OPERATIONAL RESEARCH

PRIMARY HEALTH CARE UTILIZING PROMOTERS IN THE RURAL AREAS OF ECUADOR

FUNDACION EUGENIO ESPEJO - SEDE QUITO.

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THE TRANSLATOR.

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PART ONE

INTRODUCTION

I. ABSTRACT

The health promoter system, found within Primary Health Care Strategy, constitutes a useful element to develop the Coverage Extention Program.

The central purpose of this research is to study PHC interventions utilizing health promoters in the rural areas of Ecuador.

Following the operational research methodology several problems were detected as constraints to the better development of the work of the health promoter. The problems outstanding and constituting the purpose of this research were:

- *Supervision*
- *Supplies*
- *Training*

a. The Problem of Supervision

The causes of the supervision problem are a set of elements grouped as restrictions and decision variables, which, because of their low degree of knowledge and assumption, limit a better course along the process.

Presently, supervision does not constitute a standardized aspect, therefore, there is lack of a system concerning programming aimed at designing adjustments and providing feedback. There is not a clear definition of functions regarding supervision roles, necessary for the different agents involved in the process of Primary Health Care. There are not technical homogeneous adequated tools available. The lack of knowledge of the areas is often translated into transportation problems, contacting frequency, costs, and contacting length. These limitations have stopped promoter's work from being developed into an articulated system.

OBJECTIVE OF THE SUPERVISION PROBLEM

The objective set for the supervision problem was:

"To identify a method to improve the supervision system"

The research worked towards this objective by defining the elements which constitute supervision and providing solution responses in two fields:

- Variables which condition and surround the object.
- Variables which involve contacting aspects.

The first field dealt with variables such as:

- The health level to which the promoter can have easier access.*
- The most convenient agent among several agents.
- Contacting frequency.
- Adequated number of promoters under one supervisor.
- Minimum costs.
- The supervision routes.

The second field defined:

- The lenght of the contact.
- The tools used in supervision.
- The activities performed during contacts (documentary research, field research, evaluation, continuous training, and programming).

The variables defined before were disclosed and expressed through technical tools in order to find their magnitude. Additionally, socio-economical and demographic variables were included.

It is important to note that although supervision and supplies are two different aspects, they were treated simultaneoulsy in the stage of data collection, since they presented common variables.

The physical universe comprised six provinces in Ecuador: two at the coastal area, (Esmeraldas and Guayas), two at the highlands (Imbabura and Bolívar), and two at the eastern area - oriente - (Napo and Morona Santiago).

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* Health post, sucbenter, and county hospital.

FINDINGS OF THE RESEARCH:

REGARDING THE PROMOTER:

- The promoters meet about once a month with a possible supervisor.
- The promoters give approximately three hours and a half of service a day.
- The supervisors are located away from community levels.
- The promoters perceive the supervisors as partially efficient in their supervision activities.

REGARDING THE SUPERVISOR:

- The supervisors are in charge of two and a half promoters.
- The supervisors have approximately 15 contacts with promoters a year, however, these do not necessarily constitute supervision contacts.
- The supervisors feel that the MOH does not appraise their work.
- The supervisors think that they need more training and financial resources to improve their work.
- The supervisors feel that their roles are not defined.

DEVELOPMENT OF RESPONSES

Using these and other variables we began the design of alternative responses. They were then analyzed by different experts and officers from the MOH who have decision power to this regard.

This process was useful to select the most convenient alternative:

TESTING THE RESPONSE:

The tests were carried out in the months of June through November, 1985. We worked with a sample at provincial level rather than with a sample

at national level, since provincial systems had to be considered to execute the experimental design.

Two provinces were considered as experimental and two other as of control, in order to stablish differential ranks which could be attributed to the innovative effect of the response. Additionnally, the possibility of considering a pre-test and a post-test situation was assessed. The beginning of this test consisted in a training workshop for the promoters, supervisors and other agents who take decisions at central level and provincial levels. Participants from popular local organizations were also present. The workshop included several techniques of education and popular participation. One technique which was widely used was the work by nominal groups.

RESULTS:

- In the period June-November 1985, the average number of visits received by the promoter was 3,4 in the experimental provinces; and 1,8 in the provinces of control.

- The average number of hours the supervisor spent wiht the promoter was 9 in the experimental provinces and 3 in the provinces of control.

- During the same period, the supervisors of the experimental provinces met with a community leader in an average of 3 times each, and in the provinces of control the average shown was 0,6 times.

- The promoter together with the supervisor visited pregnant women an average of 3 times in the experimental provinces and 0.83 times in the provinces of control.

The activities which received enough support from the supervisor, and which have 100 % of significance, are: conferences, control to pregnant women, curative actions to children and adults, observation to water sources, disposal of garbage, disposal of excreta, health education, control of diahrrea and respiratory diseases.

CONCLUSIONS:

- The response has been produced, since the variables which have to be taken into account to estimate the lowest cost have been defined, in a way that it can be applied to any province of the country.

- The response has been produced, within the contents of supervision, which will increase promoter's output considering large possibilities for programming and evaluation.

b. The problem of supplies.

Since this problem present variables which are common to supervision, it was analyzed and worked with jointly in the different stages of the research.

OBJECTIVES IN THE DEVELOPMENT OF SOLUTIONS:

We found the following general objectives:

- To develop a response for the problem of supplies.
- To develop a logistic model to facilitate the elaboration of exact figures about human resources, material, and financial resources, to increase benefit regarding the community at the lowest cost possible.

PRELIMINARY CONCLUSIONS:

- There are not any regulations regarding supplies to the promoters therefore the promoter has to create last-minute responses which are usually out of the program control, using traditional medicine, particular apothecaries, and using unproper medicine contributing to increase prices and lower effectiveness.

- There is a very varied demand of medicine, regarding amounts and time or frequency, due to specific circumstances lived by the promoters (distance , transport, weather, financial resources).

- 45% of the promoters (100% = 112) express they have the necessary tools for first-aid services. 85% do not have materials for conferences in the community.

TESTING THE RESPONSES:

For this problem an inventory control form was designed. This form will be useful to periodically and systematically watch for a regulated provision. A complementary order form was elaborated for the promoter, giving the supervisor the responsability of the provision from the health post or sub-center. Said provisioning can be made through the Program of Basic Medicine of the Provincial Health Office.

Supplies must be provided monthly when the supervision visit is paid.

