

FACILITATOR GUIDE



# Program Planning Case Study: Prevention of Hypertension

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# Table of Contents

<b>PROGRAM PLANNING CASE STUDY: PREVENTION OF HYPERTENSION .....</b>	<b>3</b>
<b>OVERVIEW.....</b>	<b>3</b>
<b>INSTRUCTIONS .....</b>	<b>3</b>
<b>PART 1: ASSESS AND ANALYZE PUBLIC HEALTH NEEDS .....</b>	<b>3</b>
<b>PART 2: PLAN A PROGRAM.....</b>	<b>6</b>

# Program Planning Case Study: Prevention of Hypertension

## OVERVIEW

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In this case study, participants will assess and analyze public health needs, and develop a program to address the high-priority health issue identified by their analysis. The total amount of work time for this case study is estimated at 3 hours. The time allotment per section varies, and is listed at the beginning of each step. Please allow additional time for discussion of each step.

Please keep in mind that certain components of this assessment may need to be modified for specific country needs.

## INSTRUCTIONS

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Instruct participants to read the background information below, and to complete the case study one section at a time in small groups. Then, take time to review the answers at the end of each section:

- Part 1, Assess and Analyze Public Health Needs – 40 minutes
- Part 2, Plan a Program – 90 minutes.

## PART 1: ASSESS AND ANALYZE PUBLIC HEALTH NEEDS

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Estimated Time: 40 minutes

### Background Information

In speaking with health officials and other stakeholders in the capital city of Country X, you learn the following about the problem of hypertension:

- Hypertension is a risk factor for many other noncommunicable diseases (NCDs), including kidney disease, heart disease, stroke, and diabetes.
- In Country X, 45% of adults had hypertension in 2008; globally, 26.4% of the adult population has hypertension, and 30% are estimated to have hypertension by 2025.<sup>1</sup>
- Hypertension has also been listed as a leading cause of death in Country X, (responsible for 20% of all deaths in 2008).
- Eating a healthy diet that is low in salt and high in fruits and vegetables can help reduce the risk of hypertension. Having a family history of hypertension also increases your risk.

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<sup>1</sup> Kearney PM, Whelton M, Reynolds K, Muntner P, Whelton PK, and He J. (2005) "Global Burden of Hypertension: Analysis of Worldwide Data". *Lancet*. 365 (9455):217-23.

- Smoking has also been linked to the onset of hypertension. In 2008, 1 in 4 people in country X smoke.
- Hypertension frequently has no symptoms; many people are unaware that they have hypertension or are at risk for developing it.
- There is a lack of current screening requirements for hypertension in primary care clinics

There is limited access to nutrition support and education at primary care clinics, public institutions and work places.

## Case Study Worksheet #1

Complete the questions below. *(Please note that answers are provided in italics.)*

### 1. Summarize the health issue based on the health data.

*In Country X, hypertension affects 45% of adults, higher than the global prevalence. Hypertension is known to lead to additional noncommunicable diseases, such as heart disease, stroke, diabetes, and kidney disease.*

### 2. Summarize the health issue based on information from the community and stakeholders.

*While there are many risk factors for hypertension, the majority are modifiable, such as smoking, poor diets (high in salt/sodium and low in fruits and vegetables, being overweight or obese, and being physically inactive). Non-modifiable risk factors include gender, race/ethnicity, age, and family history of hypertension. Stakeholders believe that preventing hypertension among residents and increasing the support for patients with hypertension will have the greatest impact.*

### 3. Identify risk factors and if necessary, rank by their importance and the potential change that you can make on them.

1. **Poor diet** – more important; more changeable because of the support for self-efficiency among patients and in policies.
2. **Physical inactivity** – more important; more changeable because small changes in exercise habits are known to have a large impact on the prevalence of hypertension.
3. **Overweight / obesity** – more important; more changeable; behavior changes can impact prevalence of many NCDs.
4. **Smoking** – less important due to lower participation rates; more changeable because of a growing support to reduce smoking and second hand smoke in communities.
5. **Family history of HTN, gender race, age, and other individual attributes** – varying importance; not changeable.

