

HEALTH CARE FOR THE DISPERSED RURAL POPULATION¹

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A minimum program to meet the health needs of the dispersed rural population in the developing countries of the Western Hemisphere is proposed, on the premise that the improvement of their health conditions is a pressing obligation and a prerequisite to development.

Background

Within the broad category of rural population, which in Latin America varies according to the demographic, economic, and social pattern of each country, it is possible to distinguish what might be called the "dispersed rural population." As a rule it consists of the inhabitants of communities of not more than 500 persons and it accounts for a large proportion of the total population in many of the countries. With due recognition of the differences between countries, it may be said that living conditions in a great many of these villages are very poor. Environmental sanitation, housing, and diet are inadequate. The people are largely illiterate and work at the most primitive kind of farming. Isolated from urban centers, they often preserve an archaic culture and speak vernacular tongues.

Since demographic data—vital statistics, age-specific mortality rates, birth rates, and other indicators—are incomplete, it is difficult to determine the true state of health in many of these communities. But it may safely be said that good health can hardly exist in such conditions.

Apart from the fact that neglecting such groups is conducive to social unrest, it is clearly the obligation of every government to provide services to all the inhabitants of

its territory. These people are like others in wanting their health problems attended to; furthermore, health care is a prerequisite to their development. Where little has previously been done, simple measures can accomplish a great deal. The ills that afflict this population could be considerably reduced by some of the now-traditional methods of primary prevention—such as immunization programs and the regular provision of first-aid services—and these have the added advantage of being relatively inexpensive.

Health Problems of the Dispersed Rural Population

In the dispersed rural environment, morbidity and mortality from viral and bacterial diseases and nonbacterial parasitic infections is high. The perpetuation of these diseases in endemic form is promoted by chronic malnutrition and by high fertility in mothers whose children suffer from congenital weakness.

The damage done by degenerative diseases is unknown, but it may be guessed that only the strongest survive and furthermore that the average life will not be very long. The average age of the population is probably very young, yet more than half the mortality may be assumed to occur in persons under 15.

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Possibilities for Solving the Problem

The natural and logical solution to the many problems of the dispersed rural population is a program for their total economic and social development. Besides health services, such a program should include land reform, education and vocational training, employment opportunities, means of transportation and communication, and social welfare measures. To be successful, this program must be carried out in a coordinated fashion. Calling as it does for sociocultural as well as material change, it should be planned in stages. It will therefore require not only considerable financial resources but also a rather long period of time.

In the absence of this kind of integrated development, a permanent professional medical service for the dispersed rural population will be both difficult and costly. Few physicians will be attracted to such an environment, with its lack of opportunity for professional and personal advancement, of scientific facilities, of urban amenities. Those who go are apt to misunderstand the people and be misunderstood by them, and to suffer from a sense of failure.

A service based on periodic medical visits is no real answer. Disease does not wait for the physician's arrival to strike. Acute diseases must be treated promptly, and many other diseases cannot be properly attended to in such a short time. Health education requires a regular, continuing program. In addition, periodic visits are expensive, impossible to schedule because of local weather conditions, and exhausting.

All this suggests the advisability of setting up, for the time being, a relatively comprehensive program for minimum health care provided by a trained health auxiliary according to a clearly defined work program. This worker must be an integral part of an organized public health service that trains, directs, and supervises him and that he may call upon whenever he needs help.

Work Program

An action program should be drawn up on the basis of the priority of the problems it is intended to solve; of the knowledge, techniques, and resources—in both money and personnel—available for the purpose; and of the ecological and cultural circumstances. Consequently, it is impossible to establish a program that would be fully applicable to all the developing countries in the Hemisphere or even, in some cases, to every region in a single country. However, an attempt will be made here to outline, in no special order, the bases of such a health program for the dispersed rural environment. The definitive work plan must be formulated by the local health administrator who will be in charge of the service.

Basic Activities of the Program

The basic activities of a health program for the dispersed rural population may be divided into three categories: (1) collection of data on births and deaths, to make possible the compilation of vital statistics; (2) disease prevention and health promotion, including immunizations, maternal and infant care, environmental sanitation, and the taking of samples for laboratory examinations; (3) health restoration, comprising first-aid and some emergency treatment and also mass treatment as part of specific campaigns against particular diseases.

