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HYGIENE NORMS IN LATIN AMERICA

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Activities at a Functional Level

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The magnitude and extent of the health problems and needs of the mothers and children of Latin America far exceed the resources available to meet them. In the long run social change, socio-economic, agricultural and sanitary development, and increase in the quantity and quality of health personnel and facilities will provide the means of solving these problems. However, from all present indications the numbers of medical and paramedical personnel in Latin America will remain inadequate for many years to come. It will therefore be necessary to adjust their activities to a set of targets which may be short of an ideal, but which promise the greatest returns for the specific efforts rendered. This is the task of

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the norms of service^{*} prepared at national, regional and local levels as part of the health planning process.

THE NATURE OF THE PROBLEM

In Latin America today sharp national and intra-country differences exist in the extent and nature of morbidity and mortality during the maternity cycle new born period and early childhood. The facilities and personnel available to the health services also show wide quantitative and qualitative variability (1). In spite of these contrasts, the various national and local norms for "maternal and child health hygiene"^{**} repeat the same formulations and dispositions of personnel with monotonous regularity. This would be logical only if one were dealing with personnel and facilities of comparable magnitude and with the prevention or cure of a specific disease process whose remedy followed a patterned standard order.

Childbearing, child rearing and child feeding are expressions of biological and cultural needs rather than disease processes. Because some of the actual practices which reflect these needs may contribute to a disease process, attempts to influence them are part of the actions expected of health personnel. Maternal and child hygiene^{**} is the name

* The English word "norm" is used in this document as a translation of the Spanish word "norma" which has no precise English equivalent. The nearest English equivalent is operational standards, but "normas" can also include what would be called policies and in some cases procedures as well.

** The English word "hygiene" is used in this document as a translation of the Spanish word "higiene" because "maternal and child health" in English does not necessarily exclude curative or delivery care whereas "higiene" does. Maternal and child hygiene means essentially health supervision during pregnancy and early childhood, the preventive aspects of obstetrics and of pediatrics.

given to these actions. In North America and Latin America the system of public services administering these actions and supervising the personnel who carry them out developed separately from the system of public services administering medical care and hospitals. The historical roots of this separation of preventive and curative care and its evolution have been discussed in a previous publication (2).

Under the impetus of national planning, the administrative integration of maternal and child hygiene with medical care is now occurring in Latin America. The term health care is used to express this integration and convey a meaning broader than treatment alone. However, this integration has not yet extended to the functioning of programs and the duties of personnel assigned to carry out the preventive and curative work with mothers and children. Such programs, and often the personnel who carry them out, remain functionally compartmentalized in spite of their administrative integration.

Conventionally maternal and child hygiene services have been delivered to the community in special clinics or in homes. This is an expression of the historical developments already referred to rather than an intrinsic necessity of the services themselves.

The system under which these services are delivered was designed to serve the urban population of developed countries. This system assumes that every mother and child in the community must receive an equal amount of service. Thus its norms will usually call for monthly prenatal clinic visits to a doctor during the first eight months of pregnancy, and bi-weekly visits thereafter; monthly well baby clinic visits

during the first 6 months of life, bi-monthly during the next 6 months, quarterly during the next two years, etc. If home visiting by nursing personnel is part of the service, this also is scheduled according to time intervals. "Hygiene" is dispensed as a series of "doses" given at routine intervals without any vital relation to the actual or potential disease experience of the family or the community. This method of allocating personnel time is also historically derived.

Few countries in the world possess the personnel resources to implement such ambitious norms for their entire population, and in developing countries such goals will remain unreachable for many years to come. In Latin America, a frequent practice is to aim at delivering the services of maternal and child hygiene to less than 100% of the population, (60%, 40%, or even less). However, even this lowered goal is often not attained and few if any of the families reached receive the full complement of services spelled out in the norms.

Furthermore since systematic planning techniques were not followed in establishing the norms, the small group of families who do receive these services are likely to be those least in need of them.