RESULTS:

Parallel solutions were developed for supplies and for supervision. Along the response designed for supplies, levels were included in the selective aspects: the normative level, and in the purchase aspects the operational level, resulting in a constant feedback through a system of information managed by the supervision using tools such as: the order form for medicine and materials, and the monthly record of consumption.

The responses have required teenical support for the administration of medicine and for their periodic supplying, avoiding the varied purchase channels used before.

A very important restriction to make the response work is the lack of economic resources for the purchase of medicine. The fund initially assigned to the promoter was obvioulY spent because of the high cost

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of medicine on one hand, and of the community's requirements which make the promoter give the medicine on credit basis, difficulting the collection of money to make new purchases.

C. The problem of Training.

The training subjects and modules for health promoters, designed according to the definition of the occupational profile, are consistent regarding the coherence kept with the concepts of Primary Health Care strategy. Nevertheless, the contents and the training techniques have not been developed enough, viewing from a perspective which considers the relationship the peasant sectors have with the State and the cultural background they present.

Here lays the importance of assumming the traditional forms and the most recent adaptations, which conform systems which are opposed to the formal systems, but which summarize the central problem of training.

This situation of not asumming the traditional aspects has derived in a problem of programming since this popular kind of knwoledge has not been operatively incorporated.

Since this training process is more oriented towards the institutional needs the promoter is not completely identified with the community needs and is located out of his socio-economical-cultural context.

The monitoring system, regarding the continuous education towards the promoter, which enables him to reinforce and up-date his knowledge is unsufficient.

- The requirements regarding skills and attitudes of the trainers have not been clearly set. There is not an interdisciplinary team in charge of the integral training.

- The training methodology used has not set cognoscitive objectives, neither affective or operational objectives in every area.

- There is not a proper technology regarding popular education for this kind of training.

- The trainers do not work continuously.

According to the situation described, the project designed the following goals:

1. Optimize the program of contents of the training course in order to satisfy the needs of the local communities of the country.

2. Maximize the training process, in order to help promoters to satisfactorily carry out the execution of the objectives of Primary Health Care.

3. Minimize training costs regarding decision variables:
   - Formal and non-formal teaching methods.
   - Training agent's skills.
   - Time dedicated to each module.
   - Time dedicated to theory vs. time dedicated to practice.
   - Community participation.

The development of the research has reached a diagnosis of the situation, offering quantitative and qualitative results, about the set of variables of decision and restrictions involved in the training process.

This information has led us to the design of valid conclusions and suggestions, which, considered together, will make possible the experimentation of possible alternative responses likely to be implemented by the Ministry of Health.

METHODOLOGY:

This research dealt with this problem in the provinces of Manabí (coastal area), Carchi, Cotopaxi and Tungurahua (Highlandean region). A total of 30 promoters worked in these provinces in their respective 30 communities: 7 families were interviewed in these provinces. A total number of 50 families average per community is estimated, therefore, 210 interviews would correspond to 14% . Additionally, observation guides and interviewing guides were handed to every promoter.

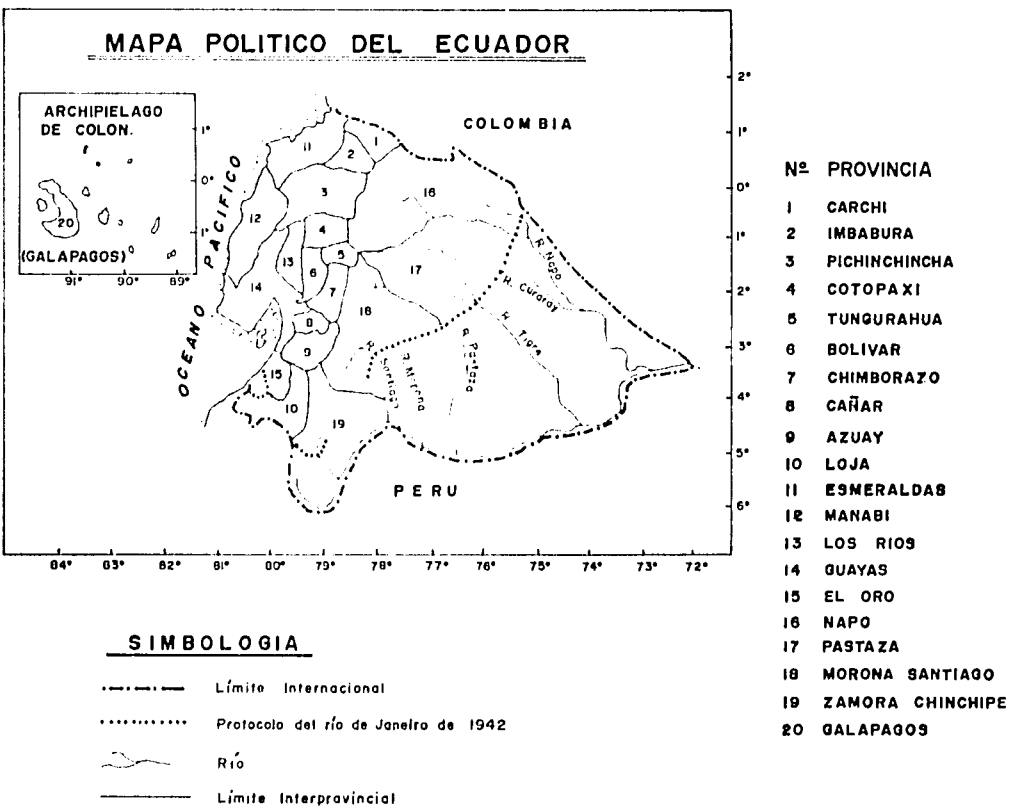
II. BACKGROUND

1. GENERAL CHARACTERISTICS OF THE COUNTRY

The Republic of Ecuador, country situated to the north-west of South America is approximately 278,482 km^2 large. It limits with Colombia to the north, with Perú to the south and east, and with the Pacific Ocean to the west.

In the Continental area, the Andes Range crosses the country from north to south dividing it into three regions: Coastal, Highlandean, and Eastern, or Amazonean Area. This determines a wide variety of climate, ecological production areas, and human settlements with specific socio-economic characteristics.

According to the political and administrative division, the country has 20 provinces, out of which 10 correspond to the highlandean area, 5 to the coastal area, 4 to the eastern area, and 1 island, the Province of Galápagos. (See Graphic A-1).



Ethnically, the country is divided into 19% white races, 38% indigenous, and 40% crossed races, and 3% black races.

