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Views of a Health Administrator on Leprosy

Control Problems¹

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The Pan American Health Organization (PAHO), Regional Office for the Americas of the World Health Organization, has been concerned with the leprosy problem in the Americas since 1951. In 1956 a document was submitted to the Directing Council containing general guidelines for the organization of leprosy control programs in the Americas. Subsequently, in 1958—to confine ourselves solely to major developments—a Pan American Seminar on Leprosy was held in Belo Horizonte, Brazil, under the sponsorship of the Pan American Health Organization, and with the collaboration of the Government of Brazil. It dealt mainly with matters of leprosy policy and how best to approach the problems, which were very much in the air at that time. The recommendations of the Seminar were quickly adopted in the countries of the Americas, and now form part of the control programs under way.

In addition to our field work, since 1959 leprosy has been part of my day to day responsibilities. These include the examination of the programs under way. It has become increasingly clear that the administration of the control programs suffers from many deficiencies. They consist primarily of undefined and partially accomplished objectives, restricted program coverage, lack of continuity, and high cost of the activities undertaken. In view of these deficiencies PAHO organized another Pan American Seminar on Leprosy in 1963 in Cuernavaca, Mexico, with the collaboration of the government of that country. That seminar concerned itself exclusively with methods of administering health programs as applied to leprosy control programs. The report of the seminar is an extremely useful technical document whose influence on leprosy control programs cannot be estimated in the short period of time that has since elapsed, but which will undoubtedly have an enormous impact in the future (¹).

It is not uncommon to hear the directors of the Leprosy Control Programs complain that the resources available to them are not

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enough to allow them to carry out work at an acceptable level of efficiency. In some instances this assertion may be true, but in others inadequate distribution or unsuitable handling of money is the reason why programs do not achieve their objectives. The budgetary funds provided by governments are usually increased each year at a rate that is a little below that requested. The result of this increase in funds is usually an increase in the number of persons engaged, which, as times goes on, becomes rather considerable. Thus, if at any time the programs did have a definite objective, they soon lost it, and their overall objective has become not that of controlling leprosy, but of retaining present personnel, control of the disease being only a pretext. Similar examples could be mentioned, but they all add up to poor administration that undermines the efficiency of the control programs.

Leprosy control is an integral task that comprises case-finding, and treatment of patients, control of patients and their contacts, prevention of deformities and the physical, emotional, and occupational rehabilitation of patients. Prevention of deformities and physical rehabilitation are considered part of the treatment of leprosy patients. In our opinion it is the responsibility of attending physicians to give the necessary indications concerning prevention of deformities and the treatment of minor disabilities. Physical rehabilitation, i.e., the treatment of major disabilities, should be the responsibility of physical rehabilitation centers providing care for all types of patients, irrespective of the causes of their disabilities.

Applied researches of an epidemiologic, sociologic, and operational nature are normal components of leprosy control programs and are carried on as parallel activities with these programs.

The methods of administering leprosy control programs are nothing more than the methods of health administration applied to the disease, whether the programs are vertical programs, are coordinated with other programs, or are part of the activities of integrated health services.

For a better understanding of our daily

tasks, we have sub-divided health administration as follows: (1) planning; (2) programming; (3) organization; (4) evaluation; (5) education and training. Probably there are some persons who do not agree with this way of presenting health administration, but we are doing so because we believe that it provides a better schematic approach to administration, and makes it easier to apply in practice. In any event we would welcome any comments or suggestions that will help to eliminate any errors, and may also improve this process to which we attribute so much importance.

PLANNING

By *planning* we mean the study of a problem in the light of background information and with a view to making a diagnosis of the situation, a prognosis of the future trend of the phenomenon, and, in the light of this analysis, a decision on what has to be done (²⁻⁵).

The following, therefore, fall under *planning*: magnitude, importance, and nature of the problem. Epidemiology is of use here, but in order to collect information that will constitute epidemiologic data, a suitable statistical system, or data registration system, as it is called, is essential. This data registration system comprises reporting, registration, tabulation, analysis, interpretation, and publication of data.

Data registration system. The data registration system of a leprosy control program must have precise objectives if it is to be really effective. These objectives are, in our opinion, the following: registration of morbidity and mortality; registration of a limited number of basic events that may help us gain a better knowledge of the disease; registration of the necessary data for evaluating the control program; and, finally, registration of data concerning the output of personnel and equipment, for determining the cost of activities. Any other information needed for special studies should be collected by ad hoc systems.

