



SEMINAR ON THE PROVISION OF HEALTH
SERVICES FOR THE PRE-SCHOOL CHILD

EM/SEM.PROV.HS.PR.SCHL.CHLD./9

Mogadishu, 21 - 26 July 1974

July 1974

ENGLISH ONLY

EVALUATION AND OPERATION RESEARCH
AS MEANS FOR MEETING SERVICE OBJECTIVES
AND IMPROVING METHODS OF HEALTH CARE DELIVERY: EVALUATION

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Evaluation of the pre-school child care services is an integral part of the whole programme of child care which is to be considered from the early planning phase of this programme. This is the feedback component of the system of care. It aims at improving each part of the system as well as the whole. Evaluation could be at the following levels: policy, planning, administration and field operation of the programme.

Evaluation of policy

The final target of any policy in a pre-school child care programme is definitely to get a better and more healthy child who reaches school age in the best condition physically, mentally and socially. Strategies to reach the aim vary. This is the aspect of policy formation which would be subjected to evaluation. In decision-making about the strategy, the relation between needs and feasibilities is the determining force which gives preference of one strategy over another. To be objective in this decision, scoring of both needs and feasibilities is to be constructed so

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that it would be possible to construct this relation. Scoring depends on breaking needs and feasibilities into components, each of which is to be measured qualitatively and quantitatively. Out of this a score is built and the ratio is calculated. For evaluation of the strategy decided upon the feedback data of achievement in pre-school child care are analysed in terms of needs and feasibilities and measured according to the scoring scale which had been built beforehand. The ratio between both in the light of achievements is to be calculated and compared with the planned expectations.

To care for the pre-school child there are alternative strategies; is it family-centred care, community-centred care or a combination of both? What would be the leading service which would act as a spearhead for such care? Is it individual physical health and immunization against infectious diseases, or nutritional care, or mental and educational care? What would be the channel of approach? Is it direct to the child or indirect through the family members or the family as one unit?

Along these parameters there are two ways of presentation of the care possible: is it comprehensive presentation which would cover a limited target of the population to be served then gradually spread till total coverage is achieved or is it the provision of one aspect of care with wider coverage then the gradual addition of other components?

A scoring system is to be built, incorporating all these components and the relation is to be established and presented either graphically or mathematically. Out of this presentation a decision is made to choose the strategy of care. The feedback data from the following levels is to be analysed and matched with this hypothetical model for evaluation. The origin of the feedback data is from the planning level, the administrative level, the field operational level as outlet for the programme and the achievement of the programme.

Evaluation of planning for pre-school child care

The aim of the planning process is to put the strategy decided upon into action. This is achieved through making the available resources

accessible in a way which is amenable for management to produce a consumable service. The feedback data are to be analysed to show to what extent the mobilized resources have been utilized in the programme. This includes the human, non-human, organizational and technical resources. What was the balance between the demand versus the supply of these mobilized resources? Was the plan presented and implemented in a schedule which matches the absorptive capacity of the population to be served? An important assessment of the value of the plan is the relation of the inputs of the plan to its outputs. There are different indices for measurement of this output in pre-school child care programmes. The degree of utilization of manpower in relation to that available is one index. Another is the degree of turnover of the technical manpower involved in pre-school child care. An important observation is the high turnover of the personnel working in pre-school child care. This will give the training of manpower an important part in the plan. The monetary investment per capita could be used to evaluate the plan on comparative bases as it is not an absolute index but depends on its purchasing capacity and its functionability. Technical extension and maintenance of pre-school child care has to match with the local cultural norms. An important index of the utilization of organizational resources is the degree of continuity and integration of the components of the services for the pre-school child between infancy care on the one side and school health care on the other.