The activities of a health care service are only one of many approaches to social change, the promotion of community health, the motivation of people to seek health care, and the health education of the community. The use of mass media (especially the radio in Latin America), community organization, and direct approaches to and through the community power structure are probably more potent weapons for these broad purposes

than personal services delivered to families through a structured organization. These community approaches require special knowledge and skills. They should be considered as a major field of developmental planning to which health personnel have much to contribute. However, they should not be confused with the specific efforts to deliver maternal and child hygiene and medical care through a structured organization of personal services which is the focus of the ensuing discussion.

The remainder of this discussion will focus on ways in which the actions of maternal and child hygiene can be integrated on a priority basis and at a functional level into the structure of the existing medical care services delivered to the population. In this way maternal and child hygiene will come to take its place in practice as one of the components of a comprehensive health care service to mothers and children which in turn is part of a health care service for the entire community.

THE ACTIONS OF MATERNAL AND CHILD HYGIENE

Actions to attain the objectives of maternal and child hygiene can be grouped into four broad classes: (1) screening for early "unrecognized" disease and referral for care; (2) anticipatory guidance and parental education (including nutrition education) designed to prevent future disease; (3) dietary supplementation; (4) immunization. Emotional support of the mother is often listed as a fifth action of maternal and child hygiene in developed countries, but this is an aspect of all patient care rather than specific to "hygiene".

These actions can all be viewed as parts of programs to combat disease. Within each of the four classes of action a series of different "tasks"* can be defined. Each task can be identified as a component part of a program to prevent a specific disease. Immunizations as a whole are parts of a communicable disease control program and BCG immunization is a specific preventive task of tuberculosis control. Dietary supplementation is part of a nutrition program with the nature of the supplement determined by the deficiency disease to be combatted; the action to provide a specific supplement is a task related to control of a specific deficiency disease. There are many different types of "screening" action, ranging from interviews to tuberculin testing. Each screening action can be identified as a task within a specific disease control program. There are many subjects with which anticipatory guidance and health education can deal and many techniques (in the usual sense of the word) of delivering guidance and education.

* see reference (3) for definition

Each subject with its appropriately chosen technique can be identified as a task within a specific disease control program.

However, the "instrumentation" * of all these specific tasks involves the human and material resources of a health care service for mothers and children integrated with the general health care services of a community. Thus, in the context of a health planning framework, maternal and child hygiene can be defined as the sum of all specific preventive tasks to be included within a health care service for mothers and children.

The tasks most appropriate for application during the maternity cycle and early childhood should derive from the diagnostic stage of the planning process after measurement has defined relative disease priority. This diagnostic process has been described elsewhere (3). In the case of mother and child health, however, three points deserve special emphasis and clarification.

In the first place, the orthodox categories of disease used to define disease and assign priority are incomplete and can be misleading as a base for child health planning. Pathology in early childhood is very apt to be multiple rather than single as in the case of the diarrhea-malnutrition syndrome in the weanling (4). Operational research is necessary to define the contribution of malnutrition to early childhood mortality with precision. Meanwhile, however, it is essential that a weighted estimate of its contribution be made and that this enter directly into the diagnostic stage of planning so that resources can be allocated accordingly. Parasitosis raises similar problems.

See reference (3) for definition

In the second place, the role of socio-economic and cultural factors in disease production and the feasibility of modifying these factors by education and preventive counselling must be assessed special care in the planning process. Crude methods for doing so have been discussed elsewhere (5). The specific tasks of maternal and child hygiene must be shaped to these realities and adjusted to these limitations. For example, in one community protective foods may be prepared and consumed by adults in a family but not offered to young children; in another community protective foods may be available but not utilized sufficiently in family meals; while in still a third community protective foods may not be available at all. In the first two cases a nutrition education message (each of different type) can be delivered; in the latter, nutrition education is futile.