In a study carried out some time ago for the purpose of setting up a data registration system in a leprosy control program, it was found, in examining the system in use, that, to collect the information, about 900

boxes contained in about 20 forms had to be filled in. Following this study a data registration system with precise objectives was prepared; the number of boxes to be filled in was reduced to less than 100; the number of forms was also reduced, and some of them were replaced by cards that could be filled in easily and counted. Although simplification of the system was necessary, even more important was the fact that as a result of simplification it was possible to begin to tabulate and analyze the information, a step that could not be taken previously despite the abundance of data collected. Analysis of these data brought out important facts that had hitherto been unknown, and which have since served as the basis for decisions and re-orientation of the program.

In an area of the program to which I am referring, four auxiliaries spent a whole week each month tabulating and presenting data on the work done. When the system was simplified, the auxiliaries gave up summarizing the forms. This became the job of a secretary, who found she could complete it in a single day. Thus, in addition to achieving a simple system, the equivalent of one auxiliary a month, that is to say, one month of work of one person, was gained for field activities.

Another consequence of the change was the fact that the data were complete and up to date. Since that time the data registration system has continued to play a very useful role in that country to such an extent that its use is becoming general throughout the national territory.

We should like to emphasize how essential it is that forms be as simple as possible, both in their design and in the way they have to be filled out. Also the number of forms, slips, cards, etc., should be as small as possible. It should be kept constantly in mind that in leprosy programs most of the forms will be completed by auxiliaries.

In the Pan American Health Organization, Dr. Enrique Pereda and I have designed a data registration system and submitted it to certain countries in the Americas for trial. Of course the system we devised needs to be adapted to the conditions and characteristics of the user country. At present it is being employed in

three countries: Argentina, Ecuador, and Venezuela. In Argentina and Venezuela it has been evaluated by the national authorities and the consensus is that this system enormously facilitates the work of the administrator at the local and the national level and makes possible continuous evaluation of the program. It is not easy for a medical officer to accept an administrative instrument like that at first sight; our experience is that his first reaction is to reject it, but after using it for sometime he is won over. The training of personnel, both in theory and in practice, is essential to the success of a data registration system.

A data registration system also calls for an accurate definition of the terms used in the system. A glossary of terms is urgently needed. A guidebook on the use and handling of the system helps personnel to master it, and to apply it in a uniform manner.

Control technics. Control technics are another aspect that should be examined in studying a leprosy control program. Generally speaking, the work technics used appear to be a matter of tradition, since they do not appear to be the most appropriate to the situation. A work technic should be analyzed from the point of view of its efficiency, secondary effects, ease of application, acceptance by the public to be benefited, and cost involved in employing it. Which technic is used will depend on the results of this examination. Although this is not the time to enter into a detailed discussion of the selection of work methods, a subject that needs a meeting all to itself, I might perhaps be permitted to illustrate with an example how expensive it can be under certain circumstances to diagnose a case of leprosy when case-finding is based on mobile units generally composed of a medical officer, a nurse, and a chauffeur, together with a vehicle. When the prevalence is low, especially in rural areas, an appreciable number of man-hours are devoted to detecting a single case. Naturally, we have mass programs in mind. Where an individual case is concerned, the approach is quite different. Use of a mobile team composed of highly trained personnel makes it possible to have a very accurate diagnosis, but it is a very expensive one

and in the long run it limits the scope of the program. The use of personnel whose services cost less than those of a physician, who are less well trained, and who are liable, as we know, to make diagnostic errors, both by over and under diagnosis, is surely a solution. If these paramedical personnel are trained to "over-detect" cases of leprosy when examining the general population, all the medical officer will have to do is confirm or reject the diagnosis in suspected cases. In this way the medical officer will be working with a selected population in which the prevalence of leprosy is high. The cost of each case diagnosed is significantly lowered. Similar examples may be cited.

A limiting factor in leprosy activities is our lack of knowledge of the productivity of control methods. If we knew that a method is capable of curing and rendering noninfectious a given percentage of patients when properly employed, then we should be in a position to establish precise objectives, and thus definite targets. In leprosy activities unfortunately we act on the basis of assumptions.

Resources. Before setting up objectives we must examine the resources available to carry out a control program. These resources are human and material. This examination will show us what is available as well as what we need in order to achieve the objectives established. In analyzing the resources available, we must also consider not only government funds but also those provided by private institutions whose assistance and participation we should make every effort to obtain. In addition, we should not overlook what the community itself can give. This is a source of resources that has not been explored, which may be of enormous value.

