



WHO INTER-REGIONAL TECHNICAL MEETING ON MALARIA ERADICATION
TEHERAN, 1 - 6 MAY 1962

EM/ME-Tech.3(a)/13

16 April 1962
ENGLISH ONLY

THE DEVELOPMENT OF A CENTRAL MALARIA ERADICATION
EPIDEMIOLOGICAL UNIT IN THE DEPARTMENT OF PREVENTIVE MEDICINE
OF THE MINISTRY OF HEALTH

By

Dr. Chamseddine M.H. Mefidi
Director, Institute of Parasitology and Malariaology, Iran

The relation of malaria eradication to other public health activities is best spelt out in the sixth report of the WHO Expert Committee on Malaria:

"Any country planning to eradicate malaria needs a special malaria service, which should preferably be a primary division of the national health department.

"The administration of malaria eradication should be distinct and separate so as to secure the efficient management of the programme....."

"In countries where the public health service is not well developed, the development of an eradication service will be a pattern of an efficient service and will serve as a nucleus around which to public health service could be built....."

"It might be useful to call eradication workers public health workers assigned to malaria, bearing in mind that any type of disease control is part of a general public health programme. Training of personnel should be planned from the beginning with this orientation. Furthermore existing professional staff in malaria programme should be orientated towards this conception of the integration of the malaria programme with the general public health programme....."

"Malaria eradication is not an end in itself but a step towards general public health and welfare. Thus, while concentrating full attention on malaria eradication it is necessary to look forward and to plan for the full utilization of the services of the malaria eradication staff once malaria has been eradicated".

From another side the successful performance of the eradication operations, particularly during the late attack and consolidation phases, need full cooperation of general public health workers at all levels, especially in the notification and case detection, treatment of fever cases, or examination of blood smears by health and medical laboratories.

Finally the obvious good effects of the campaign by the successful elimination of malaria, and also the control of a number of domestic insect pests, the consequent reduction in child mortality and increase of productivity and economy all tend to form a health-minded populace with full cooperation and confidence in other health activities.

The existence at the periphery of thinly distributed malaria eradication service units with a strong central organization and military type administration gave the opportunity for the extension of environmental sanitation activities grafted on to or grown out of a malaria eradication scheme. In this way all personnel involved in the operational aspects of malaria eradication should be integrated after a period of reorientation and suitable training into the environmental sanitation service of the Ministry of Public Health.

The epidemiological group of workers of the Malaria Eradication Service (malariaologists, entomologists, laboratory technologists, microscopists, etc.) on the other hand, have had exceptional opportunities for field application of epidemiological techniques and laboratory work, and an efficient epidemiological service could be based on them. This opportunity could be better justified if we consider the aims and purposes of epidemiology in general. To quote from Hugh Rodman Leavell, these are:-

- "1. To analyse the roles of agent, host and environmental factors in the natural history of disease in order to discover gaps in knowledge.
- "2. To describe and analyse disease occurrence and distribution according to such variables as age, race, sex, occupation, temporal frequency of occurrence, periodic fluctuation, long term trends analysis, and geographic distribution, in order to make community "diagnosis" and to estimate the risks of morbidity and mortality.
- "3. To aid in filling gaps in knowledge about the causes of disease process by observing the range, amplitude, and group behaviour of clinical syndromes in populations.
- "4. To study immediate and special problems in the field of health. This would include the study of new diseases, endemic disease problems, epidemics and administrative problems (operations research).
- "5. To measure the effectiveness of preventive and control programmes".

Thus it is evident that with their backgrounds and field experiences, the malaria epidemiologists and supervisors of case-detection activities would be the best and most qualified candidates for continuation of their

service in epidemiological scheme of the Department of Public Health. They must obviously continue indefinitely, their activities of malaria surveillance to secure the maintenance of eradication of malaria. Finally the malaria laboratory workers and the malaria field laboratories could be reoriented toward the development of Public Health Laboratories, by new training and addition of bacteriological and chemical experts, equipments and supplies.

As a matter of fact, this integration is necessary during the late consolidation and maintenance, because of great reduction or total elimination of malaria cases, and the need of continuation of a programme of constant search for something that never happens or happens only at long intervals, tending toward the loss of interest, industry, skill and competence of the workers. This could be avoided by their assignment to other sphere of activities with suitable reorientation and training in the epidemiology section and as medical officers of health to various areas (profitably areas under consolidation).

The total integration of the Malaria Eradication Services into the general programme of public health is not easily possible and may not be advisable where malaria eradication has been implemented by stages, and that different areas under attack and consolidation do exist at the same time in the country. Also the status of progress of malaria eradication in the neighbouring countries with common frontiers, would affect the decision for total integration. Under these conditions a competent service **should** continue to exist to govern the situation which is not completely under the control and stabilized and the integration should be implemented by stages similar to the malaria eradication programme.