In the third place, it must be clearly understood that in maternal and child hygiene a variety of techniques (in the most common sense of the word) can often be applied to carry out the same task. For example, the task of screening for protein-calorie malnutrition can be carried out by applying various medical techniques; the task of education to promote hand washing can be carried out by conveying a verbal message to individuals or to groups or conveying the same message in written form. Each technique can be instrumentalized (reduced to a cost factor) with relative ease. This has been called "costing the technical alternatives".(3). In some cases, such as screening for malnutrition or immunization, the effectiveness of the technique can be quantitated on the basis of published data. In many cases, such as education

to promote hand washing or the consumption of protective foods, no data exist upon which to quantify effectiveness of the technique. Only operational applied research can supply such data and until it is available informed "common-sense" must serve as an inadequate substitute for scientific judgement. The establishment of first approximation is founded on experience.

THE POINTS OF APPLICATION OF MATERNAL AND CHILD HYGIENE

The structure of health care services is visualized as a continuum extending peripherally from a regional hospital base and urban center, through a variety of ambulatory treatment points (out-patient departments, health centers, health posts, mobile units) to rural areas serviced by indigenous traditional attendants. Services at all points may be inefficient and the system may be imperfectly integrated; nevertheless a strong tendency can be discerned in Latin America to regionalize services and to perfect the system administratively. This tendency is linked to the movement toward national planning.

This system of health care services provides a "ready-made" series of contact points at which the tasks of maternal and child hygiene may be carried out or from which derived systems to carry out a task may be constructed. The proportion of the population of mothers and children reached through this system depends upon its strength. In practice, many systems are weak and have failed to capture the confidence of the population. However, the actions of maternal and child

hygiene cannot bring results in a medical care vacuum. Screening is useless without follow-up treatment and if the treatment services offered are rejected, guidance and education will suffer the same fate. Thus, the solution to weak systems of medical care is to strengthen them rather than to promote a separate system of maternal and child hygiene services.

Pregnancy, delivery, and illness in mother or child are all events which to a greater or lesser degree cause the mother to seek the care and advice of others in accordance with her traditions and beliefs. The population seeking such help is a "temporally selected" one. The promise of effective return for preventive effort rendered will be greater in this selected population than in the population at large. The population seeking care will have more "unsuspected" disease, i.e. disease not directly related to the motivating chief complaint, and it can be more strongly influenced by educational efforts because these can be related to the motivation to seek care. Thus a general governing priority in the construction of maternal and child hygiene norms is the delivery of preventive and educational services to this selected population directly or through derivative systems of service. Only exceptional circumstances bordering upon famine or epidemic can justify separate non-derived systems of service or vertical programs. Such programs are discussed later.

Hospitalization for childbirth is one example of a "ready made" contact point. Irrespective of its theoretical program priority importance it is and will continue to be expected by the entire urban population

of Latin America and facilities exist and will be constructed to meet this demand. Thus the hospital maternity service in urban areas has become a point of health service contact with mothers whose certainty and duration usually exceeds that of prenatal clinics. Although the early diagnosis of pregnancy complications is obviously inappropriate at this time in the pregnancy cycle, such preventive counsel as messages to promote breast feeding, hygienic care and immunization of the new infant, and specific nutritional measures to avoid malnutrition in the next oldest sibling are appropriate.

Hospitalization of children and the ambulatory care facilities which serve them during illness are examples of other ready made contact points. Various diagnostic screening activities can be applied at all these points. One of the simplest of these is weighing the child and classifying nutritional status according to weight for age norms but even so simple a procedure is frequently neglected. Various messages of preventive counselling can be delivered to the mother whose child is hospitalized or brought to an ambulatory care point for whatever cause. The message will be more effective if it is related to the cause for which the mother has sought assistance. The timing of such guidance in relation to the presenting complaint is a matter of judgement and sensitivity. Anxiety over present illness may make discussion of the future unwise but it can then be postponed to a later time.

