure the adoption of Phil PEN, the PHIC shall:

- Develop and implement an insurance package for individuals at risk and afflicted with lifestyle related disease.
- Advocate the adoption of Phil PEN in the health facilities nationwide by linking to financial incentives.

3. Local Government Units (LGUs)
The Local Government Units shall adopt and implement the PHIL PEN and provide services and products in primary health care facilities and hospitals in their localities as well as provide the training needs for personnel at peripheral health units, district hospitals and laboratories.

4. Referral Centers
Higher level facilities such as district, provincial hospitals, medical centers, regional hospitals and specialty hospitals must be equipped to handle referral for lower level facilities and provide the necessary support to the implementation of the PHIL PEN.

X FUNDING

The Department of Health Central Office and Centers for Health Development shall provide funds for technical assistance, monitoring and health promotion campaigns to ensure the operationalization of this Order. Local Government Units shall provide funds to provide products and services in their respective communities. Other government agencies, non-government organizations and other stakeholders shall provide counterpart funds and technical assistance as appropriate to ensure the effective implementation of the PHIL PEN Protocol in the country.

XI REPEALING CLAUSE

All previous Orders and other related issuances inconsistent or contrary to the provisions of this Administrative Order are hereby repealed, amended or modified accordingly. All other provisions of existing issuances which are not affected by this Order shall remain valid and in effect.

XII EFFECTIVITY

This Order shall take effect immediately.

ENRIQUE T. ONA, MD, FPCS, FACS
Secretary of Health
Protocol: IP Integrated management of hypertension and diabetes
(For prevention of heart attacks, strokes, renal failure, amputations and blindness)
(Total risk approach using hypertension, diabetes and tobacco use as entry points)

Action 1. Ask about:
- Known heart disease, stroke, TIA, diabetes, kidney disease
- Chest pain and/or breathlessness on exertion, pain in calf on walking
- Medications that the patient is taking
- Current tobacco use (yes/no)
- Alcohol consumption (yes/no)
- Occupation (sedentary or active)
- Engaged in more than 30 minutes of physical activity daily at least 5 days a week (yes/no)

Action 2. Assess:
- Waist circumference
- Palpation of heart, peripheral pulses and abdomen
- Auscultation heart and lungs
- Blood pressure
- Fasting or random plasma glucose (DM+: fasting >7 mmol/L [126 mg/dl] or random >11.1 mmol/L [200 mg/dl])
- Urine protein
- Urine ketones in newly diagnosed DM
- Plasma cholesterol if test available
- Test sensation of feet and foot pulses if DM

Action 3. Referral criteria for all adults:
- BP >140 or >90 mm Hg in people <40 years (to exclude secondary hypertension)
- Known heart disease, stroke, TIA, DM, kidney disease (for assessment as necessary)
- Angina, claudication
- Worsening heart failure
- Raised BP >140/90 (in DM above 130/80 mm Hg) in spite of treatment with 2 or 3 agents
- Any proteinuria
- Newly diagnosed diabetes with urine ketones +
or in last person <30 years
- DM with fasting blood glucose >14 mmol/L despite maximal medication with or without sulphonylureas
- DM with severe infection and/or foot ulcers
- DM with recent deterioration of vision or no eye exam in 2 years

Action 4. Estimate cardiovascular risk in those not referred:
- Use the WHO/IASL risk charts relevant to the WHO/IBP subregion (Annex A and B)
- Use age, gender, smoking status, systolic blood pressure, diabetes (and blood cholesterol if available)
- If age 50-59 years select age group box 50, if 60-69 years select age group box 60, etc.; for people age <40 years select age group box 40

Appendix 1: Protocol for the Integrated Management of Hypertension and Diabetes
WHO Package of Essential NCD (PEN) interventions

Protocol: 1P (continued)

### Diabetes Mellitus - Additional actions
- If despite a diabetic diet:
  - Fasting blood glucose is raised: start on metformin
  - Titrate metformin to target glucose value
  - Give advice on foot care
  - Follow up at least every 3 months
  - If resources allow give a statin to those >40 years even if cardiovascular risk is low
- Refer for eye examination every 2 years