	<b>More Important</b>	<b>Less Important</b>
<b>More Changeable</b>	<ul style="list-style-type: none"> <li>• <i>Poor diet</i></li> <li>• <i>Physical inactivity</i></li> <li>• <i>Overweight / obesity</i></li> </ul>	<ul style="list-style-type: none"> <li>• <i>Smoking</i></li> </ul>
<b>Less Changeable</b>	<ul style="list-style-type: none"> <li>• <i>Family history of Hypertension</i></li> </ul>	<ul style="list-style-type: none"> <li>• <i>Gender</i></li> <li>• <i>Race</i></li> <li>• <i>Age</i></li> </ul>

**4. Identify subgroups at risk and if necessary, rank by using factors such as impact, influence and accessibility.**

1. *Youth (5-17 years) – Forming good diet and exercise habits at a young age can help shape future health; can reach through schools*
2. *Adults (18+ years) – can access this population through worksites and community gathering places*

**5. Write a health problem statement (include the what, who, where, when, and how much).**

<b>When</b>	<b>How much</b>	<b>Who</b>	<b>Where</b>	<b>What</b>
<i>As of 2008,</i>	<i>45% of</i>	<i>Adults</i>	<i>in Country X</i>	<i>have hypertension.</i>
<i>As of 2008,</i>	<i>20% of</i>	<i>Deaths</i>	<i>in Country X</i>	<i>are attributable to hypertension.</i>

**PART 2: PLAN A PROGRAM**

Estimated Time: 90 minutes

**Background Information**

The WHO created the Global NCD Action Plan in 2012<sup>2</sup> to help countries address the rising social and monetary costs of noncommunicable diseases. The Global NCD Action Plan builds upon the existing WHO strategies for reducing tobacco and alcohol usage, unhealthy diets, and physical inactivity. Previous to the Global NCD Action Plan, the WHO also published an Action Plan for a Global Strategy on diet, physical activity, and health in 2004.<sup>3</sup>

In your research of currently existing programs to prevent and treat hypertension, you find several frameworks within the WHO reports, as described on the following page. In addition, you research evidence-based interventions globally and found evidence that supports:

- Behavioral counseling in primary care clinics to promote a healthy diet in adults who have an increased risk for cardiovascular disease
- Use of mobile technology for controlling NCDs (e.g., text message reminders for cancer screening)

**Table 1: WHO Recommendations and Components and Related Examples**

<b>WHO Recommendations and Components</b>	<b>Example Progress in Countries in the Same Region as Country X</b>
Strengthen advocacy and raise the priority of NCDs (including hypertension)	<ul style="list-style-type: none"> <li>• Improved the infrastructure for screening and monitoring the prevalence of hypertension and cardiovascular diseases.</li> </ul>
Promoting healthy diets	<ul style="list-style-type: none"> <li>• Developed sodium reduction targets to help guide food manufacturers to gradually reduce the salt levels in food.</li> <li>• Developed policy measures directed at retailers to improve access and affordability of healthier food products.</li> <li>• Developed healthy food policy guidelines for public</li> </ul>

<sup>2</sup> WHO. *Development of an updated Action Plan for the Global Strategy for the Prevention and Control of Noncommunicable Diseases covering the period 2013 to 2020*. World Health Organization, WHO Press, Geneva, Switzerland, 2012. Accessed March 27, 2013. Available at: [http://www.who.int/nmh/events/2012/action\\_plan\\_20120726.pdf](http://www.who.int/nmh/events/2012/action_plan_20120726.pdf).

<sup>3</sup> WHO. *World Health Organization, Global Strategy on Diet, Physical Activity, and Health, 2004*. World Health Organization, WHO Press, Geneva, Switzerland. Accessed March 27, 2013. Available at: <http://www.who.int/dietphysicalactivity/publications/wha/en/index.html>.