THE SELECTION OF RECIPIENTS

Since children are members of families, the potential reach of all these efforts can be vastly broadened; pregnant mothers have malnourished pre-school children; malnourished children have brothers and sisters; diarrheal disease often affects more than one family member. With appropriate simple interview techniques these facts can be ascertained at all patient contact points and other family members drawn into the web of services.

However, the personnel time needed and the costs of applying all possible measures of hygiene even to these mothers who seek care for themselves or one of their children will often be too great for the health care services to bear. Therefore service norms must establish criteria of "disease risk" in terms which can be applied to the patient population at each contact point. In effect these criteria are a form of diagnostic screening based on interview findings or objective measures such as weight, which when applied would rank families in priority order of need to receive a given service. By using such ranking systems the number of recipients of preventive and educational services can be adjusted to the resources available and the service delivered in a selective rather than a haphazard manner.

For some of the specific tasks of maternal and child hygiene no priority-ordered selection of recipients may be necessary or indicated. Thus all newborns in a maternity service can be immunized with BCG before discharge; all hospitalized children can be tuberculin tested; all

children attending ambulatory treatment points can be weighed and, at least at their first visit, receive a complete physical examination; all mothers delivered in maternity hospitals can be given pamphlets on breast feeding or attend a regularly scheduled group meeting at which infant feeding is discussed.

For other specific tasks, selection of recipients is essential because of the limitation of resources. This is especially true when follow-up activity is strongly indicated to assure results (as in families with histories of child loss) or in implementation of the task itself (as with dietary supplementation). Follow-up activity may be incorporated into the regular ambulatory patient care system, linked to the special systems of dietary supplementation or immunization which will be described, or form the basis of other follow-up systems. In all cases, however, these systems derive from the functioning and structure of health care services and are not compartmentalized operations.

Operational research data are needed to provide scientific criteria for the selection of "disease-risk" groups, and until they are available "common-sense" judgements must be exercised.

DIETARY SUPPLEMENTATION

Perhaps no other action of maternal and child hygiene suffers so much from confusion between the ideals it represents and the realities with which it must cope as dietary supplementation. The distribution of a supplemental ration (usually some form of milk powder) to every pregnant woman and to every child up to a certain age is a praiseworthy ideal.

However, the total resources necessary to implement such an ideal are usually lacking, and, except under starvation conditions, food is not an acceptable substitute for other measures of assistance and development which the recipients feel more important to them. Hence the history of indiscriminately directed food distribution efforts in Latin America (as in other developing regions) is one of failure and disillusion.

The brunt of these failures has been born by the maternal and child hygiene services, an identifiable segment of health services serving this population group and cast historically in the role of food distributor. The same historical role has bound these services to an indiscriminate rather than a selective distribution of the ration.

As emphasized earlier the place of dietary supplementation as an action to promote health and nutrition should be considered first in relation to the national nutrition program wherein it may be ranked on a priority basis in relation to other actions to improve nutrition and thus judged in relation to other priorities. Dietary supplementation is only one of several nutrition-focussed tasks of maternal and child hygiene. It merits special discussion here only because a significant quantity of resources are conventionally allocated to it.

If the planning diagnosis is applied to current programs it will usually reveal the inefficiency of their operation. Since protein-calorie malnutrition is unquestionably a major factor in early childhood mortality, such a finding should not lead to the discarding of dietary supplementation as a task but rather to its reprogramming so that the

same resources are used with greater efficiency.

The primary prevention of protein-calorie malnutrition is beyond the reach or potential impact of present or future health care services. Therefore it is logical for these services to concentrate upon secondary prevention, selecting those already damaged and arresting the progression of a pathology which leads to repeated illness, disability and death. A screening activity such as weighing, applied at all points of contact within the medical care structure will select such children who in turn are indices of families. The pre-school children who accompany an ill patient or sibling to clinic can also be weighed. All selected children should then be medically examined and diagnosed diseases treated.

