

## **THE IMPLEMENTATION CONDITIONS OF TUBERCULOSIS PREVENTION AND CONTROL OF LOCAL ADMINISTRATIVE ORGANIZATIONS IN NORTHEAST THAILAND.**

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### **ABSTRACT**

This cross-sectional survey study aimed to investigate the implementation conditions of tuberculosis prevention and control of local administrative organizations participating in the sub-district health fund in the Public Health Regions 10 and 12, Northeast Thailand. The participants were selected from 188 members of local administrative organizations in the sub-district health fund. Data were collected between December 2009 and January 2010 by using a questionnaire, and were analyzed by using descriptive statistics of frequency and percentage. Qualitative data were analyzed by categorizing contents into groups.

The results revealed that 75 % of respondents were from sub-district administrative organizations and 22 % were from municipal district. The majorities of respondents were from members of committees and of policy and plan analysis officers in the amount of 56.9% and 36.7 %, respectively. It was shown that only 24 % of the respondents ever had attended a meeting related to tuberculosis, and 68.1 % of them were needed for training in tuberculosis prevention and control program, but only 18.6 % (35/188) of the respondents had a plan/project to participate in tuberculosis prevention and control program, which focused on proactive working in community, training, meeting, and observe activities. Once the plan was evaluated, the sub-district health fund committees mostly performed it once every three months. It was the post-implementation evaluation using followed-up method.

This study reflected that public health organizations were required to pay more attention to local administrative organizations in order to make tuberculosis prevention and control program more effective. The promotion of tuberculosis patients' information transmission to each area helped local administrative organizations to make use of that information for problem analysis before making a plan/project.

**Key word:** Tuberculosis prevention and control program, local administrative organizations.

## INTRODUCTION

Thailand has been put into practice based on the concept of power decentralization to local government organizations. Many organizations have been established as local administration authorities by the mean of self-administration, so that several opportunities were provided to the communities, which taking part in creating awareness of ownership of projects and activities. Furthermore, it influences residents in the area to participate in solving their own problems. These concepts result in an establishment of a local administration organization, according to the Act of District Assembly and District Administrative Organization of the year 1994. Moreover, the act allows authorities to determine plans and procedures of power decentralization to local administration organizations in 1998, which is consisted of five goals. These goals include transferring duties of government's public service to local administrative organizations, specifying taxes and revenues and other incomes to be allocated to local administrative organizations, allocating annual expense budgets related to public service in public administrative organization areas according to government's allocation of grant-in-aid meeting the needs, setting government officer transfer system corresponding to duties, and improving related law and rules in order to be corresponding to budget transfer, man power, site, and equipment in order to enhance rapid administration of public administrative organizations.

The Ministry of Public Health is an organization that should transfer duties of health care, health promotion, disease prevention and control, and rehabilitation to local administrative organizations as a host in implementation. The new organization allocating health budgets is the National Health Security Office, and the budget allocation is from the promotion and prevention budgets. These budgets can be divided into four parts including national program, area base, express demand, and community base (National Health Security Office, 2009)

The promotion and prevention community budget provides some changes in roles and work directions of central and regional offices to the procedure in using the plan as a tool for implementing

integration under the participation strategy of locality and public sectors. In addition, operating units in the area learns how to plan their own health promotion and disease prevention and control. The implementation is integrated the concept of "thinking and doing together" in every degree, and health promotion and disease prevention and control committees are stakeholders at the provincial level. Every local administrative organization participating in health fund will be given the budget support by the National Health Security Office in the amount of 37.50 baht per resident, and this local administrative organizations should be willing to participate in donating the fund, and the fund administration committee should include the Chief of sub-district administrative organization as president of the fund, a deputy of sub-district administrative organization, public health officers, representatives from villages, and representatives from village health volunteer and other groups.

The 6<sup>th</sup> Region of the Office of Disease Prevention and Control located in Khon Kaen recognizes the importance of the implementation of local administrative organizations, especially those who participate in the sub-district health fund, because these organizations create the way in making plan/project under the concept of "thinking and doing together". This concept was considered to be the plan/project emerged from collaboration in thinking and doing in the area, and it highly responds to the problems in the area at present. Consequently, this is the background and rationale of this study. The 6<sup>th</sup> Region of the Office of Disease Prevention and Control located in Khon Kaen realizes the importance in making this plan/project. Thailand has high rate of illness of tuberculosis. Thailand has a population of approximately 64 million, which ranks 18<sup>th</sup> in the list of 22 high TB burden countries (Bureau of Tuberculosis, Department of Disease Control, 2008). Thus this study aims to investigate the implementation of tuberculosis prevention and control of the local administrative organizations participating in the sub-district health fund in the Public Health Regions 10 and 12. In addition, tuberculosis prevention and control is the emergent policy of the Ministry of

Public Health. This study expects to promote more effective implementation of tuberculosis prevention and control of local administrative organizations, as well as other diseases.