A leprosy control program should assemble all the resources available from government, private sources, religious institutions, the community, etc., in order to carry out activities at a level of efficiency that will significantly reduce the risk of contracting leprosy. The program should not be carried out, as at present, in separate activities, for if they are of value to the individual alone, they are of no significance as mass programs. Of course, an examination of the

resources must also determine what they can produce. Most of the time that factor cannot be calculated unless a prior study is made of the cost and yield of these resources.

Targets. The establishment of targets merits special attention. Targets of the following kinds, ranging from the most simple to the most complex, might be considered:

- (a) Examination of the spontaneous demand of the population.
- (b) Spontaneous demand plus examination of contacts.
- (c) Examination of a given proportion of the population representing the majority of persons exposed to risk.
- (d) Calculation of the proportion of the population that must be protected and treated in order to obtain a given reduction in the probability of contracting the disease.
- (e) Eradication.

The targets that most programs set for themselves are those that fall under (a) and (b). A small number of programs aim at target (c); in that case it is first necessary to decide which is the population, within respective jurisdictions, most exposed to the risk of becoming infected. Calculation of the proportion of the population that needs to be protected and treated in order to obtain a given reduction in the probability of falling sick, is the target that will bring most improvement, and is, therefore, in our opinion, that which every attempt must be made to apply.

We do not know what proportion of existing patients must be treated and controlled, or what percentage of infectious patients must be rendered noninfectious in a given period of time to give the prevalence curve a downward turn. This is a serious obstacle in orienting programs. The lack of this information should not, however, impede the preparation of sound programs initially based on arbitrary values with quantitative targets defined in terms of time and level of efficiency. A careful check on the progress of these programs would serve the purpose of control, and they would be of use as applied research. Their development might help us to clarify

and solve problems such as those I have pointed out above.

Just as it is necessary to determine the minimum level of efficiency in the objectives of the program, so it is necessary to determine the depth of the control program, since a control program can be moved from a level close to the actual prevalence of the disease to a point immediately prior to eradication. This determination must be made, although later the estimated values may be corrected, because the administrator needs to know the ultimate target in order to define the duration of the programs after taking available resources into account.

We are convinced that, in order to move forward, the programs, as was said above, must have quantitative targets, defined in terms of time and a minimum efficiency level.

Is it worth conducting programs whose targets are below what is considered the useful minimum? This question may give rise to discussion. We must not overlook the fact that we are dealing with mass programs. In our opinion, the assertion that it is preferable to do something rather than nothing, is to our mind losing ground. Anything below the useful minimum cannot lead to a reduction in the prevalence of leprosy. The individuals treated will benefit, but the community will not and leprosy will continue to exist there. The money invested in reducing the frequency of leprosy will not be accomplishing the purpose for which it was intended; in other words it would be wasted. In this case, it would seem better to use the money for another health activity that will give definitive results.

When no information is available on the prevalence of leprosy, we can start with arbitrary values slightly higher than what is considered to be the best estimate of the true situation. The activities to be carried out are calculated on this basis, and are defined in terms of time. Careful execution of the program, including performance of all the activities in the prescribed time periods, according to the methods of work and techniques established should show us, at the end of a given period, how close we are to the real values. In accordance with the

information collected, adjustments will be made in the program, especially in the targets, bearing in mind that our goal is the gradual reduction of the prevalence of leprosy to a point that must be defined.

I have not referred to the eradication of leprosy because I believe that our present knowledge of the disease, the methods for its control, and the efficiency of the methods, do not permit us to root out this disease.

PROGRAMING

Under this head we include the preparation of time-tables, in other words, the ordering of activities in time. The calculation of activities at the beginning of each annual period and thus cumulative monthly projection is the basis for control of the operation of the program. This is a procedure that should be introduced into all programs; every administrator at the local, intermediate, or national level should maintain a chart showing anticipated activities, by unit of time, and activities actually performed. In this way, if, in a given period, the number of activities performed is below that anticipated, he can arrange things in such a way that in the following period not only is the quota for that period attained but the shortfall for the previous month is made up. Thus, although there will be ups and downs, at the end of the year, the forecast would have been fulfilled. If the analysis of the work done is left to the end of the year, it may show that the number of activities performed is below that planned. If that were so, there would not be sufficient time to make the necessary corrections and we would find ourselves with a program that had not achieved its work targets.

