

The Assessment of Health Promotion Measures

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Rationale of the study

The Thai Health Promotion Foundation was founded in 2001 with the aim to promote, develop and support activities and process that are related to health promotion. It receives funding from the excise tax on alcohol and tobacco. Since its foundation 10 years ago, the Thai Health Promotion Foundation has spent more than 10 billion baht so it has been questioned by many about its cost-effectiveness. In addition, measures of the the Thai Health Promotion Foundation incorporates multiple strategies with different people and organizations, so it is difficult to evaluate the outcome on the overall scale, leading to its criticism. Therefore, HITAP was commissioned by the Health Systems Research Institute to conduct the cost-effectiveness of the work done by the Thai Health Promotion Foundation and was allowed two years to do the evaluation.

From meetings with executives of the Thai Health Promotion Foundation, stakeholders and academics, it was concluded that the study would consist of two methods. The first method is the use the willingness-to-pay (WTP) approach or the contingent valuation method (CVM) to compare the cost of the program and the value the general Thai population give to the Thai Health Promotion Foundation. The second method is to conduct the cost-benefit analysis with the aims to set the

target and indicator of health promotion performance of the Thai Health Promotion Foundation. In this method, benefit of the health promotion will be converted into monetary term using the information derived from cost of illness studies..

From the literature review, no evidence or studies have been found that are related to economic evaluation of the health organization. Therefore, this study can be an example of the evaluation of a health organization from an economic perspective. However, even though the two methods used in this study are widely accepted and well-known among economists, the methodologies still contain the different strengths and weaknesses. As a result, this study can be considered a good opportunity to pave the way for further discussion and criticism in terms of methodology and this will be beneficial to the future evaluation of other health organizations.

Sub-Study 1: Development of Strategy to Set Targets and Indicators of Health Promotion performance of the Thai Health Promotion Foundation using the result from Cost of Illness Analysis

Executive Summary

The aim of this study is to develop the targets and indicators for assessing the health promotion performance of the Thai Health Promotion Foundation through the use of cost-benefit analysis using input from incidence-based, cost-of-illness analysis. These were conducted as a basis for evaluating the performance for both tobacco and alcohol consumption control plan. The costs that are included in the analysis are indirect costs, which were cost of productivity loss from premature death and reduced productivity due to absenteeism and presenteeism. The costs incurred are converted to the base year of 2010.

Tobacco consumption control Plan

The cost of illness analysis showed that smoking can cause massive economic loss. For a male smoker, lifetime indirect cost was estimated at roughly 158,000 baht, with the breakdown consisting of 96,000 baht for the cost of premature death and 62,000 baht for the cost of productivity loss. Additionally, smoking would lead to life year loss of 4.6 years in male. For a female smoker, the lifetime indirect cost was calculated to be approximately 85,000 baht, with the cost of premature death

amounting to 32,000 baht and the cost of productivity loss reaching 53,000 baht. In addition, smoking would lead to life year loss of 3.4 years in female.

In terms of costs savings from smoking cessation, it was found that the earlier they were able to quit, the more economic benefits the society will receive. The study showed that life year loss among male smokers who were able to stop smoking at the age of 30, 35 and 40 were 1.4 years, 1.7 years and 2 years, respectively. For female smokers, the life year loss among those smokers who were able to stop smoking at the age of 30, 35 and 40 were 0.6 years, 0.8 years and 1 year. From an economic point of view, if a single male smoker was able to quit smoking at the age of 30, 35 and 40, the amount saved would be equivalent to 71,000 baht, 55,000 baht and 42,000 baht, respectively. Similarly, if a single female smoker quit smoking at the age of 30, 35 and 40 approximately 40,000 baht, 31,000 baht and 23,000 baht would be saved, respectively.

The results of this study clearly show that measures used to prevent new smoker to become smoker and to increase the quitting rate at the early age will reduce significant economic loss. Therefore, measures or policies that help prevent or reduce the number of new smokers as well as increase the smoking cessation rate are extremely important. The study also highlighted that the the productivity loss due to reduced productivity contributed to a significant proportion of the total loss. As a result, agencies in both the public and private sectors should also give more priority to campaigns and should issue measures in order to reduce the aforementioned impact in the work place.