The official language is Spanish, nevertheless quichua and other native languages are spoken in other regions by important groups of indigenous population.

This is the reason for considering Ecuador as a multi-national country from a socio-cultural view-point. It is also considered multicultural and multilingual with a high degree of differential regional development, which conditions the different costumes and living conditions, different production practices and consumption ways, specially in the native communities living in the rural areas.

The illiteracy rate, in spite of the rough reduction shown in the last five years, is 12% average for 1984 (4,7 % at urban areas and 20.0% at rural areas).

Regarding housing, in 1982 the population owning their houses was 58% for the urban areas and 83 % for rural areas (The deficit was approximately 30%).

The basic services of potable water, sewer services and electricity are still deficient. The average at national level is 52% (24% at rural level and 80% at urban level) of access to potable water; the access to sewerage services shows 34% (5 % at rural level and 62% at urban level) and the access to electricity shows an average of 62% (32% at rural level and 93% at urban level).

2. DEMOGRAPHIC ASPECTS

According to the last census (*), the population of Ecuador for 1982 was of 8'139.000 inhabitants, which, compared to the existence in 1962 (4'153.000) demonstrates that it practically has doubled in the last 20 years. This is due to the fact that the growth rate in this period was approximately 3 percent, one of the highest in Latin-America.

On the other hand, given the accelerated migration processes from the country to the cities, especially in the last ten years, the distribution per urban and rural areas is getting approximantely similar. In 1962, the rural population consituted 64.7% of the total population, while the census in 1982 showed a reduction to 51% percent (4'153.000)

Regarding the age groups, the population is mainly "young", i.e., the population under 15 represent 41,5%, and only 3.9% are over 65 years old. The results are shown in a poblational pyramid of ample base (see graphic A-2).

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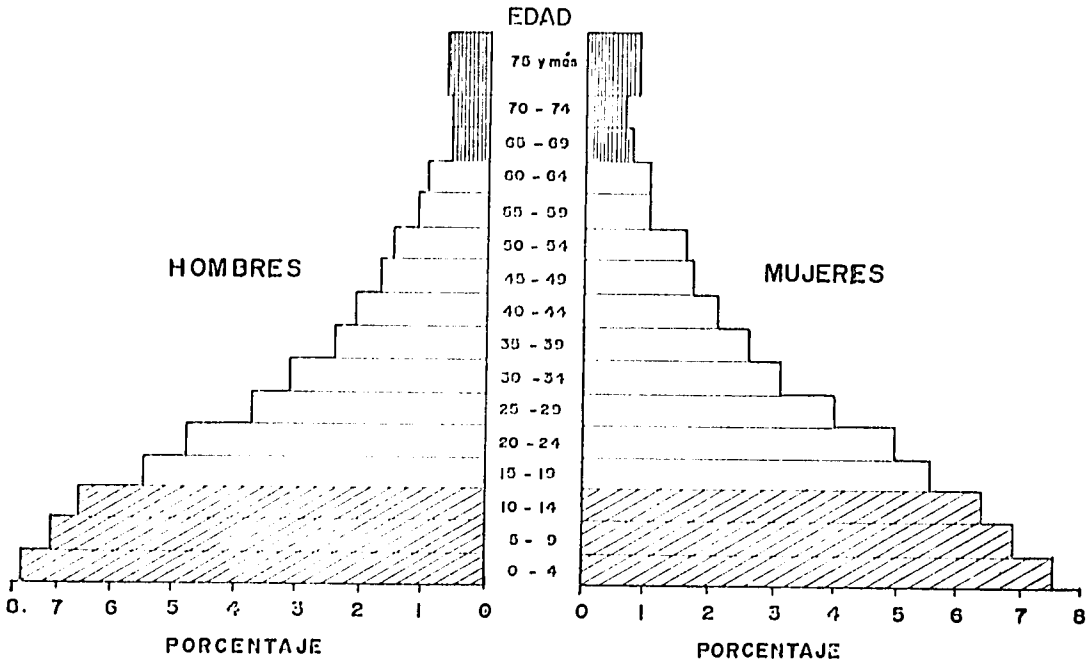
* IV Censo Nacional de Población y Vivienda, 1982. INEC. Mimeo. May, 1985. Quito.

This phenomenon, although caused by the high and sustained global fecundity rate (5.0 children per woman in fertil age), is also given thanks to the reduction of the gross rate of general mortality (8,0 per 1,000 in the period 1980-1985).

According to the same census, for 1982, the population economiccally active (EAP) was 44,3% (2"300.000), giving the first place to services,

PIRAMIDE POBLACIONAL 1982



commerce and transport (41,6%) and giving a second place to the traditional agricultural activities (33.5%), estimating an unemployment rate of 8.5% and of sub-employment of 27% (24% at urban levels and 30% at rural levels) in 1984.

3. THE MAIN PROBLEMS REGARDING HEALTH IN ECUADOR

Although the health status has undoubtely improved during the last 15 years, the national indicators for maternal, child, and general mortality are very high in relation to others reached by other latin-american countries. They especially affect the poorest population areas in the marginal regions of the cities and of the country.

Therefore, according to the last information available for 1982, the gneral mortality rate was 6,8‰ the infant mortality rate was of 63.9‰ and the maternal mortality was of 1,9‰. The total number of deaths per year (1982) - 53.001 - corresponded to children under one in 31 percent (16.800 children), out of which 66.8% corresponded to post-neonatal mortality, i.e., that in which generally preventable causes act.

Obviously, this general average rates hide the large deficiencies existing in the regional development and the more affected human groups. It is so that the general and child mortality rates are much higher in the rural areas of the central andean provinces which show a great indigenous population (Cotopaxi: CMR = 103,6‰ in 1982). In Pichincha, where Quito, the capital is situated, the CMR is 46,8‰ for 1982).

Regarding the main causes of morbi-mortality, the first places are still given to infectious disease of the respiratory and digestive apparatus, in all age groups. Nevertheless, there is a remarkable advance of other causes such as car wrecks, and brain-vascular disorders .

In the case of child mortality, the highlight was given to the protein-caloric malnutrition, as a fifth cause, as well as the persistence of whooping cough and measles, which is directly related to the still low coverage of the immunization programs. Regarding maternal mortality, the main causes are hypertension and bleeding related to labour and post-labour, which reflects the low percentage of professional care given during labour (26.9% in 1983) and post-labour (11.4% in 1983).