## MATERIALS AND METHODS

A cross-sectional survey was used to collect both quantitative and qualitative data as described by Creswell (2003). All local administrative organizations that participated in the study were located in the sub-district health fund in the areas, which were fallen under the responsibility of the 6<sup>th</sup> Region of the Office of Disease Prevention and Control in Khon Kaen, Thailand. The sample size was estimated using estimate proportion, which was described by Levy and Lemeshow (2008), and subsequently increased to 188 organizations to include the 7<sup>th</sup> and 8<sup>th</sup> Regions of the National Health Security Office that located in Khon Kaen and Udon Thani provinces, respectively. These two regions covered eight provinces, i.e., Khon Kaen, Maha Sarakham, Roi Et, Kalasin, Udon Thani, Nong Bua Lam Phu, Nong Khai, and Loei.

The constructed research instrument was self-administration questionnaires consisted of three parts. The first part was dealing with general information, while the second part was dealing with working conditions information that consisted of analysis conditions and tuberculosis control, and prevention operation conditions. The third part was dealing with the collection of qualitative data related to opinions and suggestions. All questionnaires were modified from those described by Lazenbatt (2002) and Biklen and Casella (2007). Results of quantitative data analysis were indicated by descriptive statistics including frequency and percentage, while those of qualitative data analysis were indicated by categorizing contents into groups, and content analysis followed the methods described by Stufflebeam and Shinkfield (2007).

## RESULTS

### Basic information

Results of analysis of the implementation conditions of tuberculosis prevention and control of local administrative organizations participating in the

sub-district health fund in the Public Health Regions 10 and 12 showed that 75 % were sub-district administrative organizations, 22 % were municipal district. For the respondents 36.7 % were policy and plan analysis officers, 56.9 % were committees, 24.5 % of the respondents had ever attended meeting about tuberculosis, and 68.1 % of the respondents needed training about tuberculosis prevention and control. Results are summarized and shown in Table 1.

**Table 1.** Number and percentage of characteristics of local administrative organizations participating in the sub-district health fund (n = 188).

Characteristics	Number	%
Types of local administrative organizations		
City municipality	1	0.5
Town municipality	4	2.1
Sub-district municipality	42	22.3
Sub-district administrative organizations	141	75.0
Positions in organizations		
Mayor	10	5.3
Deputy	31	16.5
Public health technical officer	57	30.3
Analysis officer	69	36.7
Others	21	11.2
Positions in health fund		
President of health fund	11	5.9
Secretary	70	37.2
Committee	107	56.9
To have attended meeting related to tuberculosis of Sub-district health fund		
Yes	46	24.5
No	87	46.3
Unidentified	55	29.2
Needs for training related to tuberculosis prevention and control of local administrative organizations participating in health fund		
Needed	128	68.1
Unneeded	60	31.9

### Information concerning overall disease prevention and control operation

Results of the analysis of the sequential magnitude of the problem of disease revealed that diabetes was a disease that local administrative organizations considered the most important disease (64.4 %), followed by dengue hemorrhagic fever (16.4 %), hypertension (8.5 %), heart and vascular disease (1.6 %), respectively. However, tuberculosis was considered to be the least important with only 1.1 %. Results of the analysis of the implementation conditions of problem, and disease prevention and control are summarized in Table 2.

**Table 2.** Number and percentage of the implementation conditions of disease prevention and control of local administrative organizations participating in the sub-district health fund (n = 188).

The order of importance of diseases	Number	%
The order of the important of the problem		
Diabetes	121	64.4
Dengue hemorrhagic fever	31	16.4
Hypertension	16	8.5
Heart and vascular disease	3	1.6
Food poisoning	3	1.6
AIDS	3	1.6
Tuberculosis	2	1.1
Influenza	2	1.1
Others	7	3.7

### The plan for implementing the prevention and control program of selected diseases

The decision making for implementing the prevention and control program for the selected diseases was made according to the magnitude of the importance of diseases listed in the returned questionnaires. The sequential ranks of the magnitude of the importance of those five selected diseases, which had been considered by members of local administrative organizations, were dengue hemorrhagic fever (38.8 %), diabetes (35.6 %), hypertension (6.9 %), influenza (3.7 %), and AIDS (3.2 %), respectively. Tuberculosis was considered

to be the least important disease because only 2.7 % was weighted from the result of analysis. The allocation of the budgets was done in corresponding to the information of the implementation plan for the prevention and control program for the selected diseases. The order of magnitude of selected diseases considered by members of local administrative organizations are summarized in Table 3.

