

## The Development of Local Administrative Organization (LAO) Network on Disease Prevention and Control from Needs Assessment

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**Abstract**—This research aims to develop a model of disease prevention and control of LAO's network and to assess and set the priority of the needs for development of LAO's network. The study areas were in Sri Sa Ket, Amnat Charoen, Nakhon Phanom, and Sakon Nakhon provinces. The research was designed by mixed methods of both qualitative and quantitative data collection. The target group on quantitative data consisted of 206 representatives of LAOs and another 60 representatives from 12 LAOs. The Priority Needs Index (PNI<sub>modified</sub>) was used for analyzing and setting the priority of needs on disease prevention and control. The Atlas ti. program was used for coding the qualitative data and then analyzing the main issues.

**Research Findings:** The first priority needs of disease prevention and control were on setting "the planning and evaluation of the project". On giving knowledge of disease prevention and control to people was under the heading of "needs of knowledge on occupational disease and environment". On the communication on disease prevention and control was under the heading of "the communication toward the public communication of the community". The model of LAO's network on disease prevention and control in the area of the Office of Disease Prevention and Control, Region 7<sup>th</sup> in Ubon Ratchathani province comprised three networks: skills development on planning and evaluating, knowledge development on disease prevention and control, and communication on disease prevention and control.

**Keyword:** Network/ Needs/ disease prevention and control / Local Administration Organization

### I. INTRODUCTION

Community capital is essential to support the prevention and control of disease. Community capital means the community strength that is useful to develop the community especially on the aspect of health. Therefore, the stability of a health network in the community is the major cause of success for disease prevention and control. However, only the community strength itself is not sufficient to build the learning process and sharing about health care and disease prevention and control. The learning, sharing, and cooperation on the knowledge of disease prevention and control are also essential to the effective outcome of suitable behavior that was widely spread in the community. Due to the difference of the context and needs of network development, the need of the network, member, and

associated organization is the most important data network to support the implementation of model development of LAO's network on the disease prevention and control.

### II. OBJECTIVES

A. To assess the needs of disease prevention and control for developing LAO's network on disease prevention and control.

B. To develop a LAO's network on disease prevention and control.

### III. METHOD

The study areas were 4 representative provinces from the area of responsibility of the Office of Disease Prevention and Control, Region 7, which included Sri Sa Ket, Amnat Charoen, Nakhon Phanom and Sakon Nakhon provinces. The first target group was 206 LAO's representatives, selected by the table of Krejcie, R. V., & Morgan, D.W. [1] and then proportional stratified sampling was used, depending on the number of LAOs in each province.

The second target group was 60 representatives from 12 LAOs of 4 provinces. This group took the role of investigating and prioritizing the areas in need of disease prevention and control. The criteria of selecting LAO representatives were based the LAO location: in the central, urban, and border areas of the provinces.

Data collection and tools were based on the form of needs assessment regarding the role of LAO on disease prevention and control and forms of group interviews of needs and expectation of 12 LAOs representatives.

There were three steps of needs assessment;

The first step: Pre-assessment/exploration, building the framework of assessment by research team.

The Second step: Assessment/Data gathering, collecting data from both target groups by using the form of needs assessment and using the interview guide by method of focus group interviews, then analyzing the needs by Modified Priority Needs Index (PNI<sub>modified</sub>) [2] and after that prioritizing the needs of prevention and control disease.

The third step: Model development/ Utilization, the grouping process technique was used to build the method of disease prevention and control that would correspond to the true needs.

#### IV. NEEDS OF DISEASE PREVENTION AND CONTROL

The contents of needs assessment on prevention and control disease were as follows:

A. *The Score of Priority needs index (PNI modified)*; the first priority of needs of disease prevention and control after having been investigated by the LAOs' representatives by brainstorming and discussing twice was divided in three aspects. The first, in the aspect of planning and project building, that is, the need of "planning and evaluating", the score of PNI<sub>modified</sub> was 0.36. The second, in the aspect of the knowledge of disease prevention and control, namely, the need of "the knowledge of occupational disease and environment", the score of PNI<sub>modified</sub> was 0.24. The finally, in the aspect of the communication on disease prevention and control, that is, the need of "the communication toward the public communication of the community", the score of PNI<sub>modified</sub> was 0.29.

B. *The needs of legislation on disease prevention and control of LAO, the score of PNI<sub>modified</sub> was 0.32.* The legislation on disease prevention and control found in use in the area were prevention and control on: 1) cause of annoyance from larvae of mosquitoes, 2) environment such as food safety and business annoyance and harm to health such as garbage, waste products, and dirty water in the community, 3) prohibition of catching frog tadpoles in the breeding season, and 4) supporting the banning of drinking alcohol at funerals..

C. *Needs of urgent health-problems solving in their communities:*

The major causes of health problems were chronic disease such as diabetes, high blood pressure, dengue fever, CA Liver/Opisthorchis viverrini (OV) in the liver, addictive substances, and toxins from agriculture found in agriculturists. All of these needed to be eradicated from communities.

#### V. THE PROCESS OF LAO'S NETWORK DEVELOPMENT ON DISEASE PREVENTION AND CONTROL

In this study the term network follows that of Narumon Nirathorn [3] which has four components. These are 1) group/organization, 2) interaction within the group that result in useful as well as non-useful messages, 3) have a collective ultimate goal, and 4) act independently. The interaction may end once the cooperative activity finishes. This term was used for the guide of network building. Two steps of the model development of LAO's network on disease prevention and control was first on needs assessment and then on steps of network building as follows:

A. *the priority of needs*; the first priority of LAO's role on disease prevention and control, was to investigate and be approved by the LAO's representatives. It was divided into three aspects. On planning was "ability in the evaluation of plan" and "planning method and evaluation". On knowledge for disease prevention and control was "knowledge of disease from occupational and environment" and on disease

prevention and control communication through "public communication in the village".