These are the first steps in a program. The number of children to be selected for it can be set by adjusting the weight-for-age cut-off point to a level where it will select only the number of children which available resources of food and personnel are prepared to serve.

The second step, rehabilitation of the selected children and their families, will require the development of a follow-up system of care, a system derivative of the health care structure rather than a separate service system. There are various instruments of nutritional rehabilitation ranging from a day care center to a special clinic, but all seek to combine food distribution and/or direct feeding with preventive and educational counselling of the mother. These services have been described in more detail elsewhere (5). They are the highest priority points

for dietary supplementation within a health care service. Service action may also include referral to social welfare resources where these exist.

If malnutrition is sufficiently severe a community problem, a house-to-house case-finding survey (by weight-taking) of all young children in the community can be organized and followed up by dietary supplementation (coupled with education) for the cases of malnutrition found. This has been practiced successfully in various local areas in Latin America. It requires additional resources of both food and personnel, although the latter need may be met by volunteers if the program is linked to one of community organization and action.

Dietary supplementation of the entire mother and child population can rarely be justified as a top health or nutrition priority except under conditions bordering on famine.* (Emergency vertical program). Nevertheless it can be justified as a measure of social policy which derives from the social values of a nation. In some Latin American countries national policy calls for food distribution of this order. If the full resources needed are not marshalled to implement the policy it will remain a meaningless ideal without relevance to maternal and child hygiene. If resources are so marshalled a system of service to the community derived neither from the system of health care nor from a

* This generalization does not apply to food enrichment or water fluoridation but these measures are not activities of maternal and child hygiene.

community survey will be required for implementation. Such a service system obviously provides another series of contact points at which selected tasks of maternal and child hygiene can be carried out. In addition to immunizations, discussed below, education on how to use the ration and regular weighing to detect and follow-up the child malnourished in spite of his ration may be the most important of these tasks.

IMMUNIZATION

Agents which immunize the population exist for many specific communicable diseases. However, the effectiveness, the medical techniques, and the norms of application of each agent are intrinsically different, and the importance of specific communicable diseases varies from community to community. A consideration of all the facets of a communicable disease control program is outside the scope of this discussion.

The unit cost for delivering an immunizing agent is relatively low in comparison with delivery cost of other health care components and the result is known with more certainty. Delivering this preventive modality only to selected young children is somewhat less logical than in the case of dietary supplementation because vulnerability is universal; furthermore, if community levels of resistance are high enough, spread of disease is interrupted and even the unimmunized receive a measure of protection. For these and other reasons, there is a tendency to deliver a single immunizing agent or series of agents to the population by means of special campaigns often organized on a house-to-house basis.

A less spectacular method of immunizing the population is by means of immunization scheduled to serve the community regularly throughout the year. Strangely enough such clinics are often as

functionally independent of both the medical care services and maternal and child hygiene services as the house-to-house campaign.

Under some circumstances, circumstances which will become manifest if the planning process is followed, house-to-house or other types of immunization campaigns may be justified. If so, the values and costs of carrying out selected child hygiene tasks at these new points of contact with the population should be weighed and judged on their own merit.

In most circumstances special immunization campaigns are not justified. If a specific communicable disease is important enough and if the elements needed to deliver the service (vaccine, logistics, refrigeration) can be made available, the organization problem then becomes one of integrating the task of immunization into the functional structure of the health care services or deriving a delivery system therefrom.

Full advantage should first be taken of all points of patient contact within the existing structure of health care services. Unless medically contraindicated, immunizations should be given to patients in hospitals, attending ambulatory treatment points, or being followed for nutritional convalescence. Sometimes an agent can be delivered in its entirety in this manner as with BCG immunization of the newborn. In other cases repeated doses of the agent will be required for full effect. These may be given at return visits to the general clinic or at a special "immunization clinic" if the numbers are large enough. If a given immunization is inappropriate or contra-

indicated at the time the patient is hospitalized or seen for illness, the patient can be referred, with explanation, to a future appointment. It will be especially important to discuss such immunization plans with mothers in a hospital maternity service before their discharge.