Supposing that the programme of malaria eradication has started simultaneously in all areas of the country, or if by stages, all areas have reached the consolidation phase at the same time, the integration of the Malaria Eradication Service into the general programme could be implemented as previously described and justified in this paper. The activities related to malaria eradication will then be carried out by all health and medical workers of the health network, and the personnel will be, as expressed in the Seventh Report of the Expert Committee of Malaria, "technically subordinate to the central technical controlling authority of the national programme".

Thus the programme will be guided, as before by the Malaria Eradication Board or Council (assisted by a special assessment team attached to the Board Council), and a central malaria eradication epidemiological unit, established in the department of preventive medicine of the Ministry of Health for this purpose. This unit is similar to the epidemiological section of the malaria eradication service, with adaptation to the new organizational status in the department of preventive medicine and the requirements of the programme. As far as

the terms of references of this unit is concerned, it should work in association with the scientific endemic diseases (formerly malaria) institutes (if existing), and follow the activities of the Public Health Service in the maintenance of the status of malaria eradication and receive, accumulate and analyze all data and activity reports of health and medical network of the country, enforce the observance of quarantine regulations against the importation of malaria parasite carriers and advise on the vigilance measures necessary to maintain the absence of malaria from the country. It should follow the trend of malaria eradication in the world and neighbouring countries, assist the local epidemiologist and preventive medicine personnel in the epidemiological and entomological investigations of suspected cases and eventual outbreaks, and should receive all positive slides diagnosed in various laboratories of the country for re-examination and confirmation.

It should be provided with a special budget and transportation enabling rapid action.

It should enjoy full cooperation of the environmental sanitation department in the case of emergency needs for spraying or any other vector control activities.

The central malaria eradication epidemiological unit should consist of the following sections:

Malaria epidemiology

Entomology

Parasitology

Recording

The number of personnel in each category of malariologists, entomologists, laboratory technicians, health inspectors and collectors, statisticians and statistical clerks, draftsmen and clerical and transportation staff depends on the size of the country and the programme.

It is also advisable that at the provincial level, particularly in those areas with potentiality of recrudescence and importation of malaria one of the epidemiologists of the department of preventive medicine with necessary clerical staff be assigned specifically to follow up the progress of malaria eradication and to receive assistance from his colleague and auxiliary personnel of D.P.M. when needed. He would draw additional technical assistance from the M.T. Epidemiological Unit at HQ during special occasions when more detailed investigations become necessary.

SUMMARY AND CONCLUSION

As expressed by the WHO Expert Committee on Malaria Seventh Report, "Malaria eradication is not an end in itself but a step towards general public health and welfare".

If this programme is launched, based on a fairly well developed rural network of basic health services, with provision of central technical controlling authority to guide the eradication operation, the chances of successful achievement of the programme and particularly the maintenance of the absence of malaria from the country becomes greater.

In the developing countries where the public health service is not developed the organization of malaria eradication service with its vast operational, epidemiological and administrative units could be itself used as a pattern and nucleus around which the public health service could be built. Under these conditions the integration of malaria programme into the general health network should be envisaged as early as possible and implemented rapidly or by stages depending on the homogeneity of the eradication phases and status of malaria in neighbouring countries to be completed at any rate at the end of the consolidation phase.

Under the integrated programme of malaria eradication, the Malaria Eradication Board or Council with the assistance of a special technical auditing and assessment unit and of a central malaria eradication epidemiological unit of the department of preventive medicine and the existing scientific institutes (malaria or endemic diseases institutes) would continue to guide technically the implementations of activities relevant to the extermination of residual foci or maintenance of absence of malaria from the country or areas under this programme.

The malaria eradication epidemiological unit would assure the correct execution of eradication operation, accumulate and analyze the data of activities of health and medical care network of the country, enforces the observance of quarantine regulations, advise on the vigilance measures during maintenance phase, assists the provincial and zone sections of preventive medicine in the epidemiological and entomological investigations and acts in association with the department of environmental sanitation in the emergency needs for spraying or any other vector control activities.

BIBLIOGRAPHY

- 1 - Leavell H.R. & Clark, T.G., (1958) Preventive Medicine for the Doctor in His Community 43, 2 edition
- 2 - Macdonald G. (1956) Public Health Policy in Relation to Malaria Eradication Programme. WHO/Mal/165.
- 3 - WHO Expert Committee on Malaria (1957). Wld. Hlth. Org. Tech. Rep. Ser., 123 (6th report).
- 4 - WHO Expert Committee on Malaria (1959). Wld. Hlth. Org. Tech. Rep. Ser., 162 (7th report).
- 5 - WHO Expert Committee on Malaria (1961). Wld. Hlth. Org. Tech. Rep. Ser. (205) (8th report).
- 6 - WHO Manual on Preparation of Malaria Eradication Programme. WHO/MEM/3. July 1961