Regarding the main transmissible diseases, the greatest persistence of paludism with a rate of 602 per 100.000 inhabitants for 1983 is constant, followed by influenze with 269,5 per 100.000 inhabitants, and tifus with 90.12 per 100.000 inhabitants in the same year.

Additionally, the advance of sexually transferable diseases and gonococcic infections outstand, which implies the need of specific control programs.

Regarding nutrition, the largest problems identified are protein-caloric malnutrition, endemic goiter and nutritional anemia. Presently the estimations are for 40% of children in pre-school age suffering of some degree of malnutrition. The prevalence of endemic goiter is situated in 35.6 % affecting the population located between 1.500 mts. and 4,200 mts. a.s.l. (rural andean population).

4. THE HEALTH SYSTEM AND THE PRIMARY HEALTH CARE STRATEGY.

There is not an Integrated National Health System in Ecuador. On the contrary, according to the socio-economical development model, the most varied forms of sanitary assistance and medical practice exist in the formal sector (public, private, mixed) adding the non-formal health system (traditional medicine). Therefore, what really function are several independent systems which conform activity sub-sectors, (Social Security, Private Medical Services, Military Services Benefitting Committees, Ministery of Public Health, etc.) which often show policies, objectives and strategies which are dif ferent.

Therefore, if a Unified National Health Plan is not operating, there is an unbalanced situation among the offer of services regarding the actual needs demanded by the population, leaving as less protected the groups presenting more risks (mothers, children and workers).

Under this Health System Outline the Primary Health Care Strategy is included as a main tactics of the extention programs, in charge of the Ministry of Health, State's institution, regulating the health policies of the country, which is in charge of caring for approximately 85 % of the population of the country. To this State's institutionwe will be referring afterwards.

Under this context, one of the worst problems faced by our countries when trying to improve their health status is the high deficit of coverage measuring qualitative and quantitative aspects, with basic health services to care for the growing demanding needs of the largest part of the population. Obviously, the sectors which show less protection are the rural and urban-marginal areas, and among them, the more depressed socio-economical human groups. This situation reflects a

non-equal distribution of the scarce resources assigned to health, as well as the elementary development of a conception of multicausality due to the emphasis and interpretation of the phenomenon called health-disease, and therefore, for thegeneration of solutions under the context of th processes of national development.

On this premise, the Government of Ecuador has expressed in its health policy the need of extending coverage of health services using the strategy of Primary health care and community participation, especially towrds the rural population and the marginal-urban population, emphasizing on the preventive and priority actions in the attention of groups of less risk, (mother-child unit).

According to this policy, the first objectve manifestation for coverage extention in the rural areas of the country was the implementation of a Rural National Health Plan since 1970, by which, as a mandatory and official regualtion, all physicians, nurses, obstetricians, and dentists must go to Health Units of rural areas to work during one year. This plan began with 72 health subcenters in 1970, and was increased to 631 subcenters in 1983, 234 health post, with 1.274 physicians, 526 dentists, 186 nurses, 112 obstetricians, supported by about 900 nurses auxiliaries. The coverage estimated is approximately 2 millions inhabitants, i.e., 50% of rural population. In spite of this increased coverage, the dificit is still significant, especially regarding the called rural-disperse population, i.e., the ones living in groups of less than 500 inhabitants, where the involvement of institutional health services has not been possible.

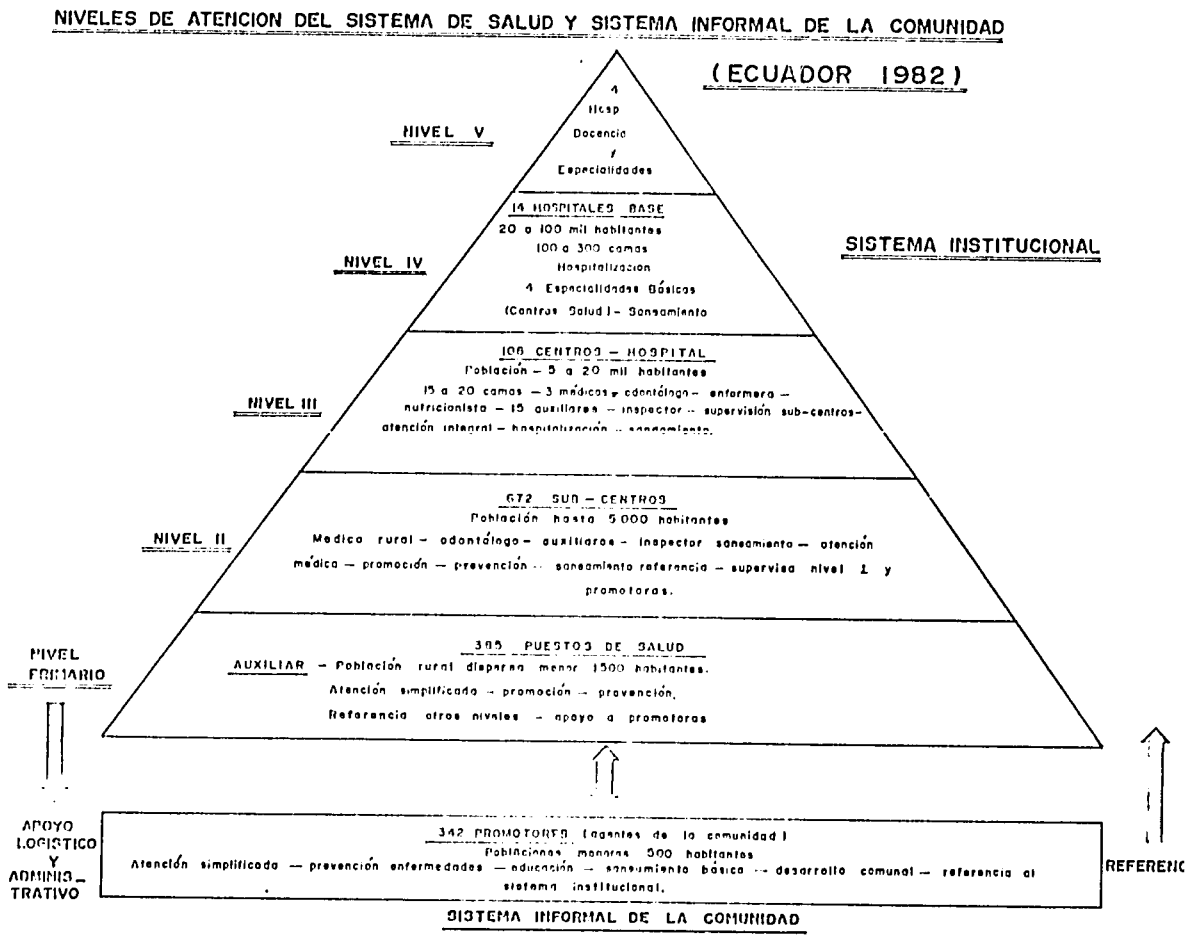
With this consideration, the MOH, official institutionof the country,

has been caring for enlargening the coverage of these sectors of the population of the disperse rural areas, with the application of the strategy which permits the application of basic actions of health to the population, and trying to integrate the community and institutionalheath systems prevailing in the sector. For this purpose, after the country signed in 1978 the Declaration of Alma Ata, in 1980 the Ministry of Health, together with FODERUMA (Agency of the Central Bank of Ecuador) initiated the implementation of the strategy of Primary Health Care with community participation, linked to the formal health system as a means to contribute to the integral development of the rural c mmunities.