ORGANIZATION

By organization we mean the ordering and coordination of resources in such a way that the objectives will be attained within the established deadlines, the product of activities will be of good quality, and the cost be as low as possible.

In setting up an agency, the objective is to define its functions and then its structure, and establish vertical lines of command and horizontal lines of coordination.

Leprosy control programs are no exception to these general rules. Observance of these rules would bring an enormous advance in leprosy control programs.

I shall not deal here with such matters as personnel, advisory services, inspection, budgeting, etc. They are all very important, but considerable time is needed to discuss them and I do not believe they are within the terms of reference of this paper.

Another point open for discussion is whether leprosy control programs should be independent, i.e., vertical programs (campaigns), or coordinated with other health activities, especially programs for the control of communicable diseases, or part of the routine activities of integrated health services. In my opinion the reply to this question will depend on the degree of development of the health services in the country concerned, and in different areas of that country. I believe that all of us who are concerned with leprosy would like control programs to form part of the routine activities of health services, whether those services are integrated or simply coordinated. However, experience shows that this is not always possible, and that we have a long way to go before this wish can be realized. Where conditions do not permit any other solution, a separate leprosy control service should be established, but it should be organized in such a way that it can be coordinated with other health activities as they develop, or can constitute the basis for the formation of local health services. Coordination with other health activities, where leprosy services already exist, is a step toward integration of functions. It often happens that other health services are unwilling to take on leprosy as a part of their duties; in this case, coordination should not be forced, since in the long run it will prejudice leprosy activities. It will have to continue as a separate service until the time is ripe; meanwhile educational efforts must be made to shorten the intervening period. One possible solution, when leprosy services are in a position to adopt it, and most of the time they are, is for those services to assume responsibility for other health activities such as immunization and the control of certain communicable dis-

eases. In this way a start is made on coordination, which, in addition to being useful, brings stability and continuity in activities.

EVALUATION

Evaluation is a continuing process, which is not limited solely to the objectives of the program, but covers all the stages of the program, and is projected beyond the program in the search for indices that disclose the effect of health activities (morbidity, mortality, for example). It is a difficult process, especially when we are dealing with activities that cannot be expressed in figures, or that are the object of subjective interpretation.

In order to have good evaluation it is first necessary to have quantitative objectives defined in terms of time, which will serve as the basis for the preparation of the plan of operations. In the plan of operations, in turn, the activities to be carried out in each unit of time must be defined. The technics to be employed must also be defined. All these activities are subject to measurement. The totality of the activities of the program should lead to a reduction in the incidence and prevalence of leprosy, that is to say, to a reduction in morbidity. This last measurement can only be made in the long-term, whereas the activities mentioned above can be measured immediately.

The cost of the activities is also a matter covered by evaluation. This is a very important point, and should never be lost sight of. There are methods of work which, although efficient, are also extremely costly, a fact that limits their scope; there are others which, although not as efficient as the former, are much less costly, and therefore can be used on a large scale. Many such examples can be cited.

The establishment of the cost of activities by work units makes it possible to prepare realistic budgets. For an administrator, this is basic and, at the same time, is of major importance for the future of control programs. It is easier to obtain the support of governments if they can be shown what the work will cost, and better still, if they can be shown that efforts are being made to reduce operating costs without lowering the quality of the work.

A comparison of the work planned with the work carried out will show how the program is progressing. In the case of case-finding examinations of great masses of the population, daily evaluation of the work will tell us, for example, whether or not the patients are actually being found in the groups in which they are usually found, or if we are examining a population in which the prevalence of leprosy is very low. If we are not alert to it, this last-mentioned situation may lead us into error, because, while the target of examining a given percentage of the population may be reached, we may be examining the wrong groups. This applies particularly, in my opinion, in rural areas. In some programs I have noticed that when population groups are being examined there is a greater attendance by women than by men, and that the age group under five constitutes the highest proportion of the group examined. This does not agree with what leprologists tell us about the situation in these areas, viz., that leprosy is more frequent in males, and most of the cases are diagnosed in the age groups 15 years and above.

Evaluation cannot be made without an efficient data registration system. Without this administrative tool, there can be no such thing as evaluation; furthermore, without a data registration system, a leprosy control program cannot operate.

I believe that for the purposes of evaluation special attention should be paid to the following points:

- (a) Morbidity and mortality.
- (b) Percentage accomplishment of the objectives of the program, and of the number of activities planned.
- (c) Quality of the work done.
- (d) Cost of activities carried out. Establishment of unit cost of activities.