It should be remembered that this program will be carried out by auxiliary personnel. They will need a clear explanation of what they are to do, and the work should be simplified as much as possible so that they can perform it with little difficulty. It is advisable that their duties be set forth in a work manual, of which each has a copy.

Collection of data on births and deaths. These data will make it possible to determine the natural growth of the community in a given period of time. All the auxiliary has to do is note down, in the simplest possible manner, the following information: for

births, the date and place, the sex of the infant, and whether it was alive or dead at birth; for deaths, the date and place and the sex, name, and age of the deceased, with perhaps the possible cause as gathered from signs and symptoms described by relatives. This information need not be confirmed by a family member; the auxiliary need only be aware that the birth or death has occurred, and in a small rural community everybody hears about such events immediately. With respect to births, the mother's name may be added so that she and the baby can subsequently receive adequate care, and the auxiliary should end by advising the parents to register the birth officially.

The information, after being properly recorded, should be examined by the supervising nurse, who can make use of it for purposes of in-service training.

Disease prevention and health promotion. Immunizations are an important part of this work. The types and methods must be determined by the local public health organization, but transportation and preservation problems suggest the advisability of freeze-dried vaccines.

Maternal and child care may be directed primarily toward supervising the local midwives and giving them simple instructions on personal cleanliness and hygiene for the mother during her confinement and on asepsis in cutting the umbilical cord and protection of the infant's eyes. They should also be taught when to refer an expectant mother to the medical service and, above all, what not to do. The mother should be advised on her own and her baby's diet and hygiene, and she should be watched during childbirth for signs of hemorrhage or puerperal fever, so that if necessary she can receive first aid or medical care.

In the matter of environmental sanitation, the people should be aroused to an interest in solving their water supply and excreta disposal problems. Once they are willing to take an active part in solving these problems, the auxiliary should request advice

from the health service, through his supervisor. Local needs may require that priority be given to other activities, such as a campaign against vectors.

Health restoration. In regard to first aid to accident victims, the auxiliary's function is to refer them to the medical care service, so far as possible without further damage and suffering on the way. In cases of drowning, obviously, the auxiliary should perform mouth-to-mouth artificial respiration.

In mass campaigns against certain diseases, the auxiliary will take samples and send them for laboratory examination. He may also refer suspected cases to the proper service and distribute medicines.

The auxiliary should also provide first aid to patients suffering from certain locally common, easily diagnosed diseases for which the treatment is specific, simple, and not dangerous. The delegation of curative duties to an auxiliary may be the most controversial aspect of the present proposal, but the epidemiological, sociocultural, and administrative circumstances of the dispersed rural environment make it necessary. Besides reducing mortality from such diseases, it serves the purposes of promoting an acceptance of preventive measures and increasing coverage. The structure of the program is entirely up to the local medical service.

The auxiliary should not act arbitrarily; he should only attend diseases that have been previously selected by the epidemiologist and for which he has received training and has clear guidelines in his work manual to follow. Pneumonia and childhood gastroenteritis are examples of acute diseases with high mortality rates in the dispersed rural environment that could be reduced by early treatment. Fever, cough, and dyspnea are easily observed signs of pneumonia; penicillin administered early is effective, and the risk of an allergic reaction is unimportant compared to the number of deaths that may be prevented. If patients do not have easy access to this treatment, they can only resort

to the local methods or make an effort to reach medical care, which is usually so far away that they cannot get there in time for any treatment to be successful.

From the sociocultural standpoint, a minimum curative service is essential to winning the community over to acceptance of preventive measures. To rural people the only value of medicine is in its healing power; they do not know enough to appreciate the value and importance of prevention. Since the prestige of the service depends on how well it does what is expected of it, any public health program, however modest, must offer the community a minimum of curative care to meet the most urgent needs.