For the last 10 years (2001-2010), our cost analysis revealed that the average cost per year of the tobacco consumption control program plan by the Thai Health Promotion Foundation the program was about 143,730,000 baht.

Based on the analysis, at the breakeven point the following annual target should be reached:

- 1) 920 new smokers are prevented from being lifetime smoker (if calculated at the same declining rate of both genders). This is divided to 880 males and 40 females), or

- 2) 3,520 smokers aged 40 years old are able to quit smoking permanently (if calculated at the same declining rate of both genders). This is divided to 3,340 males and 180 females), or
- 3) 2,690 smokers aged 35 years old are able to quit smoking permanently (if calculated at the same declining rate of both genders). This is divided to 2,560 males and 130 females), or
- 4) 2,060 smokers aged 30 years old are able to quit smoking permanently (if calculated at the same declining rate of both genders). This is divided to 1,960 males and 100 females).

Alcohol consumption control Plan

The cost of illness analysis shows that consumption of alcohol causes enormous economic loss. An assessment of the cost of one drinker based on gender and level of consumption showed that the lifetime indirect cost of one new responsible drinking male was equivalent to 19,000 baht (the cost of premature death was -18,000 baht and the cost of productivity loss was 37,000 baht). For one new hazardous and harmful drinking male, the costs were estimated at 307,000 baht (the cost of premature death was 58,000 baht and the cost of productivity loss was 249,000 baht) and 360,000 baht (the cost of premature death was 89,000 baht and the cost of productivity loss was 271,000 baht), respectively.

In the case of female, the cost of one new responsible drinker was equivalent to 28,000 baht (the cost of premature death was -4,000 baht and the cost of productivity loss was 37,000 baht). For one new hazardous and harmful female drinker, the cost was equal to 202,000 baht (the cost of premature death was 14,000 baht and the cost of productivity loss was 188,000 baht), and 240,000 baht (the cost of premature death was 21,000 baht and the cost of productivity loss was 219,000 baht), respectively.

It was also found that life time loss among hazardous and harmful drinking males were about 2.6 years and 3.86 years, respectively. In the same case for female, life time loss among hazardous and harmful drinker was about 1.47 years and 2.2 years, respectively.

In terms of the cost savings from making drinkers quit, it was found that the faster they were able to quit, the more economic benefits society would be received. The

cost savings were also varied by gender and consumption amount. The details are as follows:

The costs saved in the event that one responsible drinking male is able to quit drinking at the age of 25 years, 35 years and 45 years was found to be 17,000 baht, 7,400 baht and 600 baht, respectively. The costs saved in the event that one responsible drinking female is able to quit drinking at the age of 30 years, 35 years and 45 years was found to be 25,000 baht, 13,000 baht and 4,000 baht, respectively.

The costs saved in the event that one hazardous drinking male is able to quit drinking at the age of 25 years, 35 years and 45 years was found to be 275,000 baht, 132,400 baht and 13,500 baht, respectively. The costs saved in the event that one hazardous drinking female is able to quit drinking at the age of 30 years, 35 years and 45 years was found to be 178,000 baht, 80,000 baht and 3,700 baht, respectively.

The costs saved in the event that one harmful drinking male is able to quit drinking at the age of 25 years, 35 years and 45 years was found to be 288,000 baht, 121,000 baht and 20,000 baht, respectively. The costs saved in the event that one harmful drinking female is able to quit drinking at the age of 30 years, 35 years and 45 years was found to be 184,000 baht, 69,000 baht and 5,600 baht, respectively.

The results of this study clearly show that substantial economic loss can be prevented from preventing new drinker as well as from making drinker in every category to refrain from alcohol, especially in hazardous and harmful drinking. The study also highlighted the significant impact of the reduced productivity on the total indirect cost. This was quite evident, even in those who were responsible drinkers. Therefore, agencies in both the public and private sectors should give priority to campaigns and implement measures to reduce such impact in order to improve efficiency.