B. *Three LAO's network of disease prevention and control;*

A. *The network of skills development on planning and evaluating*; the goal of this network was to develop the knowledge, ability, understanding, and skills regarding the evaluation of project and plans. The activities included training on project and planning evaluation, and community hearings with regard to disease prevention and control. The needs were made up of disease prevention and control, hearing and sharing between networks, getting knowledge from outside networks, studying and observing activities from successful organizations, and operational meetings.

B. *The network of the knowledge development on the disease prevention and control*; the goal of this network was to give knowledge on occupational diseases, diabetes mellitus, hypertension and disease from hazardous substances, injury and guidelines for toxin prevention. The activities were setting up the community stage for sharing and hearing of needs and problems as well as studying and observing activities. The president of the sub-district organization was the chairman of the meeting committee in charge of soliciting needs and problems of the members which could later lead to helping them.

C. *The network of the communication on the disease prevention and control*; the goal of this network was to develop the quality of communication channels on disease prevention and control. The activities included developing the model of network by studying and observing activities of successful organizations and between networks, meeting, training and sharing information between sub-districts, and sharing and helping both the media and the experts. The guides for development of the media depended on the components of communication: the sender, the media, the communication channel, and the receiver.

C. *The six steps of network development;*

Step I: the rudiments of needs assessment;

-Survey of needs from representatives of 206 LAOs from sub-districts of 4 provinces.

-Group interviews of 12 groups of LAOs' representatives from the central, urban, and border areas of 4 provinces. These comprised presidents of organizations, members of organization, health volunteers, community leaders and the representatives of public health at the sub-district level.

-Analysis of needs and setting priority of needs of disease prevention and control.

Step II: Investigating the needs by stakeholders;

Investigation of needs by brainstorming and participation of 60 participants from 12 LAO were conducted. They had to participate in the group interview from step I. This method was used to assure the real needs of disease prevention and control in the communities.

Step III: Understanding of concept and meaning of needs; the participants perceived and understood the concept and

meaning of needs before investigating the needs since they were the researchers in the study area and participated in the process of investigation and network establishment.

Step IV: Issues of needs of disease prevention and control; three issues of needs were developed as follows:

1) The communication of the disease prevention and control

2) The knowledge development of the disease prevention and control

3) The skills development on planning and evaluating

Step V: Understanding the concept and meaning of network;

This step involved the process of understanding the concept and meaning of network by the researchers from sub-districts organization which was used for brainstorming to build the network according to the main issues of needs.

Step VI: Establishment of the network of disease prevention and control;

The guidelines of network as mentioned above which applying for model development particular for the fifth step was consisted of the goal, learning and sharing space, reciprocity, and communication between the networks. The six steps of this models development can applying for the other models development which was address to the participation method by stake holder in any aspects.

## VI. DISCUSSION

### *A. Needs assessment of the LAO's in aspect of disease prevention and control;*

This study was an assessment of needs along with the LAO's role which was the communal problem and solving by network form. This problem was wider and consists of the amount of minute problems and issues inside. It was the limitation of needs when discussion for setting the issues and activities of practice for solving problems. However, these several of issues and problems can be used for developing the policy and planning of disease prevention and control in the organization at both the provincial and regional levels.

### *B. LAO's network of disease prevention and control;*

The basic concept of disease prevention and control in this study was a network that was suitable for managing the integrated and communal problems on the health of the communities. The method in terms of network means cooperation, sharing, and building a relationship that leads to reciprocity and help among networks, as well as enhancing the efficiency of disease prevention and control. However, the limitation of LAO's network which developed from this study was its building from needs assessment both quantitative and qualitative data by the brainstorming and group discussion techniques. But there is a lack of investigation by scholarly experts and also experiments in this model in the real situation. Thus, this model should be developed continually by experiment in the real situation and then applied in other areas.

## VII. RECOMMENDATION

The Office of Disease Prevention and Control should cooperate with the Office of Provincial Public Health in order to build a plan for disease prevention and control associated with the three aspects of needs. The next research should be an operational research for building the learning process of the LAO's network of disease prevention and control. Furthermore, it should focus on the study of the existence and strength of the LAO's network of disease prevention and control.

## ACKNOWLEDGMENT

I wish to acknowledge with gratitude the most important people who made it possible for the successful completion of this research. First and foremost, I would like to thank the research team from the community, participants who investigated needs and developed the network. I would like to express my sincere thanks to the Bureau of KM from the Department of Disease Prevention and Control, MOPH, who launched this opportunity as well as the budget for the research team of the Office of Disease Prevention and Control Region 7<sup>th</sup> Ubon Ratchathani Province. All this made this research come true.

## REFERENCES

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## Step 1: Needs Assessment



Figure 1. Needs assesment with qualitative and quantitative method.

## Step 2: Investigation of Needs on Disease Prevention and Control



Figure 2. Brainstorming and participation to investigate needs on disease prevention and control.

## Step3: Develop the network of Disease prevention and control



Figure 3. Brainstorming and participation to develop the network of disease prevention and control.

## Send the research finding back to the community



Figure 4. Discussion while sending the research findings back to the representatives of the community.