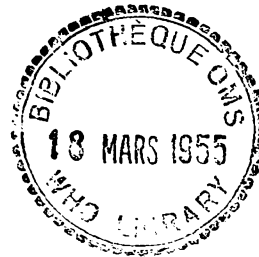


United Nations

Nations Unies

WORLD HEALTH
ORGANIZATION



ORGANISATION MONDIALE
DE LA SANTE

MALARIA CONFERENCE FOR THE WESTERN
PACIFIC AND SOUTH-EAST ASIA REGIONS

WHO/Mal/109 ✓
Taipei Conf./8
30 August 1954

Taipei, 15-27 November 1954

a 60561

ORIGINAL: ENGLISH

The Secretary of the Expert Committee on Malaria
has the honour to communicate hereunder
the following note:

BENEFITS OF DECENTRALIZED MALARIA CONTROL OPERATIONS
AND PROBLEMS ENCOUNTERED IN IMPLEMENTATION

by

K.C. Liang

Director of the Taiwan Provincial Malaria Research Institute

(Item 5 of the Provisional Agenda)

1. INTRODUCTION

During the First Asian Malaria Conference, discussions were held on operational organization for a national malaria control programme. It was the general opinion of the Conference that a strong central malaria control organization is necessary in a national anti-malaria campaign. This central organization is responsible for planning, training, research and standardization of equipment and formulations. In fact, most of the countries engaging in a nation-wide malaria control have such a central organization through which the national malaria control programme is planned and carried out. With regard to the actual control operations, however, it was the general preference to have a decentralized organization integrated in the general rural programme of the health units. This paper is intended to discuss the benefits of such decentralized operational organization, the problems encountered in implementation and how such problems have been overcome, based on the experiences obtained in the malaria control operations in Taiwan/the Republic of China.

2. BENEFITS

The greatest benefit realized in the decentralized organization in Taiwan is the development of a feeling in people's minds that the malaria control programme is a part of their own programme run by their own health personnel. Such a

feeling makes the programme popular and evokes interest among the people as well as the local government officials. When local participation is called for, the people are apt to co-operate without special efforts made for propaganda.

Secondly, the programme has given to the local health personnel a confidence that they can really do something for the people by their own efforts. The local health units in Taiwan, namely the township health stations, came into existence just a few years ago and have never had the experience to show their abilities in the field of preventive medicine in large-scale operations. Through such a confidence, they can be further developed administratively or technically to take up other public-health programmes in the future.

Thirdly, the malaria control programme in the future can be gradually taken over by the local people when foreign assistance is withdrawn. The trained key personnel, such as township supervisors or foremen, are the health workers in the existing health units, and therefore, they can be nuclei in the future malaria control or surveillance programme. Financially, the local governments have taken over the responsibilities of all the local expenditures since 1953 operations. The local township share runs to **37.3** per cent. of the total operational expenses. If the local participation can be developed to such an extent that they can buy their own DDT and sprayers, the programme can be continued without any outside help. In fact, the DDT and sprayers needed for the programme are now manufactured on the island and can be purchased with local currency. This fact is a great advantage and incentive to self-support of the programme at the local level.

Fourthly, decentralized organization in the malaria control programme represents a great deal of saving in expenditures and finally will mean a reduction in the per capita cost. Almost no funds are required for transportation of workers from place to place during the operational period. Since all the supervisors and foremen are the employees of local health stations or governmental organizations, they are regularly paid by the respective organizations and receive no particular payment for malaria control except their per diem. The salaries of supervisors and foremen during the operational period are charged against the malaria control programme in computing the per capita cost, but there is no special fund required for the salaries in the local budgeting.

Fifthly, the central organization can most effectively devote its efforts to planning, training, supervision, standardization of formulation and assessment of results, with a limited number of technical personnel on an annual salary basis.