Organization of Work

It is well to repeat that no universally applicable standards can be formulated for the organization of the health service, any more than for its program. However, just as an attempt has been made to outline a work program, some general principles will now be discussed as a guide to organization. These principles have to do with the area that may be covered by the auxiliary and with the equipment and premises he will need. Suggestions will also be made about working conditions—hours, pay, supervision, and evaluation—and about the selection and training of candidates.

Area. Each auxiliary's working territory should be clearly delimited. How large an area it should cover depends on the communications and transportation available; therefore, it should be determined not by the distances involved but by the time it takes to cover them. For each eight-hour day the maximum radius may be regarded as one hour's travel each way. Where the journey will require two hours, the auxiliary should arrange to stay overnight.

Premises. To start with, a minimum sort of shelter—one room built of local materials, with space for waiting and proper protection from the weather—will suffice. Later, as the

service gains prestige, the community will surely help to improve its quarters.

Furniture. The furniture, locally made, may consist of a bed or cot, a table, three or four chairs or benches, and rough boxes or cabinets to keep medicines in.

Equipment and supplies. The equipment need be no more than a device and receptacles for boiling water and sterilizing hypodermic and other necessary instruments such as needles, scissors, lancet, and forceps. The drug supply will depend on the objectives of each program.

Personnel. The service will be in the charge of one health auxiliary who must live in the community and work full time, with no other paid employment since he must be available in any emergency.

His salary will come out of the local budget, and even though this is a temporary service it is advisable to provide incentives and certain social benefits to retain the personnel until the region has developed enough for a permanent, properly equipped and financed medical service to be established.

Where auxiliaries with a certain amount of basic education are available, a good incentive would be to give them an opportunity to study for a degree, as in nursing, for example. In other places—perhaps the majority—where the auxiliaries' education is rudimentary, the incentive might consist of progressive salary increases for merit and length of service, and social benefits such as retirement pensions, separation pay, compensation for accidents on the job, and schooling for their children.

It is advisable for the nurses in charge of training the health auxiliaries to be their immediate supervisors, since they know the program and the individuals. Periodic supervision should constitute an extension of in-service training and be as frequent as possible (this is essential to the very existence of this kind of health service), and the supervisor's attitude should be one of assistance and encouragement rather than of criticism;

the understanding and tolerance needed are possible only if she is fully identified with the culture in which she works. For purposes of evaluation, the quantifiable data should be simple and contained in as simple a report as possible.

Selection and Training of Health Auxiliaries

How health auxiliaries are to be selected and trained depends on the work program and the manpower available in each place and also on the health policy of the country.

Auxiliaries should be free of physical and functional defects that would hamper them in their work. They should be mature in personality, emotionally stable, and talented in dealing with people. In age they may range from 18 to 40 years.

With respect to sex, the preference will depend on the culture of the region and the nature of the work. In general, however, the more common attributes of the two sexes in this work may be described as follows: men have more stamina and physical capacity for travel, and may be away from home for a period of time, but they are more ambitious with respect to income, and must be supervised by persons of the same sex; women have firmer ethical standards, a greater sense of responsibility and discipline, greater domestic stability, and more modest financial requirements, but they are at a disadvantage physically and are less free to travel.

Ideally, the candidate will be a native of the place where he is going to work. In any case, it is essential for him to have lived there, for this means that he will know the topography and problems of the region and will have first-hand experience of the people's way of thinking, emotional reactions, customs, superstitions, and vernacular.

The educational requirements will depend on local conditions. Where there are no schools, or where such as exist go only as far as the first elementary level (third year), the candidate need only know how to read

and write. In places where more advanced schooling is available, completion of the third grade or a full primary education may be required. If candidates are expected to have more of an education than the local institutions provide, it will be difficult to obtain natives or residents. Furthermore, persons in such regions who acquire more education aspire to professions more lucrative than that of a health auxiliary and do not stay long even if they accept.

Although any civil status is acceptable, preference should be given to candidates who have a stable home and a good moral and social reputation in the community.

The training of auxiliary personnel should take approximately three months and should be primarily practical, since it is designed to prepare the candidate for a minimum, clearly defined program. It should be conducted by nurses specially qualified for teaching and for the administration of field work and, above all, dedicated to their work. There should be no more than 10 students to each instructor.

