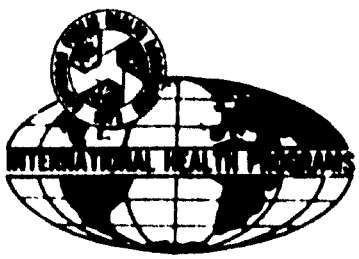

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A REVIEW OF THE DATA ANALYSIS, COST ANALYSIS, AND EVALUATION OF THE LAMPANG HEALTH DEVELOPMENT PROJECT

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I. INTRODUCTION

As the final evaluation of the Lampang Health Development Project nears completion, project personnel have begun to raise certain specific questions in the interest of presenting their findings and conclusions in the most useful and objective format. For this assignment, the consultant was requested (1) to review data analysis; (2) to complete the cost-analysis model; and (3) to assist in resolving remaining problems of the evaluation.

The consultant met with Mr. John Rogosch in Baltimore, Maryland, on May 18-19, 1981, to complete his tasks. To prepare for the meeting, Mr. Rogosch made a list of specific issues for consideration. This list was most helpful in focusing the discussion which led to the conclusions, reflections, and recommendations summarized in Chapters II and III.

II. FINDINGS, CONCLUSIONS, AND RECOMMENDATIONS

Community Survey

In the consultant's report of January 1981, a number of problems that arose in the analysis of community survey data were cited. Encouraging progress in overcoming these difficulties has been made since that time.

The various survey rounds differ with respect to sampling fraction according to household size. Because of higher reported morbidity rates in small families, overall sample morbidity rates are affected by the relative representation of small families in the sample selected. During the last several months, a careful review of sampling procedures was undertaken. Reasonable adjustment factors were derived for the various sub-surveys, resulting in better comparability between groups (C_1, C_2, E_1, E_2) and survey rounds.

Progress also has been made in correcting tabulation errors and completing tabulations that were reported to be missing in January. As a result of the corrections, female morbidity levels are more in line with the morbidity levels for other population groups. There is evidence, here and in surveys conducted elsewhere, that respondents under-report illness for other members of their families. This problem, however, seems to be less serious now than was feared earlier.

The errors in the tabulation of service use are being corrected. This action is especially noteworthy in view of the recognized importance of integrating utilization information from the community survey with that from the routine service statistics reporting system, task analysis, and health post volunteers. The consultant re-emphasizes in particular the significance of earlier recommendations on the format of tabulations on service utilization from the community survey. These recommendations are being implemented, and they deserve to receive continuing, priority attention.

RECOMMENDATION: Because the community survey is valuable in its own right and in relation to other sources of utilization data, the results of the survey need to be organized to produce the tabulations listed below.

1. Total population sampled and totals in relevant need categories (e.g., currently-married women, age 15-44; women who were pregnant in specified years; etc.).

2. Users of defined service sources in total and in relevant need categories (e.g., ratio of number of women receiving antenatal care from trained midwives to number of pregnancies).

3. Users of defined, functional categories of services (e.g., maternity leave).

4. Users of specific services within functional categories (e.g., antenatal care, child delivery, postnatal care).

These tabulations will be useful in distinguishing between the extent of coverage of the population at risk and the intensity of service use by those who are covered.

Use of Services

Improved service coverage was a fundamental objective of the project, and the analysis of service use, broadly considered on the basis of multiple sources of information, received considerable attention during the consultation. In recognizing that use did indeed improve during implementation of the project, the evaluation report must identify three kinds of improvement.

First, it is possible that use at existin facilities increased because available services were upgraded (e.g., trained wechakorn were introduced).

Second, utilization may have increased as services were made more accessible (e.g., health centers were added and village health volunteers were introduced at the periphery).

Third, the use of certain services may have been re-distributed toward the periphery. For example, it appears that although use of family planning services did not increase markedly in the project area, village health volunteers became increasingly significant providers of such services.

It is important that these three dimensions of utilization be examined separately for the various service categories and that net effects be ascertained. One might ask, for example, whether net health center utilization increased as a result of improved coverage overall, or whether it was balanced by a transfer of preexisting utilization to the periphery.