**Table 3.** The order of magnitude of selected diseases and the frequency of decision considered by members of local administrative organizations who participating in the sub-district health fund (n = 188).

Diseases	Frequency of responses		Frequency of decision	
	Number	%	Number	%
Dengue hemorrhagic fever	73	38.8	72	38.3
Diabetes	67	35.6	42	22.3
Hypertension	13	6.9	18	9.6
Influenza	7	3.7	13	6.9
AIDS	6	3.2	6	3.2
Tuberculosis	3	2.7	4	2.1
Heart and vascular disease	2	1.1	3	1.6
Food poisoning	1	0.5	2	1.1
Others	16	8.5	28	14.9

### The conditions of bringing the plan into practice and evaluation

The roadmap was considered of how to bring the plan into practice and evaluate the plan for disease prevention and control program based on the sequential magnitude of the importance of selected diseases. The roadmap involved meeting and training (83.0 %), rewards and motivation (47.9 %), and operational meeting (30.3 %). The project plan evaluation was mostly taken the responsibility by public health officers in the area (47.9 %). The methods in evaluating were the post-implementation evaluation (70.7 %), and the annual work summary (62.7 %). The frequency of the evaluation was once a year (71.2 %). The details are summarized in Table 4.

**Table 4.** Number and percentage of the conditions of bringing the plan into practice and evaluation of local administrative organization participating in the sub-district health fund (n = 188).

Bringing the plan into practice	Number	%
Conditions of bringing the plan into practice		
Meeting/training	156	83.0
Observing activities	36	19.1
Rewards/motivations in working	90	47.9
Operational meeting	57	30.3
Project plan evaluation		
Persons responsible for project plan evaluation		
President of sub-district health fund	20	10.6
Secretary of sub-district health fund	17	9.0
Committee of sub-district health fund	31	16.5
Community	30	16.0
Others, such as public health officers	90	47.9
Types of evaluation		
Pre-operation evaluation	30	16.0
Evaluation during operation	25	13.3
Post-operation evaluation	133	70.7
Methods of evaluation		
Monthly conference	31	16.5
Work followed up	33	17.6
Tour meeting	6	3.2
Annual work summary	118	62.7
Frequency of project plan evaluation for health fund		
Monthly	8	4.3
Once every three months	16	8.5
Once half a year	30	16.0
Once a year	134	71.2

#### Information of the implementation of disease prevention and control

#### The problem analysis of implementation conditions and tuberculosis prevention and control program

Results of interviewing analysis of those responsible persons in organizations for the implementation of tuberculosis prevention and control of local administrative organizations participating in the health fund showed that the local administrative organizations were analyzed and aware of problems in prevention and control of tuberculosis, but they considered that tuberculosis was not an urgent problem that needed to be solved because the administration committees thought that it was not

very important, and that it overlapped with the Ministry of Public Health's duty, and that they lacked staff expert in tuberculosis prevention and control. Most of the budgets were spent for sub-district administrative organizations in controlling dengue hemorrhagic fever. Therefore, the authorities of local administrative organizations do not have any plan/project for tuberculosis prevention and control. The responsible persons in organizations responded that they did not make any plan/project for tuberculosis prevention yet because they did not understand how to implement the plan/project, and that they did not know whether to establish rules for the budgets in order to be an expense for controlling or

for campaigning. There was no specification for the needs to deal with tuberculosis in the regulation so that the plan had not been made. Moreover, there were no information and cooperation of operating, skills, and knowledge about tuberculosis prevention from health centers or community volunteers. Thus, the tuberculosis project had not been pushed forward in order to ask for some support.

### The plan making conditions of tuberculosis prevention and control

The decision of making the plan for the tuberculosis prevention and control program was supported by only 18.6 % of authorities of local administrative organizations who participated in the health fund. The flowchart of the project plan was consisted of DOT making (100 %), projecting (82.9 %), seeking for a new patient (77.1 %), and giving knowledge (62.9 %).