The implementation of this concept depends primarily upon specified actions at all points of patient contact within the total system of health care and only secondarily upon following an "immunization schedule". The "immunization clinic" is a derivative of the health care structure and not an independent entity. Each health care facility must be flexible enough to apply immunization at all times rather than exclusively at a specified "clinic" or only at specified intervals and ages. This is less complicated than it sounds since injections of various sorts are a regular component of most treatment facilities.

Obviously the "immunization clinic" derived from the health care structure as described affords additional contact points with families and young children. Specific activities of diagnostic screening (such as brief interviews and weighing) and of preventive counsel (simplified and preferably capable of delivery to a group) can be selected in the manner discussed earlier and applied at these additional contact points. It must be stressed again, however, that the decision as to whether or not to deliver any immunizing agent to the community at all is to be made on a planning and health priority basis in the first instance. In many communities, immunizations may be a less important use of limited resources than other measures of health care or environmental improvement. When immunization is to be practiced community norms for immunization have to be established and target for delivering these norms set and readjusted by periodic review.

THE PROBLEM OF RURAL AREAS

The structure of health care services is weakest in rural areas. Remote rural posts are often staffed by an auxiliary whose medical care function is negligible. The supporting system within which she works is too weak to provide the supervision which will enhance her capacities. Under such circumstances it has been tempting to emphasize the preventive counselling (health education) aspects of her activities. Such use of personnel is theoretically possible but can only be successful if it is also linked to community organization and methods of promoting social change in which neither the system of health services nor the auxiliary have generally acquired the necessary maturity and competence. Thus, failures of program and wasteful expenditures for salaries are common.

On the other hand, dietary supplementation and immunizations are two simple but finite activities which theoretically can be carried out by the auxiliary in a remote rural post with a minimum of supervision. Unfortunately the same remoteness and isolation which interfere with regular supervision also interfere with the delivery of regular supplies of the food and vaccine and the presence of refrigeration facilities. If these problems can be overcome and if malnutrition or a specific communicable disease is a relatively high health priority in a rural area, these activities can be carried out in rural posts. However, it is more likely that when regular communication between a rural post and a larger health facility exists, there is an even greater need to

build up the supervision and in-service training of the auxiliary so that her role within the total health care structure can be strengthened.

Mobile units working out of a central source which visit rural communities on a regular scheduled basis are another common method of serving rural areas. As additional contact points in the continuum of the health care structure they provide the same opportunities to carry out maternal and child hygiene actions that have been discussed earlier.

In general, rural health services in Latin America have made little effort to reach and influence the non-professional indigenous practitioner from whom the mother seeks advice and care (partera empírica and curandero). Yet, because of the proportion of the population served by these practitioners, such efforts are probably the first priority order to be explored in developing rural health services. Efforts should seek to influence the indigenous practitioners, so that they do no harm, so that they will apply those specific measures of screening or counselling adaptable to their use, so that they will recognize and refer to a professional resource the most serious problems they encounter. For some events, such as assistance at normal deliveries, it is possible to educate and supervise the partera empírica and to provide her with simple guides for service.

These efforts may not be successful for a variety of reasons, but it is a mistake to overlook this approach without trial when professional and paramedical resources are very limited. As the community

professional resources grow, more mothers will consult them directly, and gradually the indigenous practitioner will be displaced as a source of care regardless of whether or not such efforts are made.

It is difficult to leave the discussion of rural health services without some additional reference to the potential of mobilizing community self-help and aspirations through techniques of community organization that will link them with the delivery of important maternal and child hygiene services to the population. The potential promise of such efforts warrants operational research efforts which both outline a methodology that can be duplicated easily and justify its application by relating its costs to demonstrable improvement in the health of mothers and children.