RECOMMENDATION: To facilitate the foregoing analyses, it is recommended at utilization matrices be constructed to depict the following:

--population per facility;

--number of services per facility; and

--number of services per population at risk.

The various sources of information will need to be adjusted, merged, and presented by service type and facility type. For example, a careful review of the annual service statistics for facilities included in the cost and task analysis reveals that reports were not available for certain months Appropriate upward adjustment of reported service contacts will have to be made to compensate for such under-reporting. The community survey provides data (e.g., deliveries by traditional birth attendants) that are not readily available elsewhere. Information from the community survey can, therefore, enhance the utilization matrices, provided that the aggregate numbers obtained from the community survey are compatible with the figures derived from the service statistics reports. Again, assuming that utilization data from the cost and task analysis are compatible with the annual statistical reports, time and cost information from the same analysis can be merged with the utilization data from various sources. The village health volunteer reports also are a unique data source that can be combined with other data sources.

Cost Analysis and Cost-Effectiveness

Since the development of the cost-analysis model, which was described in the consultant's January 1981 report, additional cost and task data have become available and can be used for pre-project and post-project comparison Such comparisons are relatively straightforward; they were not cause for con cern during the present consultation. The discussions on cost were focused primarily on the costs and cost-effectiveness of routine operations associated with replication.

As in other demonstration projects, the costs of the Lampang Project have been much higher than the costs that would have been incurred in replication. It is obvious that the successful implementation elsewhere of Lampang-type operations would require a level of management support that would exceed current resource allocations to these traditionally understaffed functions. Presumably, the incremental direct benefits would more than compensate for the added indirect costs in support of improvements. Realistic quantification of the implications of Lampang is, however, essential. Discussions were held during the consultation to clarify the conceptual framework for this analysis.

By organizing Lampang Project staff in units for planning and programming, administration, training, and evaluation, it is possible to assess costs and staffing requirements for the basic components of management that are necessary for operational support. It should be possible to use project records to estimate the costs of each component that were unique to the demonstration project and the costs of those features that would have to be added to the infrastructure in other provinces where Lampang-type operations might be launched. It is expected that the analysis will show, for example, that training resources are critical prerequisites to success and that they will have to be strengthened substantially, given

current capabilities. The cost of this effort would be small in comparison to operational costs (e.g., the cost to maintain additional trained staff). It would be shown that results are not especially sensitive to the assumptions made in dividing project costs as "demonstration" and "replication" components. In addition, the findings would reveal the importance of providing adequate management support to ensure that much larger operational resources are used cost-effectively.

RECOMMENDATION: The analytical framework that evolved during the discussion consists of six steps. These steps are recommended for consideration.

1. Three kinds of indirect costs should be presented:

   a. project costs that are not replicable;

   b. normal administrative costs of the ministry; and

   c. project costs that would be added to ministry costs during replication elsewhere.

2. Direct costs should be displayed as:

   a. normal ministry operating costs; and

   b. additional operating costs that are needed to achieve the improved coverage associated with Lampang.

3. Utilization statistics should be displayed in two parts:

   a. coverage normally achieved (from control area data); and

   b. additional coverage achieved in E_1 and E_2, based upon utilization analyses (outlined in a preceding section of this report).

4. The results from the above three steps should provide persuasive visual evidence of the relative cost-effectiveness of the Lampang Project. They are likely to show that substantially increased coverage can be achieved at necessarily increased direct and indirect

costs that are, however, less than proportional to increases in utilization, and thereby result in reductions in costs per unit of service.

5. Resource requirements should be examined in detail under the following headings:

   a. planning and programming;

   b. administration;

   c. training; and

   d. evaluation.

6. The data on increased utilization should be examined in detail by service category and service provider. (This analysis is outlined in this report in the section on service use.)

III. OVERALL REFLECTIONS

Earlier consultations on evaluation addressed a number of technical issues. During the latest assignment, the consultant said that substantial progress had been made in resolving those issues. In addition, he was able to step back and take a hard look at several of the fundamental questions about coverage and replication which will be addressed in the overall evaluation report. The consultation was most timely in clarifying the approach to these overriding questions.