For the last 10 years (2001-2010), our cost analysis revealed that the average cost per year of the alcohol consumption control program by the Thai Health Promotion Foundation the program was about 250,550,000 baht.

Based on the analysis, at the breakeven point the following annual target should be reached:

- 1) 11,278 new drinkers are prevented from being lifetime responsible drinkers (if calculated at the same declining rate of both genders). This is divided to 7,325 males and 3,953 females, or
- 2) 856 new drinkers are prevented from being hazardous drinkers (if calculated at the same declining rate of both genders). This is divided to 738 males and 118 females, or
- 3) 718 new drinkers are prevented from being harmful drinkers (if calculated at the same declining rate of both genders). This is divided to 652 males and 66 females, or
- 4) 142,808 responsible drinkers are able to quit permanently after having been drinking for more than 20 years (if calculated at the same declining rate of both genders). This is divided to 89,605 males and 53,743 females, or
- 5) 20,885 hazardous drinkers are able to quit after having been drinking for more than 20 years (if calculated at the same declining rate of both genders). This is divided to 17,713 males and 3,172 females, or
- 6) There are 13,457 harmful drinkers are able to quit after having been drinking for more than 20 years (if calculated at the same declining rate of both genders). This is divided to 12,081 males and 1,376 females, or
- 7) 26,492 responsible drinkers are able to quit after having been drinking for 10-19 years (if calculated at the same declining rate of both genders). This is divided to 16,867 males and 9,625 females, or
- 8) 2,009 hazardous drinkers are able to quit after having been drinking for 10-19 years (if calculated at the same declining rate of both genders). This is divided to 1,718 males and 291 females, or
- 9) 2,162 harmful drinkers are able to quit after having been drinking for 10-19 years (if calculated at the same declining rate of both genders). This is divided to 1,952 males and 210 females, or
- 10) 12,497 responsible drinkers are able quit after having been drinking for less than 9 years (if calculated at the same declining rate of both genders). This is divided to 7,783 males and 4,714 females, or

- 11) There are 963 hazardous drinkers are able to quit after having been drinking for less than 9 years (if calculated at the same declining rate of both genders). This is divided to 816 males and 147 females, or
- 12) There are 905 harmful drinkers are able to quit after having been drinking for less than 9 (if calculated at the same declining rate of both genders). This is divided to 812 males and 93 females.

In setting the targeted goals, it was not limited to just the aforementioned results but can also potentially incorporate the overall targets for various activities together. An example of this is prevention of new drinkers/smokers together with helping drinkers/smokers at various ages quit. However, in assessing the cost and outcome in this regard, the outcome only covered the cost of productivity loss but excluded medical costs, which is minimal when compared to indirect costs. These indirect costs do not take intangible costs such as suffering and sorrow into account, which could not be assessed using the current research methodology. Additionally, by using cost of illness method, the results of the analysis did not take into account several potential outcomes of the Thai Health Foundation, i.e. creation of knowledge and awareness in society, and creation of health promotion networks. Hence, the value of the estimated outcome may be lower in reality. Moreover, the method used in this assessment may not be appropriate for some plans of the Thai Health Foundation for which effectiveness of the operations is not related to the cost of illness.

However, this study is helpful in determining a goal and target to be achieved by the Thai Health Promotion Foundation, and all projects supported by it to be more concrete. Therefore, the Thai Health Promotion Foundation should conduct a study to collect all data about the outcome of implementing plans, both in terms of the number of new drinkers and smokers and those that can quit their habits as a result of the Thai Health Promotion Foundation's actions.

Policy Recommendations

- 1) The Thai Health Promotion Foundation and all of its networks can present empirical data in their campaigns in order to prevent new drinkers and smokers in society. The campaigns can also be used to help encourage current drinkers and smokers to quit more quickly.

2) Develop more concrete targets and performance indicators in terms of the number of new drinkers/smokers that can be prevented from drinking/smoking and the number of drinkers/smokers who are able to quit as a result of the operations of the Thai Health Promotion Foundation and all associated networks.