PRENATAL CLINICS, WELL-BABY CLINICS AND HOME VISITING

These three hallmarks of traditional maternal and child hygiene originating in the urban areas of developed countries have been deliberately neglected in the previous discussion. The discussion has sought to demonstrate that the tasks they perform can be performed efficiently at various patient contact points in the structure of health care services or through follow-up systems which derive from this structure. It has stressed that such an approach is the priority point of departure for the construction of norms of maternal and child hygiene. The distinction between the follow-up systems described and the traditional triad of maternal and child hygiene services serves the very important purpose of allowing health priority ordered adjustments to be made which balance needs with resources.

Home visiting on a routine basis to deliver guidance and education to an unselected group of pregnant mothers or young children requires tremendous manpower resources and can be categorically classed as a low priority health service activity. However, there is a place for highly selected home visits which are linked to follow-up systems for nutritional rehabilitation or other specific indications providing the visits are feasible and the resources are available to carry them out.

The distinction between a well-baby clinic and the follow-up system for immunizations described as a derivative of the health care system may seem to be a semantic one, but this is far from the case. Return visits to an "immunization clinic" will be scheduled less

frequently, and the nature of the other tasks performed at these visits can be adjusted to priority needs and resources rather than following a standard routine.

Dietary supplementation or formula distribution services (gotas de leche) depend upon their relative importance in the health plan as discussed. The artificial feeding of infants is no longer the esoteric subject of 50 years ago. Preventive guidance on these matters can be given at many points within the structure of medical care services; high "disease-risk" and malnourished infants with mothers in special need of supervision can be selected out for more intensive follow-up and special services. Nutrition education is clearly a high priority task of maternal and child hygiene in Latin America. It is the points at which or from which the task is carried out and the techniques which are used to do so which require change rather than the objective.

The same principles of balancing needs with resources can be applied to prenatal care. The limited resources available to deliver the full complement of conventional prenatal care to all pregnant women requires a focus first upon those pathologies most prevalent and preventable during the maternity cycle or related to it, and the development of a maternal health care program related to disease priorities rather than to prenatal clinics. Thus tetanus neonatorum in rural areas may be prevented by working with parteras empiricas or by immunizing mothers during the latter part of the maternity cycle with choice of method depending upon community circumstances and resources. Special prenatal

clinics are a justified extension or derivation of medical care services only if their need can be established by the relative importance of the burden of pathology which they will prevent. However, even when established, the principles of recipient selection (separation of high and low "disease-risk" cases) the identification of specific tasks of service and the delegation of duties to trained paramedical personnel will reduce drastically the wasteful drain upon resources which characterize present norms of prenatal care.

As health resources and personnel increase in strength and numbers, the "immunization clinic" and prenatal services can take on more tasks, and home visits can be made less selectively. However, if the principles of health planning are followed literally it can be safely predicted that in Latin America the level of activities demanded by present norms of maternal and child hygiene will not be reached for many years to come.

THE CONSTRUCTION OF NORMS OF SERVICE

Relatively few if any countries in Latin America are homogeneous enough so that precise norms can be prepared on a national basis for application throughout the country. Each region or area of a country requires a "definition" of the norms that its stage of development can provide. Broad differences in the epidemiology of disease and the distribution of resources can be recognized at a national level and provide the framework for such a definition. Using such definitions and making use of the concepts discussed earlier, the construction of maternal and child hygiene norms and their integration with health care service norms

may be summarized as a series of steps to be applied at regional and community levels:

1. Define and weight in order of priority, the specific pathologies of the maternity cycle and childhood that characterize the area (3).
2. Define and weight in order of priority the specific child-bearing, childrearing and childfeeding practices which cause or contribute to these pathologies.
3. Outline in broad terms the maternal and child hygiene actions which can be applied to detect these pathologies early, to prevent them or to prevent their progression.
4. Estimate the proportion of the mother and child population reached at various patient contact points in the total continuum of the health care structure from the indigenous practitioner to the base hospital.
5. Select the actions and tasks which can be directly applied at each contact point or lead to the derivation of a follow-up system; and for each contact point rank these in order of priority. Follow-up systems provide additional contact points of application.
6. Adapt the task - this applies primarily to counselling and health education - to the realities (limitations) of the community and reorder their priorities accordingly.
7. List the techniques (in the most common sense of the word)

available to carry out each task at each contact point and rank them in order of probable effectiveness.