For the Ecuadorean State, the Primary Health Care Strategy is a set of actions which try to fulfill the integral satisfaction of the more frequent and prior health needs of the whole population and promote the integral development through joint participation coordinating with the institutional health team, or with the staff of other develppment institutions and of the trained and organized community".

The net of Primary Health Care is comprised by the promoters in the communities, the rural nurse auxiliary in the health posts, the physician, dentist and sanitary inspector in the health subcenters and the multidisciplinary team in the Health-centers - Hospitals and other operational units of major capability, according to levels of service, structured in an outline of regional services, at the base of which the community level of Primary Health Care is found, establishing a link between the formal and the non-formal health systems (See graphic A-3).

Regarding the community resources, up to 1985, a total of 472 health promoters had been trained, out of which 343 promoters (72,2 percent) are effectively giving their services in 15 provinces of the country, estimating a coverage of 110.000 inhabitants of the disperse rural area (approximately 320 people per promoter), which means 3.63 percent of the total number of inhabitants of the rural areas of Ecuador.



The health promoter after receiving training during 8 weeks, promises to use part of his time in the execution of basic activities of promotion, stimulus and recovering of the health status. Additionally, he will be referring to the operational units the cases of morbidity which requiere a more complex care and cooperate with other activities for the integral development of the community. The promoter technically depends on the support from the closest health unit and administratively, he depends form the community organization he belongs to, through which, he receives a small bonus for his task. The activities regarding supervision adn material supplies medicine for their tasks, are the responsability of the Provincial Health Office and coordinated with the central level of theMinistry of Health and FODERUMA. The evaluation and technical administrative programming necessary for all the health levels in the health system are carried out regarding PHC.

To summarize, the Ecuadorean health system is just getting organized. For this reason, the strategy of Primary health care is also limited, Very remarkable operational problems exist to involve a greater degree of efficiency and productivity in the system and therefore a more rapid enlargening of the coverage with basic health services to all the population. This is the reason for highlighting the three main problems in the process of the operational research(supervision, supplies and training) in the health promoter system.

And last, it is important to note that the MOH, in a paper produced in April, 1985, indicates that it has foreseen for next years to increase community participation in the training of 800 health promoters to serve about 400.000 people of the rural disperse areas, and also 115 nurses auxiliaries which would be located in communities of 1.500 inhabitants in Health posts to carry out supervision and monitoring

to the health problems. Nevertheless, as this study presents it, in order to consolidate the coverage extention, with the participation of the health promoters in the strategy of Primary healthcare, it is necessary to improve the basic support of the Institutional Health System in the operative aspects mentioned before, in order to get, within an integral concept of the national health system, the role of the promoter to be more effective and with higher impact in the health levels and development of the communities of the country.

III. THE PURPOSE AND OBJECTIVE OF THE RESEARCH

The Health Promoter (Community Health Worker) System outstands within Primary Health Care Strategy. It certainly constitutes a useful element in the development of the program of coverage extension of the Ministerio de Salud Pública (MOH) in Ecuador.

THE PURPOSE OF THE RESEARCH

Under this context, the central purpose of this research is ".....to study PHC interventions utilizing Health Promoters in the rural areas",* in order to experiment with and propose new alternatives to improve the strategy application, i.e., to broaden the coverage of population with health services in the rural areas.

GENERAL OBJECTIVES

a. To study PHC interventions utilizing Health Promoters in the rural areas, and the output, by defining and evaluating the contribution to the coverage extension regarding health services delivered to the population.

b. To assess community participation within PHC utilizing promoters.

c. To determine the interaction level between the formal and the non-formal health system related to PHC.

d. To identify the operational constraints to the application of the PHC strategy utilizing Health Promoters.

e. To design and implement an alternative model for the application of PHC strategy which considers an increased level of community participation in specific programmatic areas which will represent lower costs.

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* Operational Research Project "PHC utilizing Health Promoters in the rural areas. Pages 4-5 - Typed - Fundación Eugenio Espejo, Quito, Ecuador, 1983.

The alternative model comprises punctual answers to the operational problems using increased community participation.

f. To establish the orientation and the necessary programatic elements for the successful implementation of the operational modifications implemented by the MOH.

g. After studying the operational constraints, to state alternatives and suggestions useful to improve the cost-efficiency of the Health Promoters Sub system and to reach the central goal of improving the health status of the population in rural communities.

SPECIFIC OBJECTIVES : THE OPERATIONAL PROBLEMS 'ND OBJECTIVES

PHC Strategy interventions and implementation utilizing Health Promoters in Ecuador is relatively new; it began functionning in 1980. Nevertheless, and, in spite of the significant efforts carried out by the MOH to improve the sub-system, the situation offered a series of problems derived from an unproper correspondence between the theoretical framework (Normative Manual) and the actual and practical process.

Local, as well as foreign consultants observed the existence of several problems, from which outstand:

- Community Organization and Participation.
- Health Promoters' selection process.
- Promoter's training profile
- Supervision system
- Motivation and feedback systems.
- Medical and other supplies provission.
- Evaluation process.

A process of deeper discussion about this problemacy determined the existence of strong relationship ties among several of them. After it, several basic problems, defined as those having greater influence on the others were highlighted. These problems were finnally categorized in :

- Supervision
- Supplies
- Training

1. Supervision.

The Health Promoter System, which involves different kinds of input such as policies and rules, promoter's ocupational profile, training, material resources, etc., brings about an interaction process where the supervision process is reliant as long as it permits a higher or lower quality in the output, objectified through the better use of the MOH's technical managerial structure and through the community organization, in order to reduce costs and improve the health status of our population.