EDUCATION AND TRAINING

It is a well-known fact that most physicians are not qualified to diagnose leprosy, especially in its early stages. The reason for this is that until recently, leprosy has been kept out of the regular medical activities, and only a group of specialists have devoted themselves to it, although with apos-

tolic fervor. Medical schools, as far as I can ascertain, do not include leprosy in their curriculum, or devote only a few hours to it; this is so even in countries where the prevalence of leprosy is high. It is therefore urgent to make the teaching of leprosy a regular part of the curriculum of medical schools, and to ensure that appropriate time is devoted to it. This holds true also for schools of nursing.

As people become more aware of what leprosy is, and as control programs are expanded, general practitioners will devote themselves more and more to this task, since the number of specialists is insufficient to meet the demand. If general practitioners are to work efficiently, they must be trained. Postgraduate courses at the country-level for general practitioners are a pressing need.

In view of the high costs of medical activities, and the need for leprosy control programs to cover all the areas in which the disease occurs and for carrying out activities at appropriate performance levels, the use of paramedical personnel, primarily properly trained auxiliary personnel, under the supervision of medical practitioners, is inevitable.

The training of auxiliary personnel should be carefully considered. In our region we have had little experience in the use of auxiliary personnel in carrying out delegated functions in leprosy control programs. In a country in which auxiliary personnel were trained to undertake case-finding examinations of the population, the results have been highly satisfactory. These personnel were trained to screen persons suffering from leprosy. They registered suspects and referred them to the medical officer concerned. The medical officer made the definitive diagnosis. As a result it was possible to extend the program to cover the whole country, and the operating costs were considerably diminished. Auxiliary personnel are also responsible for the regular control of patients and contacts, and for educational activities designed to prevent the occurrence of disabilities.

Although our experience in the use of auxiliary personnel in leprosy control programs is limited, I am convinced that this

method of work must be used increasingly in the future if we really want to make sure that leprosy control programs achieve the levels we propose.

We should not overlook other very valuable health personnel such as nurses, health inspectors, etc. They too should be given training in leprosy.

One resource that has been very little used is that offered by the community. I believe that the collaboration of the community can be extremely useful in leprosy control programs. One form that this collaboration might take would be the participation of volunteers who would be assigned a specific task, for which they should be trained. Here again, our experience is limited. Recently we began to use volunteers in leprosy work. They have been entrusted with the distribution of drugs to patients and are responsible for ensuring that the group of patients assigned to them take the drugs with the frequency and in the form recommended by the medical officer.

What should be taught, how it should be taught, and how long training should last, are matters that must be solved in each particular case. However, general recommendations for each case would be very useful, since they would curtail the process and would create a kind of common denominator in teaching that would facilitate comparison of the experience gained in this field in different areas of the world.

We do not know anything about how to approach the community in order to teach it about leprosy, how to eliminate its prejudices against the disease, and how to create a favorable attitude toward leprosy patients. These are matters we should deal with as soon as possible. In our own region, practically nothing has been done in this connection, and it is a matter of serious concern to us.

As for the health education of patients, contacts, family members of patients, etc., we know little about the procedures. A leprosy patient, for various reasons, cannot be treated in the same way as a typhus or diphtheria patient. The leprosy patient and his contacts and family call for a different approach. As time goes on, if our efforts to put leprosy on the same footing as other

infectious diseases are successful, our approach to the health education of the leprosy patient and his social relations will probably not differ very much from that used when dealing with other chronic infectious diseases. In our opinion, just as it is necessary to study how to approach the community about leprosy, so we must study how best to approach the leprosy patient, his contacts and family members in order to ensure that health education produces the greatest impact.

As far as education and training in leprosy are concerned, I believe that a meeting of all persons interested in the subject should be organized to discuss the problem, exchange opinions and experiences, and recommend the steps to be taken. Such a meeting would undoubtedly lead to the preparation of teaching material of the highest quality, which might also be suitable for common use. If so, it would save much work and expense. Standard education programs, flexible enough for adaptation to local circumstances and the conditions peculiar to certain areas of work, would also be a great help. General recommendations on our approach to the community and on the health education of patients and contacts are also necessary.