The teaching centers should preferably be situated in the dispersed rural environment and must be attached to a small hospital of 30 to 50 beds. Training in urban hospitals has three great disadvantages: (1) if the candidate shows ability the hospital may end by offering him employment; (2) during his training the candidate may break his ties with his native region and decide not to go back; (3) the techniques and equipment used will not be available in rural work areas.

It is therefore advisable that training be carried out in the modest rural hospital center from which the auxiliary will be working and to which he will send cases that present problems. This will make possible the good personal relations that are essential to proper coordination of work.

Both in training classes and in the manual, the language of the area should be used. Scientific terms have two great disadvantages: first, they hamper learning; second, if

the auxiliary becomes familiar with them he will tend to use them in his work and ordinary people will not understand him.

Other Personnel

In places where a service with full-time auxiliary personnel cannot be organized, a more limited health program can be set up using rural schoolteachers, policemen, or other local technical personnel—for example, agricultural agents or foresters.

The training of such personnel would be oriented in the same way as that of health auxiliaries, adapted in content to the particular program. Their health work would be directed and supervised by the local public health service in coordination with the government department by which they are employed.

Obviously, any activity assigned to them under the health program must be handled in such a way that it will not interfere with their regular work, will not take much of their spare time, and can be carried out effectively.

An effort should also be made to have the school serve as a continuing example for health education. Words or phrases with a health content can be used in literacy classes. With student participation, programs for water purification, excreta disposal, and garbage removal, among others, should be encouraged. The teacher's health service to the community may be limited to the gathering of data on births and deaths, immunization, and first aid to accident victims.

Vacation periods and frequent moves from one place to another limit the use of these personnel. In the case of teachers, the vacation is three months, which are usually spent in taking courses. The teacher might be able to train some local volunteer—perhaps a student in a higher grade—to take his place during this period.

In some places there may be certain drawbacks to using unpaid volunteers on a permanent basis. Standards, techniques, and

discipline may be difficult to enforce in such circumstances.

This does not mean that volunteer work is not to be valued; on the contrary, the amount of cooperation provided by the community may be a good indication of what it thinks of the health service. Country people have often been known to contribute their labor for the construction of rural aqueducts, access roads, schools, and dispensaries, displaying a spirit of altruism and an aspiration toward change and development. To be sure, they are more inclined to understand the value of an immediately useful object than that of continuing, routine work such as health protection through vaccination, which requires a much more highly developed capacity for abstraction than the typical countryman has. It is therefore difficult to motivate them to systematic, technically guided cooperation over an indefinite period of time. However, a desire to serve and a spirit of solidarity are common human attributes, and wherever they appear they should be used. The organization of volunteer work is a wise measure in good health administration.

A progressive country should not evade its responsibility to provide health services to the dispersed rural population—services that not only are essential to their economic and social development but may perhaps give them, who have nothing, some of the well-being and happiness they deserve.

Summary

Within the broad category of rural population, which in Latin America varies according to the demographic, economic, and social pattern of each country, it is possible to distinguish what might be called the dispersed rural population. As a rule it consists of the inhabitants of communities of not more than 500 persons living in very unfavorable socioeconomic and health conditions.

Assuming that it is the responsibility of health services to seek to change these conditions and to foster the progress of this appreciable segment of the rural population, it is first necessary to decide on the type of health

service that can be of the most benefit to it, given existing possibilities and resources.

Because of the lack of reliable vital statistics it is extremely difficult to establish age-specific mortality rates, birth rates, and other equally important indicators for the dispersed rural population. Nevertheless, it is to be assumed that the environment in which that population lives is not conducive to its health and welfare.

The solution of the problem will have to be found in the context of the general development of each country. While such a change is being brought about, a minimum health care program can be drawn up for the dispersed

rural population. Under present circumstances it would be very difficult and very expensive to base such a program on permanent services provided by professional health workers. It is therefore proposed that a permanent and fairly comprehensive service staffed by auxiliary health workers be established and tailored to a well-defined program based on sound epidemiological principles, and that the general norms covering the organization of activities and the training, supervision, and evaluation of personnel be worked out. Administratively, this infrastructure would be considered as forming an integral part of the general health service. □