WHO Recommendations and Components	Example Progress in Countries in the Same Region as Country X
	institutions and workplaces and developed measures to track implementation.
Conduct nutrition education	<ul style="list-style-type: none"> <li>• Dietary counseling at worksites for patients diagnosed with chronic disease</li> </ul>
Promote physical activity in daily living	<ul style="list-style-type: none"> <li>• Adopted and implemented national or local guidelines on physical activity for health.</li> <li>• Promoted physical activity programs at public institutions and worksites (e.g., bike to work).</li> </ul>

## Case Study Worksheet #2

Complete the questions below. *(Please note that answers are provided in italics.)*

### 1. Create a program goal.

- *Decrease the prevalence of hypertension*
- *Decrease the mortality rate due to hypertension*

### 2. Develop long-term objective(s) to achieve the program goal.

- *By 2020, decrease the prevalence of hypertension by 25% among adults aged 18 and older*
- *By 2020, reduce consumption of sodium in the population aged 2 years and older by 30% (2g/day)*

### 3. Identify and rank contributing factors.

	More Important	Less Important
<b>More Changeable</b>	<ul style="list-style-type: none"> <li>• <i>Lack of current screening requirements for hypertension in primary care clinics</i></li> <li>• <i>Lack of knowledge about the risks of hypertension</i></li> <li>• <i>Limited access to nutrition support and education</i></li> </ul>	
<b>Less Changeable</b>	<ul style="list-style-type: none"> <li>• <i>Access to safe areas for physical activity</i></li> </ul>	

#### 4. Develop an intervention.

- a. **Determine a health strategy or strategies (behavioral/educational, environmental and/or policy).**

*Behavioral/educational (e.g. behavioral counseling in primary care clinics)*

OR

*Policy (e.g. a policy that provides healthy food alternatives in public institutions and work places)*

- b. **Summarize existing programs (based on the background information on pages 4 and 5), focusing on your highest-priority contributing factors.**

- *Behavioral counseling in primary care clinics to promote a healthy diet in adults who have an increased risk for cardiovascular disease*
- *Use of mobile technology for controlling NCDs (e.g., text message reminders for cancer screening or high blood pressure)*
- *Promoted dietary counseling at worksites for patients diagnosed with chronic diseases*
- *Promoted diet and physical activity programs at public institutions and worksites*

- c. **Compare and critique interventions. (Use criteria such as culture, target audience, organizational capacity, program goals, objectives, and delivery methods). Describe your conclusions below.**

*The following is an example of comparing four of the above mentioned programs:*

<b>Criteria</b>	<b>Intervention:</b> <i>Behavioral counseling in primary care to promote healthy diet</i>	<b>Intervention:</b> <i>Text-messaging for cancer screening</i>	<b>Intervention:</b> <i>Dietary counseling at worksites for chronic disease patients</i>	<b>Intervention:</b> <i>Diet and Physical activity programs at public institutions and worksites</i>
<i>Target Audience</i>	<i>-: Only directed at those diagnosed with hypertension</i>	<i>+: High usage of mobile phones by adults</i>	<i>+: Ability to reach wide populations or specific high-risk groups</i>	<i>+: Ability to reach wide populations or specific high-risk groups</i>
<i>Program goals/objectives</i>	<i>+: Promotes healthful diets</i>	<i>+: Promotes cancer screening, and program can be</i>	<i>+: Promotes healthful diets</i>	<i>+: Promotes healthful diets and daily physical</i>