Supervision has been considered as a set of activities expressed through the relationship supervisor-supervised, the promoter's action monitoring within the community, a continuous training and technical assistance activity, which, on the other hand generates stimulus, but mainly it establishes an effective linkage between the community and the State's institutions.

From an idealistic standpoint supposedly there should be a supervision system precise enough as to assess PHC's purpose asociated with the health expectancies in the community, developing systematic actions focussing preventive and curing interventions. On a more specific level a system capable to collect valuable information as to provide feedback

to the process, giving support to the training and educational needs required by the promoter at the community site is required, as well as to have supervisory activities undertaken by a representative from the Health System so producing a horizontal communication line in order to guarantee a continuous relationship State-Rural Community. For this purpose the supervisory system must clearly define, in every case, an important number of variables set at decisory levels such as contacting frequency, distance cost effectiveness, transportation, traveling time, contacting time, etc .

A large number of these components do not present the desired quality. This is how a diversity of agents in charge of the function are present, which share different qualities regarding skills and behaviour, their supervisory interventions frequency is not homegenous, there is not a clear definition about the meaning of supervision, either and, on the contrary, there exist different versions about it found in different supervisory guiding manuals. Similarly, enough material and economic resources are not available in order to develop this role, which, at different hierarchy levels within the MOH is translated in serious difficulties for the decision taking.

The supervision problem is caused by elements which could be grouped in a set of limitations and decision variables, which, due to the fact that they are not completely known or assumed, do not permit a better running of the process.

Thus, the supervision is not an actual system presently, and has not led to a systematization shaped in a program designed for the process adjustments and feedback.

There is not a proper functional definition about the meaning of the supervisory interventions for the different agents involved in PHC process. If such definition is not given, the actions are dispersed, eventual, and often based on the individual's subjectivity, and even deteriorated by not having proper and homegous technical tools.

Similarly, the specific unacquaintance with the areas which involves problems regarding transportation, maintenance, communication, roads, contacting time, etc., has impeded the promoter's work to be constituted as an articulated system.

The program design largely foresaw these problems dealing with the supervisory interventions, however the development of the research assumed the problem disclose regarding the supervisor's activities towards the promoter and the community. This problemacy was framed in a single objective: To identify a cost-reducing method.*

When the research study began, the objective stated before was proper, however, along the actual supervision process asessment, we found a lack of more attention to the contents and functionality of the supervision, since it was not properly defined or operationalized. Through the development of the research we detected the need of defining a complete supervisory outline which would shape supervision needs at an acceptable cost.

The research assumed this objective by defining the components and providing the solutions at the level of variables which condition or surround the supervision, as well as with the internal elements determining the contact. Thus, in a first phase, the knowledge of variables such as the following was assumed:

- The promoter's most easily available health levels for supervision purposes: health post, health sub-center, county hospital, Provincial

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* I.BID. Page 36.

Health State Office, and Central Level.

- The most competent agent among several likely ones: Nurse auxiliary, Nurse, Rural physician, Hospital phisician, Sanitation Inspector and Health educator.
- Contacting frequency: monthly, bi-monthly, quarterly, etc .
- Number of promoters reporting to one supervisor.
- Supervision cost-effectiveness as associated todistance, type of transportation, travelling fees and allowances.
- Supervision routes.

A second phase dealt with the variables expressing contact, therefore, the following ones were defined:

- Contacting period
- Tools used for the supervision
- Activities performed during contact.
- Survey study
- Field Observation.
- Evaluation criteria
- Ongoing training
- Programming

2. Supplies

Supplies have been and still are a programmatic area of the health system which do not present satisfactory answers to the problems in spite of the remarkable efforts the State performs to make improvements.

Regarding the promoter's situation within the supplies system, his marginal status is noted since he practically has not been considered as part of the Health System.

Presently, the procedures which generate supplies programming are more based on offer rather than on the actual demanding needs from the community, therefore, the promoter is even harder provided with health resources.

Aware of the though difficulties presented by the National Health System regarding supplies, FODERUMA (Fondo de Desarrollo Rural Marginal - Rural Marginal Development Fund)* attempted an important solution to the promoter's supplies limitation by defining the so-called Provision of Medicine and Materials to the Promoter, based on technical criteria and a set of activities and functions performed by the promoter; however, this was also limited by the lack of an ongoing monitoring which would indicate the consumption frequency, according to characteristics particular to each province regarding distances, type of transportation, costs according to different sources, replacement time, and not associating these variables to the prevailing and differential pathologies. Similarly it has also been impossible to determine a program according to needs, to economically rationalize the acquisition process according to efficiency and effectiveness , as well as the processes of storage, distribution and control.

Thus considering the supplies problem, the research study defined the following objectives:

a. To determine the variation of the supplies demand requested by the health promoters (punctualizing amounts and time to make it predictible)

b. To determine time taken and constraints found from the moment the health promoter states his request to the moment he receives it.

c. To minimize total supplies transportation costs from the provission centers to the hands of the health promoters.

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* State Agency depending upon the Banco Central del Ecuador (National Bank)

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d. To minimize the supplies transportation time from the provission centers to the promoters

e. To minimize the inventory processes total costs regarding orders and storage in a provission center.

Considering the fact that some of the variables studied regarding supplies are the same as these regarding supervision, they were studied jointly in the same Provinces and at the same time. Following this premise, the solutions developed for supplies and then tested, run parallel to the alternative model proposed for supervision.

Consequently, the alternatives for supplies have shown satisfactory for the following objectives:

° To minimize the total cost of supplies transportation from the provission centers to the promoter.

° To minimize transportation time from the provission center to the promoter.

The other objectives were not satisfactorily fulfilled due to the presence of several constraints:

° MOH's provision systems are so rudimentary that it is not possible to develop an integrated model suitable to incorporate all the variables considered under a supplies system.

° The decisions about the most convenient location of the possible provission centers considering time and distances were not taken by the members of the coordinating committee* because of a complete lack of knowledge about their suitability.

° The MOH would not have immediate capability and availability as to create a new infraestructure requiered by the provission centers

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* Technical advances discussion and coordination level comprised by a team of researchers from the Fundación Eugenio Espejo and Top Officers from the MOH.

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suggested by us. The idea is to use the services existing regarding provission centers although they do not fulfill the most important requirements from the mathematic cost-effectiveness viewpoint.