3. THE PRESENT ORGANIZATION OF THE MALARIA CONTROL PROGRAMME IN TAIWAN AND ITS FUNCTION

The basic spray unit is called a "spray squad" which is composed of one foreman, four operators (spraymen) and two helpers. One spray squad is provided for each 7,000 or portion thereof of the population. The normal operational period is 60 days, although many squads finish their area in less time. The foremen usually are the permanent staff members of the health station or township office. If a township has only one or two spray squads, one of the two foremen is designated as the "headforeman". In a township with three or more squads, there is a township supervisor in addition to a separate foreman for each spray squad. The township supervisor or headforeman is usually a sanitarian of the township health station and frequently an anti-malaria technician who had received a training in malariology especially in microscopy before the island-wide DDT residual campaign. The supervisor or the headforeman is the one who is responsible for the overall malaria control programme of that township. The operators (spraymen) and helpers are temporary employees selected from the community by the township supervisor or the headforeman. At the hsien (prefecture) level, there are one or two hsien supervisors in each hsien who are responsible for the overall planning, supervision and resolution of administrative difficulties within the hsien with help of the hsien health officer and the temporary counterpart from the Malaria Control Headquarters.

The hsien and township supervisors receive one week's training in a regional training course conducted by Headquarters' personnel (WHO team members and staff of the Malaria Research Institute). After the supervisors' training, foremen are given one week's training by the Headquarters' personnel with the newly-trained supervisors acting as assistant instructors. The trained foremen in turn, train their operators and helpers in their own respective townships for one week. There are four operational regions set up in Taiwan for the malaria control programme. In the 1954 programme (the third year), four classes were conducted for hsien and township supervisors (one in each region) and seven

classes for foremen. Altogether, 186 supervisors and 878 foremen were trained by less than 10 Headquarters' personnel, and 3,456 operators (spraymen) were trained by the foremen.

In actual functioning, each hsien supervisor and his counterpart from the Headquarters work as a team giving technical direction and administrative assistance to 30-60 squads operating in the various townships within the hsien (prefecture). Under them are the township supervisors or headforemen who accomplish day-to-day planning and supervision of all the squads by spot-checking in their respective townships. Under each supervisor or headforeman, there are in average three to four (varying from two to nine) foremen who actually lead the spray squads and make visits to individual houses for DDT spraying.

Upon the completion of spraying operations in one hsien, the counterpart from the Headquarters is transferred to another hsien in a different region and becomes a counterpart of the supervisor of that hsien. The hsien and township supervisors and foremen, upon the completion of the operations, return to their original jobs since they are the regular staff members of the health organizations or township offices. The operators and helpers, who are temporary employees working for daily wages, are dismissed. Financially, the Malaria Control Headquarters is responsible for the cost of insecticides, sprayers, subsistence and lodging for foremen and supervisors during training periods, and transportation cost for DDT and sprayers from port of entry or manufacturers to each hsien health centre. The hsien (prefecture) governments are responsible for costs of printing posters and handbills, travelling expenses of the hsien supervisor and cost for educational activities. The local township offices are responsible for all local operational expenses including wages of spraymen and helpers, per diem for foremen and township supervisors, transportation of DDT and sprayers from hsien health centre to their respective townships and providing accessory equipment such as mixing cans, repair kits, water containers, etc.

4. PROBLEMS ENCOUNTERED AND HOW THEY ARE SOLVED

There are several problems encountered in the implementation of the decentralized operations. Most of the problems are administrative difficulties attributed to the differences in the degree of enthusiasm among local government officials especially the finance officer and the mayor or in the degree of