### The conditions of bringing the plan for tuberculosis prevention and control into practice

The sequence of practice to bring the plan for tuberculosis prevention and control program into practice was consisted of a proactive working in community (74.3 %), training (37.1 %), meeting (34.3 %), and observing activities (14.3 %).

### The plan evaluation conditions of tuberculosis prevention and control

An evaluation assessment for the tuberculosis prevention and control program was conducted and found that most of the responsible persons of the plan/project evaluation (31.4 %) were supported by the sub-district health fund committees. The method used in evaluating was post-implementation evaluation (48.6 %), and the follow-up evaluation in the area (48.6 %). The frequency of evaluation was once every three months (45.7). The details are summarized and shown in Table 5.

**Table 5.** Number and percentage of conditions of evaluation of local administrative organizations participating in the sub-district health fund that had a plan for tuberculosis prevention and control (n = 188).

Implementation of tuberculosis prevention and control	Number	%
<b>Project plan evaluation</b>		
Persons responsible for project plan evaluation		
President of sub-district health fund	3	8.6
Secretary of sub-district health fund	4	11.4
Committee of sub-district health fund	11	31.4
Community	10	28.6
Others such as public health officers	7	20.0
Types of evaluation		
Pre-implementation evaluation	8	22.8
Evaluation during the implementation	10	28.6
Post-implementation evaluation	17	48.6
Methods of evaluation		
Monthly conference	10	28.6
Work followed up	17	48.6
Tour meeting	3	8.6
Others, such as public health officers	6	17.2
The frequency of plan/project evaluation for the health fund		
Monthly	8	22.8
Once every three months	16	45.7
Once half a year	4	11.4
Once a year	7	20.1

## DISCUSSION

This study revealed that the implementation of tuberculosis prevention and control program of local administrative organizations' authorities who participated in the sub-district health fund in the Public Health Regions 10 and 12 was supported by members of organizations, which included 141 members of sub-district administrative organizations and of municipal districts in the proportion of 75% and 22 %, respectively. The respondents were consisted of policy and plan analysis officers and committees in the proportion of 36.7 % and 56.9 %, respectively. The need for attending the meeting related to tuberculosis, there were only 24.5 % of respondents that ever had attended the meeting before, whereas about 68.1 % of local administrative organizations' authorities who participated in the sub-district health fund requested for the participation in the training program that related to the tuberculosis prevention and control program.

Results of the problem analysis and implementation conditions of tuberculosis prevention and control program of local administrative organizations' authorities who participated in the health fund suggested that most of local administrative organizations' authorities had no plan/project for tuberculosis prevention and control, but only 18.6 % (35/188) of them had the plan/project for tuberculosis prevention and control. This was probably that most of local administrative organizations' authorities who participated in the health fund had not made any project plan for tuberculosis prevention, and they did not know how to implement tuberculosis prevention and control. Moreover, there were no information and cooperation about implementation, skills, and knowledge of tuberculosis prevention provided by health centers or community volunteers, and so the tuberculosis project was not pushed forward in order to ask for support, and most of the budgets were spent on dengue hemorrhagic fever control.

In order to bring the plan for tuberculosis prevention and control program into practice, the roadmap should be consisted of a proactive working in community (74.3 %), training (37.1 %), meeting

(34.3 %), and observing activities (14.3 %). The results were corresponded to the overall conditions of bringing plan into practice and disease prevention and control evaluation, which consisted of training (83.0 %), rewards and motivation (47.9 %), and operational meetings (30.3 %).

The assessment plan for evaluation of tuberculosis prevention and control program was supported by most of responsible persons of the plan/project evaluation in the sub-district health fund committees (31.4 %). The method used in evaluating was post-implementation evaluation (48.6 %) and follow-up evaluation in the area (48.6 %). The frequency of the evaluation was once every three months (45.7 %). However, the overall project plan evaluation for prevention and control program was considered to be implemented by public health officers in the area (47.9 %). The method used in evaluating post-implementation evaluation (70.7 %) and annual work summary (62.7 %). The frequency of the evaluation was once a year (71.2%).

According to the results, related public health organizations should arrange training or courses for local administrative organizations' staff and for the president of sub-district health fund, especially the organizations that participated in the sub-district health fund. Public health organizations should have a transfer system of tuberculosis patient information in each area to consider the information together with the problem analysis before setting a project plan of the local administrative organizations participating in sub-district health fund. Public health officers should improve their skills and knowledge proactive and reactive working for tuberculosis prevention and control, especially front public health officers, including sub-district public health officers and public health volunteers.

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