Evaluation of the administration of pre-school child health services

1. Organization: Have the pre-school child care services an identity within the context of maternal and child health services or are they left to be searched for vaguely? If they are present, are they at top or intermediate administrative levels? If present at more than one administrative level, how do these levels communicate? What are the channels of communication between the other connected services at the same level, i.e. the transverse communication channels with the maternal and infancy care services, the control of communicable diseases, nutritional health services, mental health services and school health services? There might be no need for a labelled unit within the structural organization labelled as pre-school child care, but it might be a function of one of the already existing units

within maternal and child health to carry out this function. The minimum requirement is that care for the pre-school child is well shown to be a function of such a unit. This statement of the function will help in its accounting and auditing.

2. Management: An important evaluative index in the management of the pre-school child health unit is to what extent the outputs of the related health service units are used as inputs for the functionability of that unit at administrative level. In other words, to what extent is the pre-school child health unit functioning as part of a health system. Thus the plan for the care of the pre-school child is part of the overall plan for the care of children. The utilization of technical recommendations of the communicable diseases control unit is included in the administrative recommendations of the pre-school child care unit. Furthermore, according to the data fed back from the field, what is the validity of these recommendations, as they are applied to these children? Have these conclusions been fed back to the control of communicable disease service unit? The same function is carried out towards the other related services.

The supervisory function of the unit is not limited to the feedback data from the field; field visits for supervision are also important. To what extent are they carried out, what is their span of coverage and their components? To what extent does the supervisor conduct on-the-spot training? All of these are indices which help to evaluate the administrative level of pre-school child health services, however, administrative evaluation is not intended to evaluate individual personnel performance.

Evaluation of field operations

There are two approaches for evaluation of field operations, i.e. evaluation of performance or evaluation of achievement.

1. Evaluation of performance: This is obtained by the following:

1.1 The human element: who are the personnel involved in the operation of the pre-school health services in the field unit, quantitatively and qualitatively? What are their levels of training?

What is the ratio of professionals in relation to auxiliaries? What type of auxiliaries are they, skill-oriented or multi-skill trained? What is the ratio of work-load per person in the unit?

1.2 The work premises: permanent or temporary. Are they of sufficient capacity and fit for the purpose?

1.3 The equipment of the unit: what is available in relation to what ought to be available to perform the job? Is what is available in working condition? Is it in sufficient quantity to face the pressure of the services at peak periods of work, to minimize queueing time in the service unit?

1.4 Are the service records properly kept and fed back to the upper levels of administration and also to the same related service units for referral and information?

1.5 What are the aspects of the services given to the pre-school child, e.g. medical care, health education, nutrition supplementation, vaccination against infectious diseases?

2. Evaluation of achievement:

2.1 Developmental indices: recorded follow-up of growth and development of the pre-school child. Where are the levels of growth and development located in relation to the growth and development norms of the community, if present?

2.2 Morbidity indices: what are the prevalent diseases among pre-school children and what are their epidemiological and clinical manifestations? Are the prevailing diseases mainly infectious or nutritional or a combination of these? What is the clinical picture of behavior problems?

2.3 Mortality data: what is the age specific death rate such as 1 - 4 death rate? To what extent do deaths in the pre-school age contribute to the crude death rate of the community? Is there a sex difference in the deaths?

2.4 Service consumption pattern: are the pre-school children utilizing the preventive services mainly, or do they come for curative services? What is the load of children in relation to the corresponding pre-school aged population in the community which that unit is serving? Are the services provided to the consumers satisfactory or not up to the level required?

2.5 Net result of the pre-school child care: this is assessed by the pre-admission medical examination at school.

Techniques used in evaluation

1. At individual level:

1.1 Personal health history through interview of the mother.

1.2 Physical examination of the child.

2. At community level:

2.1 Field observation visits: These are conducted to places where pre-school children are expected to be found, such as houses, market places (where mothers take their children with them), day care centres (if any), maternal and child health centres, health units, hospitals. The purpose of these visits is mainly to assess the magnitude of the child population and its condition, how the children look and their vitality.

2.2 Service unit observation: The purpose of this is to ascertain the load of requests for the service and the degree of queueing. What type of service is requested?

2.3 Record studies: These are the records of the service units as well as the health office records which report the feedback data from the service units in the community. The vital statistical records are important sources of data for the evaluation of pre-school age child care.