As a result, we can not foresee the setting of an integrated supplies response considering the variables, which have, in theory been defined for the model and which are:

a. Request for supplies (materials and medicine) set by the promoters.
b. Number of local and foreign providers.
c. Provission levels (Storage centers and distribution posts)
d. Delivery frequency according to needs.
e. Time and distance between the promoters an d the provission centers.
f. Costs of materials and medicine per unit, considering purchase prices, transportation, storage, personnel, etc .
g. Training in administrative issues for personnel involved in the system(general level , provincial and local level)

These variables, and the combination of possible alternatives for the design of a supplies system for the health promoters were considered both by the team and the consultants considering some of the objectives; nevertheless, on not existing a minimal operating supplies system to be modified or improved, and given the great variety of processes and changes in the supplies demand and the lack of decisions regarding the rest of the system, it was not possible to formulate an integral response to the supplies problem for the health promoters, based on the few elements on hand.

Under this context, the idea is to at least begin by a regular and standard control of the demand in order to establish mechanisms for a more systematic provission. Therefore, considering that the supplies

problemacy highly depends on the supervision, along with the implementation of the supervision response a more elementary approach to a supplies system was included since, in theory, the most unexpensive and apparently more effective provission level is the health sub-center drugstore or the Health Post ruled by the nurse auxiliary, and that at the same time, is,within the supervision model, the one who has the responsability of giving supervision to the health promoters once a month.

This approaching outline followed by consecutive approaching responses will, in the future lead to the creation of a more integrated supplies model, that would converge with the National Supplies System of the MOH.

5. Training: The Context.

Having defined the promoter's occupational profile, and still within PHC's conception, the State's experts or agents went on elaborating the training concepts and modules, however, these modules and techniques have not been developed well enough from a viewpoint considering the relationship existing between the peasant sectors and the State and the social and cultural background involved.

The fact stated above generates an important problem which not only pertains to training and which consists in the fact that all the community promoters have followed the same selection process regardless of the particular or regional specific conditions which determine the peasant communities, and regardless of the historic processes which have generated a series of innovative and adjusting interventions permitting the survival or replacement of a series of values which, at the present time constitute a cultural and social code conforming the internal structure of the peasant communities.

This is the justification of the vertebral purpose of the research study of trying to understand from the community's viewpoint their actual needs and how the promoter's presence is perceived, the importance given to him, appart from finding out how the oposition of two systems with different thoughts is given.

One way of encountering this problemacy in relationship to training consisted in assuming the relationship State-Peasant Community as a dinamic and often tense relationship, due to the lack of a completed and homogenous process, it is seen as a structure in constant movement seeking adaptation, creation and evolution of the factors determining its existence. This is the reason for having mentioned the traditional forms opposed to those ones recently adopted, which conform systems different from the formal ones, but that will help to summarize the central problem of every development program.

The research design punctualized several training aspects derived from the above stated.

A problem in the programming process has been detected due to the fact that the different manifestations of popular medicine have not been considered not even these regarding physiotherapeutical issues, therefore this has not been considered normativelly nor operationally.*

Since the training process is much more oriented towards the institutional needs, the trainee is not completely identified with the community needs and feels he is out of the socio-economic context.

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* I. B ID Pages 28-29

- The training follow-up system, regarding continuous education, is insufficient. This would let the promoter keep his knowledge up-dated and "fresh" and have his skills renewed, precisely due to the lack of a supervisory system.

- The trainers' skills requirements have not been clearly determined yet. There is not a multidisciplinary team in charge of the integral training able to define pathologies according to the different cultural and ecological aspects of the regions.

- The training methodology used does not get to the bottom of the cognitive, affective and operational objectives in every corresponding area.

- There is not an evaluation and comptrolling system, the only interventions existing are those linked with criteria received by nurses during their formal education.

- The training staff are not permanent, but usually hired or assigned for a specific course.

Following these training limitations, the program stated the following objectives:

1. To optimize the curriculum of the training courses in order to meet the needs of the local communities of Ecuador.

2. To improve the training process in order to help the health promoters to successfully carry out the activities for the final execution of PHC's objectives.

3. To determine the training cost-effectiveness as related to decision variables, i.e., formal and non-formal teaching methods, trainer's skill, period assigned to each module, necessary modules, class' size, time assigned to theory vs. time assigned to practice.

The development of the research regarding the training system has reached the stage of stating a diagnosis of the situation, offering findings which express quantitative and qualitative values about the set of constraints and decision variables taking part in the training process. Therefore, the research did accomplish the training objectives, while, using the data collected we have reached the design of valid conclusions, the statement of recommendations and of a tentative responsive theoretical design.

If a new research study considered these elements all together, it would surely design and test alternative responses very likely to be adopted by the MOH.

Within a systematic logics, the research study defined the health promoter as an element articulated to the Primary Health Care System. A more profound analysis of the promoter system showed several problems existing, which orderly conformed a hierarchy resulting in the need of analizing a set of three basic problems: supervision, supplies and training.

PART TWO

DEVELOPMENT OF THE RESEARCH.

IV. SUPERVISION

1. PROBLEM ASESSMENT

Focussing the objective of improving the supervision system at acceptable costs, the research study tried to achieve satisfactory and practical responses. The following chart presents a summary of the supervision system:

SUPERVISION SYSTEM

INPUT	PROCESS	OUTPUT
Training	Promoter's occupational profile	Minimum costs
Level which generates supervision.	Information	Higher health efficiency
Frequency	Promoter-community relationship	Feedback
Supervision contents	Relationship with institutions	Programming
Supervision agent	Evaluation	
Logistics-costs	On-going education	
Community participation.		

This logical flow of the supervision system does not happen, due to several small constraints located at the entrance and during the process of the system. Thus, the performers of the supervisory interventions are MOH agents located at different levels within the health system, or volunteers grouped under private organizations with different purposes and leaders from second level community organizations.

These performers, due to their different origins and social dinamics, the different type of institutions they belong to, the various autonomous levels they manage, develop a differentiated impact movement in the overall promoters' supervision interventions. Thus, the State's Institutions agents find themselves limited by the slow rhythm of the bureaucratic wheels which impedes the quick and timely decision taking, apart from the nganization existing at the different levels of the National Health System, which often presents tense situations seldom easy to solve. Stress is also present in the relationship among different State's Institutions, and among State's and Private institutions related to promoters' work.