Any professional health worker engaged in leprosy control programs should, in my opinion have an overall knowledge of the program and the reasons justifying the procedures being used. Thus, each one should know how a program is prepared, how it is conducted and evaluated and what various elements make up the control program, with emphasis naturally on his particular speciality. In this way, the program will not be fragmented. It will be given an integral character, and each professional will understand, and be familiar with the *modus operandi* of his colleagues in fields different from his own, with the result that all will share a community of interest.

SUMMARY

This paper deals with various aspects of the administration of leprosy control programs under the separate headings of planning, programming, organization, evaluation,

and education and training. Under planning are included considerations on epidemiology and statistics, data registration systems, control technics, resources, and objectives. Programing calls for a time-table of operations. Organization involves function, chains of command, control, inspection, budget and other considerations. Evaluation is a continuous process covering the attainment of objectives in terms of percentage accomplishment toward goals in morbidity and mortality, and such factors as quality of work and cost of activities. Education and training deal with the training of medical students, general practitioners, specialists, paramedical personnel, personnel provided by the community, and volunteers.

Leprosy control programs are presented as an integral unit. Case-detection, treatment of the sick, control of patients and surveillance of contacts, prevention of deformities, and physical, social, emotional, and occupational rehabilitation are components that should find their place in all leprosy control programs. Applied research of an epidemiologic, sociologic and operational nature must be regular, and parallel activities in all leprosy control programs.

RESUMEN

Este trabajo se refiere a los diversos aspectos de la administración de los programas de control de la lepra, divididos bajo los títulos separados de planeamiento, programación, organización, evaluación, educación y adiestramiento. En planeamiento se incluyen consideraciones sobre epidemiología y estadística, sistema de registro de datos, técnicas de control, recursos y objetivos. Programación incluye las tablas de tiempo. Organización comprende funciones, líneas de mando, control, inspección, presupuesto y otras consideraciones. Evaluación es un proceso continuo que cubre el logro de los objetivos en términos de porcentajes logrados hacia la meta, expresados en morbilidad y mortalidad, y factores tales como calidad del trabajo y costo de las actividades. Educación y adiestramiento se refiere al adiestramiento de los estudiantes de medicina, médicos generales, especialistas, personal paramédico, personal proporcionada por la comunidad y voluntarios.

Los programas de control de la lepra se presentan como una unidad integral. Búsqueda

de casos, tratamiento de los enfermos, control de los enfermos y vigilancia de los contactos, prevención de las deformidades y rehabilitación física, social, emocional y vocacional son componentes que forman parte de todo programa de control de la lepra. Investigación aplicada de orden epidemiológico, sociológico y operacional deben ser actividades regulares y paralelas en todos los programas de control de la lepra.

RÉSUMÉ

Cet article traite des divers aspects que revêt l'administration des programmes de lutte contre la lèpre, en les considérant sous les chapitres séparés suivants : planification, programmation, organisation, évaluation, éducation et formation du personnel. Dans le chapitre se rapportant à la planification, on a repris des considérations se rapportant à l'épidémiologie et aux statistiques, aux systèmes d'enregistrement des données, aux techniques destinées à lutter contre la maladie, aux ressources, et aux objectifs. La programmation requiert un calendrier des opérations. L'organisation fait intervenir la définition des fonctions, l'organigramme des responsabilités, la supervision, l'inspection, les aspects budgétaires, ainsi que d'autres considérations. L'évaluation consiste en un processus continu qui se rapporte à l'accomplissement des objectifs, en terme de pourcentage des buts qui ont été atteints, tant en ce qui concerne la morbidité que la mortalité, et qui fait intervenir d'autres facteurs tels que la qualité du travail et le coût des opérations. L'éducation et la formation traitent de la formation des étudiants en médecine, des médecins généralistes, des spécialistes, du personnel para-médical, du personnel fourni par la communauté, et du personnel volontaire.

Les programmes de lutte contre la lèpre sont présentés comme une unité intégrale. Le dépistage des cas, le traitement des malades, leur contrôle ainsi que la surveillance des contacts, la prévention des difformités, la réhabilitation physique, sociale, affective, et occupationnelle, constituent des éléments qui devraient trouver leur place dans tout programme de lutte contre la lèpre. Des recherches appliquées, dans le domaine de l'épidémiologie, de la sociologie, et des aspects opérationnels, devraient constituer des activités habituelles et parallèles dans tous les programmes de lutte contre la lèpre.

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[NOTE: All mimeographed. Copies of any or all will be supplied on request to Dr. Huerta at the address given in Footnote 2.]