<b>Criteria</b>	<b>Intervention:</b> <i>Behavioral counseling in primary care to promote healthy diet</i>	<b>Intervention:</b> <i>Text-messaging for cancer screening</i>	<b>Intervention:</b> <i>Dietary counseling at worksites for chronic disease patients</i>	<b>Intervention:</b> <i>Diet and Physical activity programs at public institutions and worksites</i>
		<i>adapted to text messaging about hypertension screening</i>		<i>activities</i>
<i>Culture</i>	<i>Unknown whether behavioral counseling is culturally acceptable</i>	<i>+: Usage of mobile phones is widespread</i>	<i>Unknown whether dietary counseling is culturally acceptable</i>	<i>Unknown whether diet and physical activity programs are culturally acceptable</i>
<i>Cost</i>	<i>+: Initial limited investment of training health staff</i>	<i>+: Limited financial resources required, aside from training and staff time for setup</i>	<i>-: Initial investment in training may be significant</i>	<i>+: Inexpensive to reach large audience</i>
<i>Organizational Capacity</i>	<i>-: Need clinical expertise</i>	<i>+ Can build on capacity for already existing text messaging</i>	<i>-: Need clinical expertise</i>	<i>-: Requires training of staff</i>

**d. Adapt or create an intervention. (Describe the intervention you have selected, including the rationale.)**

*Examples based on two of the above mentioned interventions:*

- Text messaging program can be adapted for hypertension screening because given the target audience and culture of Country X, mobile phone usage is high. The cost of the intervention is reasonable and there should be the capacity to implement the program.*
- Implementing diet and physical activity programs at public institutions and worksites, such as nutrition education classes or a “bike to work program” will target adults and potentially be less expensive to implement.*

**5. Develop at least one medium-term and one short-term objective(s) that describe what the program will accomplish.**

*Example for the text messaging program:*

- *Medium-term objective: By the end of five years, the percentage of adults who are screened for hypertension will increase by 50%.*
- *Short-term objective: Within one year, text messaging for hypertension screening will be implemented in all major regions of Country X.*

*Example for the diet and physical activity programs:*

- *Medium-term objective: By the end of five years, 25% of Country X's workforce will be employed at a work site which supports worksite nutrition and physical activity.*
- *Short-term objective: By the end of three years, 10% of public institutions and worksites in Country X will implement diet and physical activity programs.*

**6. Develop an implementation plan.**

**a. Describe potential barriers for implementation and how to address them.**

- **Text Messaging Program:**
  - **Staff concerns about learning the text messaging technology:** collaborate with leaders from the successful community center program to develop an effective protocol, and to train staff involved with implementation.
  - **Limited resources:** provide data from the community center on the small amount of resources required, OR provide services at a lower intensity (fewer messages) or for a shorter duration.
- **Diet and Physical Activity Program**
  - **Lack of experience in diet and physical activity programs:** create partnerships with organizations that can assist with workplace diet and physical activity support and program implementation.
  - **Managers are concerned that there is no time to create a diet and physical activity program:** Provide data on the large impact of diet and physical activity on higher workplace productivity. Cite studies that illustrate the importance of saving money on insurance costs due to healthier workers.

**b. Develop a Work Plan (refer to attached worksheet; answers will vary).**

**c. Develop a Communication Plan (refer to attached worksheet; answers will vary).**

**7. Plan for evaluation: List how you should begin planning for evaluation while you are planning and designing your program.**

**Answers will vary; participants should consider:**

- *Do you have the resources to do an evaluation?*
- *What component of the program will you evaluate?*

- *What do you want to know about your program? For example, do you want to learn whether all the activities were implemented as planned?*
- *When will you evaluate the program? For example, will you evaluate the program one year after implementation, several years after implementation?*
- *What type of data will you need to address the evaluation questions?*
- *Do you have a system or tools for collecting the data? Where, how and when will you collect the data?*
- *Do you have a system or tools for organizing and interpreting the data?*

# Work Plan

**Long-term Objective(s):**

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**Medium-term Objective(s):**

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**Short-term Objective(s):**

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**Project Manager:** \_\_\_\_\_

**Today's Date:** \_\_\_\_\_

Task	Person Responsible	Resources	Time Estimate	Due Date	Date Completed