### Action B: Treat as shown below

- All individuals with persistent raised BP ≥ 160/100 mmHg should be given antihypertensive treatment
- All patients with established diabetes and cardiovascular disease (coronary heart disease, myocardial infarction, transient ischemic attacks, cerebrovascular disease or peripheral vascular disease) if stable, should continue the treatment already prescribed and be considered as risk ≥ 20%
- All individuals with total cholesterol ≥ 8 mmol/l (320 mg/dl) should be given lifestyle advice and statins

#### Risk < 20%:
- Counsel on diet, physical activity, smoking cessation (Protocols 3P and 4P)
- If risk < 10% follow up in 12 months
- If risk 10% - < 20% follow up every 3 months until targets are met, then 6 - 9 months thereafter

#### Risk 20 to <30%:
- Counsel on diet, physical activity, smoking cessation (Protocols 3P and 4P)
- Persistent BP ≥ 140/90 mmHg in DM ≥ 130/80 mmHg consider a low dose of one of the drugs: Hydrochlorothiazide 25-50 mg daily, Furosemide 5-20 mg daily, Amlodipine 5-10 mg daily or Atenolol 50-100 mg daily or Amiodipine 5-10 mg daily
- Follow up every 3-6 months

#### Risk ≥ 30%:
- Counsel on diet, physical activity, smoking cessation
- Persistent BP ≥ 130/80 should be given one of the drugs: thiazide, ACE inhibitor, beta-blocker, calcium channel blocker
- Give a statin
- Follow up every 3 months
Protocol: 1P (continued)

Repeat Actions 2, 3 and 4
Follow referral criteria for all visits (see Action 3)
Treat as shown below

- If risk ≤ 20%, follow up in 12 months and reassess cardiovascular risk
- Counsel on diet, physical activity, smoking cessation (Protocols 3P and 4P)

- If risk is 20 to <30%, continue as in Action 4 and follow up every 3 months

- If risk is still ≥30% after 3-6 months of prescribed interventions at first visit, refer to next level

Advice to patients and family
- Avoid table salt and reduce salty foods such as pickles, salty fish, fast food, processed food, canned food and stock cubes
- Have your blood glucose level, blood pressure and urine checked regularly

Advice specific for diabetes
- If you are on any diabetes medication that may cause your blood glucose level to go too low, carry sugar or sweets with you
- If feasible, have your eyes checked every year
- Avoid walking barefoot or without socks
- Wash feet in lukewarm water and dry well especially between the toes
- Do not cut calluses or corns, nor use chemical agents on them
- Look at your feet every day and if you see a problem or an injury go to your health worker
Appendix 2. Flow of Activities or Service Pathway

**Community Risk Assessment**

- Walk-in clients with complaints related to NCDs
- Clients availing of other health center/RHU services

**Risk Assessment**

- Age more than 60 yrs
- Tobacco/cigarette smoking
- Central adiposity
- Raised blood pressure
- Diabetes
- Family history of hypertension, stroke or heart attack
- Family history of diabetes or kidney disease

**Health Center**

- Risk Screening
  - Referral Criteria
    - +
    - =
  - Risk Stratification Using WHO/ISH Risk Prediction Charts
  - Risk Management following WHO PEN Protocol & Pocket Guidelines for Assessment & Management of Cardiovascular Risk

- Give health information
- Repeat assessment after one year

- Refer to next level facility
### NCD High-Risk Assessment and Screening Form

| ID No. | **NCD HIGH-RISK ASSESSMENT**  
| **Facility Form** |
| Date of Assessment: | Birth Date: | Age: |
| Name: | Civil Status: | Sex: |
| Address: | Contact Numbers: |
| Occupation: | Educational Attainment: |