malaria prevalence in various townships. The most serious problem realized in the operation is the differences in budgeting malaria control funds in various township offices. Where malaria is a serious problem or the mayor of the township is very enthusiastic about the programme, there is no difficulty in assuring the availability of malaria control funds; where malaria is not very prevalent or the mayor is lacking in enthusiasm there is a difficulty in an adequate budget for the programme. The second problem is the difference in the rate of wages and per diem for spraymen, helpers, supervisors or foremen among various townships. Each township has its own schedule for per diem and wages and pays according to the local custom. In some townships, the mayors do not wish to pay adequate wages or per diems for their workers and consequently the job is poorly done. In some instances, the mayor may try to use voluntary or semi-voluntary labour in order to save operational expenses. However, such penny-pinching practices were soon found to be unsatisfactory. These problems were brought up and discussed at meetings of hsien health officers, called especially for considering the malaria control programme. Through such meetings, uniform rates for budgeting and payment were decided by all the hsien (prefecture) health officers and then recommended to the provincial government for action. An official announcement or order was then published in the provincial gazette advising each township to provide a fund of one New Taiwan Dollar per capita for the programme and to pay at least NT \$10.00 for per diem and wages. Following this announcement there has been very little trouble regarding these problems.

There was a problem realized in wiping-off of the sprayed DDT during the semi-annual house cleanings which are traditional throughout Taiwan. This house-cleaning programme is sponsored jointly by the local police and health organizations. In some townships, there arose different opinions between the police and the health personnel as to whether the sprayed DDT should or should not be wiped off at the cleaning time. In the first year demonstration programme (1952) there was an entire village in which the sprayed DDT was completely wiped off, and even in the 1953 programme there were such instances. This problem was again brought up at the health officers' meeting and was cleared through the same channel by a provincial gazette order.

5. DISCUSSION

Operationally, the responsibilities of the malaria control programme in Taiwan have been transferred to the local health organizations with excellent support rendered by the people. The programme, after having been carried out for two years (1952 and 1953) has become so popular that in 1954 there is not a single township mayor on this island who can withstand the people's hot demand or who failed to make an adequate township budget for the programme as regulated by the provincial gazette. There has always been a hot argument from the people's representatives at the hsien or township assemblies, if the hsien magistrate or township mayor fails to conduct the programme properly. Administratively, the programme is run by the local organizations using local funds, except DDT and sprayers which are furnished by the FOA/MSM-C and the Provincial Government through the Taiwan Provincial Malaria Research Institute. Technically the programme is conducted by the local health personnel who receive training from the Malaria Control Headquarters. Except for one person from the Headquarters assigned to each hsien (prefecture) and acting as the counterpart of the hsien supervisor or as the liaison officer, the entire programme is carried out by the local personnel who are on the local payroll. Through the training courses by the Headquarters' personnel, through the direction of the Headquarters' counterpart personnel or through the regional bi-weekly meetings attended by hsien supervisors and their counterpart personnel, standardization of techniques is maintained.

The delegation of responsibilities from central to local level develops a great confidence among the local health personnel in achieving the malaria control by themselves. Year by year the local health stations have become more and more self-sufficient in the operational programme. In 1952 the Headquarters' personnel worked practically side by side with the local township foremen; in 1953 the responsibilities of supervision were still shouldered by the Headquarters' personnel. However, in 1954 the programme is being run and administered almost entirely from the local level. Such an experience will give the newly established local health stations an excellent opportunity to become mature. It is believed that other health programmes can be developed through this extensive programme.

The responsibilities remaining at the Malaria Control Headquarters are then (a) planning of work, (b) training of local personnel at hsien and township levels, (c) technical direction given through the Headquarters counterpart personnel, (d) standardization of administrative and technical aspects, and (e) research and assessment of results. The entire staff of the Headquarters numbers only 60 persons including the staff members in the head laboratory and two branch stations. Out of the 60 members, only 16 are engaging in the field operational programme such as training, supervision, checking sprayers and standardization of technical formulations. The counterpart personnel assigned to hsiens are also drawn from these 16 members. With decentralized organizations, this limited number of personnel can direct a DDT spraying programme for 5,400,000 people. The remaining Headquarters' personnel can concentrate on the solution of overall administrative problems (provincial budget, etc.) and on field investigation, laboratory research and assessment of results.