8. Reduce each task to an instrument* capable of expression on a cost per capita basis.
9. Develop specific criteria of high "disease-risk", which can be applied at various contact points so as to select on a priority basis the number of maternal and child hygiene service recipients or referrals to special follow-up systems.
10. Prepare three alternative plans for the delivery of maternal and child hygiene to the population: minimum, (no increase in resources), moderate, and maximum. Each plan will represent the combination of several tasks to be carried out at one or more different contact points and one or more follow-up systems derived from their application.

Costs and personnel needs will be greatest in the maximal plan and reduced in the other versions by the application on a priority cost-balance basis of different criteria of recipient selection, different techniques to carry out a task or the elimination of the task itself.

11. Incorporate the norms of service required for the implementation of the three plans into the norms of the health care service and the duties of personnel working each contact point.

*See reference (3)

Special norms of service would be prepared only for the follow-up service systems which derive from the health care structure. Norms so prepared should never be regarded as fixed. Planning is a continuous process which must perfect itself in the course of its evolution.

MYTH AND REALITY IN PLANNING

The translation of these concepts into practice will require drastic changes in the norms of service for maternal and child hygiene and in the disposition of personnel and personnel time assigned to carry them out. Greater changes and shifts will be required to implement a "minimal" plan than to implement a "maximal" plan. Such changes may not occur quickly or smoothly because man is not a wholly rational creature. However, if the goals of these changes are visualized clearly, a path to their attainment can be built. The path may not always be a direct one because impassable features of the terrain block a direct approach. Any change in the direction of the goal is progress toward it.

Change itself is both impeded and propelled by myths which surround the design and execution of health plans. It is impeded by myths which distort public health history and lead to the ritual repetition of systems of service whose logic and purpose are not justifiable in the context of Latin America. The separate structure of service for maternal and child hygiene is in effect such a ritual*.

*On the other hand there is need and logic in identifying within the medical care structure a system of service for total maternal health care and total child health care whose components include treatment and rehabilitation as well as "hygiene".

Change is impeded by myths of public health fable which substitute an assumed wisdom for scientific fact. This has been commented upon at many points in the discussion where the need for operational research to dispell these myths has been stressed.

Change is impeded by myths which deify the physician and his paramedical attendants and endow them with powers of acumen and performance which they do not possess because they are inadequately prepared and inadequately supported technically to discharge the functions expected of them. Health planning which includes measures to strengthen medical and paramedical education and in-service training and supervision will transform this myth to a reality that can at least be quantitated in the planning process.

Change is propelled by the heroic myths of human aspiration, an element which cannot be quantitated and whose effects cannot easily be predicted. It is this aspiration which pushes irrationally for a maternal and child hygiene "sub-sector" of health planning when logically all sub-sectors of health, indeed all sectors of the total national plan itself, will have an impact upon the health of mothers and children and the family units to which they belong.

Nevertheless the human aspirations expressed as society's special concern for its mothers and children must not be lightly disregarded. They are a catalytic link which can harness the forces of social change and political reality to the technical proposals of the planner. These aspirations demand full expression in their own right as part of the

promotional efforts which must both accompany planning and propel plans to achievement. It would be a serious mistake of judgement to overlook this special expression or to restrict its statement to a narrow sub-sector labelled maternal and child hygiene. The expression of these aspirations should draw together from within the health plans the full panorama of action which will benefit mothers and children. This panorama should be exposed to full public to view with all the sensitivity, conviction and force that its human values demand, so that in effect the health plan as a whole may become the "advocate " of the child.

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