#### Family History

<table>
<thead>
<tr>
<th>Does patient have 1st degree relative with:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hypertension</td>
</tr>
<tr>
<td>Stroke</td>
</tr>
<tr>
<td>Heart Attack</td>
</tr>
<tr>
<td>Diabetes</td>
</tr>
<tr>
<td>Asthma</td>
</tr>
<tr>
<td>Cancer</td>
</tr>
<tr>
<td>Kidney Disease</td>
</tr>
</tbody>
</table>

#### Obesity

| BMI | Yes | No |
| Ht (cm) | Yes | No |
| Wt (kg) | Yes | No |

#### Central Adiposity

| Waist circumference (cm) | Yes | No |

#### Raised BP

| Systolic 1st reading | Yes | No |
| Diastolic 1st reading | Yes | No |
| Systolic 2nd reading | Yes | No |
| Diastolic 2nd reading | Yes | No |

#### Average Blood Pressure

#### Smoking (Tobacco/Cigarette)

| Never smoked | Current smoker | Stopped > a year | Passive Smoker |

#### Alcohol Intake

| Never consumed | Yes, drinks alcohol |

#### Excessive Alcohol Intake

| in the past month, had 5 drinks in one occasion | Yes | No |

#### High Fat/High Salt Food Intake

| Eats processed/fast foods (e.g., instant noodles, hamburgers, fries, fried chicken, etc.) and takaw-ilaw (e.g., isaw, adiabas, etc.) weekly | Yes | No |

#### Dietary Fiber Intake

| 3 servings of vegetables daily | Yes | No |
| 2-3 servings of fruits daily | Yes | No |

#### Physical Activity

| Does at least 2½ hours a week of moderate-intensity physical activity | Yes | No |

#### Presence or Absence of Diabetes

1. Was patient diagnosed as having diabetes?  
   - Yes  
   - No  
   - Do not know  
   - If yes, with medications  
   - If no, proceed to question 2  
   - If you do not know, proceed to question 2  

2. Does patient have the following symptoms?  
   - Polyphagia | Yes | No |
   - Polydipsia | Yes | No |
   - Polyuria | Yes | No |

   If two or more of the above symptoms are present, perform a blood glucose test.

#### Questionnaire to Determine Probable Angina, Heart Attack, Stroke, or Transient Ischemic Attack

1. Have you had any pain or discomfort or any pressure or heaviness in your chest?  
   - Yes/Oo  
   - No/Hindi  
   - If NO, go to question 8  

2. Do you get the pain in the center of the chest or left chest or left arm?  
   - Ang sakit ba ay nasagot sa iba o ng di'ndi sa kaw ing braso?  
     - Yes/Oo  
     - No/Hindi  
     - If NO, go to question 8  

3. Do you get it when you walk uphill or hurry?  
   - Nara arma dama man ba ito kung ikaw ay nag aval kay mga ngad talong o ka na sa ilim ng ibang dis?  
     - Yes/Oo  
     - No/Hindi  

4. Do you slow down if you get the pain while walking?  
   - Tumigil ba ka sa paglakad capag tumatag ang iyong dibba?  
     - Yes/Oo  
     - No/Hindi  

5. Does the pain go away if you stand still or if you take a tablet under the tongue?  
   - Nawawala ba ang sakit kapag ikaw ay direktong o ka ng gamot ng laban?  
     - Yes/Oo  
     - No/Hindi  

6. Does the pain go away in less than 10 minutes?  
   - Yes/Oo  
   - No/Hindi  

7. Have you ever had a severe chest pain across the front of your chest lasting for half an hour or more?  
   - Nawawala ba ang sakit kapag ikaw ay kumulog ng paglalakad ng kalagayan o ka ng higit pa?  
     - Yes/Oo  
     - No/Hindi  

   If the answer to Questions 3 or 4 or 5 or 6 or 7 is YES, patient may have angina or heart attack and needs to see the doctor.

#### Stroke and TIA

1. Have you ever had any of the following: difficulty in talking, weakness of arm and/or leg on one side of the body or numbness on one side of the body?  
   - Yes/Oo  
   - No/Hindi  

   If the answer to Question 8 is YES, the patient may have had a TIA or stroke and needs to see the doctor.