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ASSESSMENT OF MALARIA CONTROL PROGRAMMES (OPERATIONAL)

by

H. A. Rafatjah
Chief
Equipment Planning & Operations
WHO Geneva

EVALUATION

Programme evaluation is aimed at the measurement of progress and achievements in relation to its defined purposes and objectives, and, specifically, the targets set for the period under evaluation. Its purpose is to identify the causes of failure or success so that corrective action can be introduced to improve performance and eventually revise objectives. Thus, evaluation must be done continuously and form a permanent feature in any programme.

In a malaria eradication programme, evaluation has usually consisted of the regular collection, analysis and interpretation of a number of specified epidemiological indices. In a malaria control programme, however, evaluation must go beyond epidemiological measurement of progress, and include an assessment of the impact of such progress or failures on the purposes for which the project was planned, namely, improvement in health and socio-economic conditions, protection of population groups and prevention of the spread and intensification of the disease.

This means that baseline data needs to be collected before the programme begins operation, and used as a basis to measure and assess the progress or failures. Collection of accurate baseline data on mortality and morbidity, due to malaria, is not always possible, even in countries with fairly well-developed health infrastructure. Likewise, collection of reliable socio-economic indices, against which improvement, due to malaria, can be assessed, would be mostly unrealistic. Nevertheless, trends can be established for progress or failure, though the exact role of malaria cannot always be singled out and measured. Sometimes certain institutions, e.g. universities, development projects or private enterprises, can supply reliable data for evaluation; where this is not possible, special services and facilities may need to be organized to provide the needed data.

A detailed investigation of causes of failure or success is essential to assure progress towards its planned objectives. In the process, every failure and success

needs to be traced back to its causes, whether there are deficient programme implementation or inadequate or inaccurate planning.

The assessment should begin with programme implementation and include the operational, epidemiological, entomological and administrative and managerial aspects.

Operational assessment should investigate in detail the implementation of the attack activities in relation to the plan, and determine whether they have followed the timing, coverage and quality for which they were planned or specified. If not, the organizational administrative and managerial deficiencies may be the principal cause, and need to be studied and indentified.

In programmes using residual spraying operations, the assessment should include verification of the dosage, number, duration and timing of spraying rounds, the degree of coverage and the quality of spraying applied. The assessment should then go deeper in operational and managerial practices and processes to detect deficiencies. The state of geographical reconnaissance, field organization, adequacy of supervision and supervisory staff, training of field staff, the number and kind of transport allotted and their deployment, maintenance and reqpirs, the insecticide formulations performance and monitoring application equipment and techniques, spraymen's output, mopping up operations, reporting procedures, safety and precautionary measures used, administrative, financial and logistic rules and practices, etc., should be reviewed and evaluated.

It is obvious that many of these investigations need direct field observation of activities which must be done while operations are being implemented, and must be supplemented by entomological field studies . Others can be done from the reports and by field visits, but a full and up-to-date geographical reconnaissance is an absolute prerequisite for assessment.

Sometimes misconception, or deficient planning, is the cause of failure and needs to be studied and identified, thenplans are corrected and revised. Inadequate

information on factors, e.g., seasons of transmission, susceptibility level of vectors to the insecticides used, vector behaviour, population habits and movement, etc., may lead to deficient planning. Some of these factors are also subject to change in the course of the project's operation, due to theprogrammes' impacts or natural and environmental changes.

In programmes where other chemical measures, e.g. repetitive larviciding or adulticiding are applied, similar factors and conditions should be looked at and verified. Since the repetitiveness of the operations is more subject to varying physical, environmental and human factors, e.g. wind, vegetation, temperature and the applicators' motions, evaluation of their efficacy requires introduction of sensitive and responsive entomological parameters.

To be of maximum usefulness, collection, compilation and analysis of data and communication of results to the field should be done rapidly. In practice this means that lower operation units at the field level should be responsible for the operational assessment, and thus they need to receive adequate training, guidance and supervision.

In programmes using larvivorous fish, operational evaluation must rely greatly on entomological and parasitological assessment. Methods available for determination of fish density are still crude and unreliable, and need further improvement and refinement. These include dipping for fish, release of dyed (fluorescent) fish and determination of the increase or decrease through estimation of dilution rate.

Of all the antimalaria measures, operational evaluation of environmental management works are more feasible and reliable. The work done, whether ditching, filling, deepening, channel strengthening, shoreline maintenance or weed control, can be measured regularly and the progress evaluated against the planned timing and targets.

Evaluation operation needs to be planned in advance at the time of planning the project and must form an integral part of the programme's operation. Regular or

continuous evaluation operation must be a feature in any antimalaria programme and should include operational as well as epidemiological, managerial and politico-socio economic assessment. Results from different evaluations need to be correlated, analysed and interpreted into a common programme evaluation for follow-up action and project replanning.