The State's Institutions inner tensions are often generated by miscarriage of power, by over and sub valuing of hierarchy, by an unproper management of status, but, especially, by the different perceptions assumed regarding PHC strategy. The management and possession of resources assigned to the promoters generate organic stress between them and the State Agencies at local level.

Thanks to their small sizes, the private organizations have a better capability to quickly respond to the system's demand, this occurs also thanks to the fact that the volunteer staff have developed a self-motivation and mystic spirit, which , in many cases, outcomes as cohesive and consisten performances.

The leaders belonging to second level popular organizations (regional organizations) would show high levels of authority, which would improve the development of PHC Strategy utilizing promoters , as long as this authority becomes part of the popular programs, therefore it would be necessary to obtain a joint decision representing State Institutions and popular instances.

Actually, there exist opposed relationships between the State's agents and the popular organization, especially due to the vertical implementation methods of PHC Strategy and to the absent popular participation in the design process of health interventions. This is also coming from interventions showing deep ethnic discrimination. In this way , the punctual mechanisms describing and making popular organization participation a reality have not been possibly established specifically regarding supervision and generally regarding PHC.

After this analysis and based on the supervision objective, the research study disclosed the problem in a set of smaller problems expressed through the components of the supervision system.

- On one hand, a set of decision variables and constraints surrounding supervisory interventions.
- On the other hand, a set of variables that express and make supervisory interventions real.

In the first area the following variables were surveyed:

- Number of contacts held between the supervisor and the promoter.
- Health level where the supervisor belongs to within the MOH hierarchy.
- Time taken and cost of supervision trips.
- Horizontal and/or vertical relationship of the supervision.
- Supervisors' training.
- Supervision logistics.

- The punishment and reward system along supervision.
- Community participation

In the second area, consistency of supervision through composing elements was surveyed.

- Field and documental survey.
- Evaluation of promoter's performance.
- On-going education or training-in-site
- Programming.

Consultants and other local experts considered that although some of the before described problems were already foreseen in the PHC rules manual for promoters, it was anyway necessary to make a deeper analysis on them in order to obtain more coherent and systematic alternatives. Thus it was important to theoretically and practically evidence the variables considered and their magnitude in order to facilitate procedures and decision taking.

The next phase along the operational research process consisted in the elaboration of technical tools* in order to collect the quantitative and qualitative information required. Consequently, surveys were designed for the promoters and for the agents of the health system located at posts, sub-centers, and county hospitals, as well as for health local offices and people from private institutions for whom surveying manuals were also prepared. The visits paid to the promoters in their communities were also used to apply observation guides.

The tool designed to find out the promoter's point of view was structured according to the following variables:

- Demographic variables: age, sex, school level and main occupation.
- Distance to the closest formal health level, as it relates to time, and type of transportation.

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* As it was stated before, the supervision and supplies problematy were jointly studied both along the data collection stage and solution designing.

- Type of supervision agent associated to the level he comes from and the location.
- Number of contacts during the last year according to the contacting place.
- Supervision interventions performed by the agent during contact.
- Promoter's perception about the support he is receiving.
- Promoter's perception on the reward and punishment system.
- Information and filing system as it relates to difficulties.

The tool used to find about the supervisor's point of view mainly includes the following variables:

- Demographic variables: age, sex, education, occupation
- Supervisor's training as it relates to time
- Time dedicated to supervision activities.
- Contacting with promoters frequency.
- Size of promoters group assigned to the supervisor as it relates to places and programming.
- Activities the supervisor develops within his role of supervisor.
- Community participation in the supervision.
- Perception on the supervision value.
- Constraints to the role.
- Administrative process.
- Traveling costs for the development of his role.

UNIVERSE:

NUMBER OF PROMOTERS SURVIVED ACCORDING TO REGIONS AND PROVINCES

REGIONS AND PROVINCES	NUMBER OF PROMOTERS
COASTAL AREA:	
ESMERALDAS	15
GUAYAS	18
HIGHLANDS:	
IMBABURA	10
BOLIVAR	16
EASTERN AREA:	
NAPO	11
MORONA	16
TOTAL	86
NATIONAL TOTAL	246

Source: MOH.
Elaborated by: PRICOR-FCE team.

As shown, the supervisionproblemacy was studied through a universe composed by six provinces distributed accordingly to the three geographic areas of Ecuador: Coastal, Highlandean, and Eastern areas.

The before mentioned criterionwas used to select the survey areas, nonetheless, other criteria such as the following were considered:

ECOLOGY: The provinces chosen perfectly express the ecological variety of the country.

CULTURE: As linked to ecology, there exist different ethnic categories and nationalities which similarly perceive and express diverse pathologies and ways of comprehending health problemacy. The provinces chosen represent a valid sample of such characteristics in the country.

THE UNEQUAL DEVELOPMENT: Certainly, these six particular provinces present a variety of different degrees along the development process regarding economics (production, commerce, in-take) education, health and communication infrastructure.

Consequently, the provincial environment is adequate for the development of solutions of PHC problems, since this also is a circumscription of the country's health administration. The province is a health sub-system.

Obviously the health promoters constitute the analitic universe, however, our study also incorporated other performers linked to health issues such as personnel at health posts, health subcenters, county hospitals and Provincial Health Offices within the formal Health system. We also worked within the community system relying on qualified informers from local and regional organizations.

The number of promoters surveyed, as shown in the chart, represent 35% of the total number of promoters working in the country ('83) which confirms it was a representative sample regarding the technical processes of the research study.

The number of supervisors and others prepared to be supervisors was 139, in the six provinces representing 90% of the health posts, sub-centers, county hospitals and Provincial Health Offices (See annex, chart 2), however, for the statistic analysis pruposes we only considered 34 agents who are presently playing the role of supervisors. They are thus 100%.

a) *Promoters' Survey Findings*

Regarding the promoters subsystem, the following findings were stated:

Promoters' age average is 29,95 years. At provincial level, Esmeraldas presents the highest average, 35 years old, and Bolivar the lowest average 26,25 years old.

As for promoters' sex, the data presents mostly male, however, in Imbabura, women's participation was significantly high.

Regarding school level, all promoters had passed sixth grade, and a remarkable number began high school education.

The promoters average 14.07 contacts per year (supervisory visits paid to them) with some higher level likely to perform supervisory activities, nevertheless, such contacts would not be expressely called supervision activities. Thus framed, the provinces presenting lowest frequencies are Morona with 10 contacts and Guanas with 11,65 contacts. In the first case the obvious explanation is the lack of roads and transportation means, while in Guanas this can be attributed to the mere omission of the supervisor's role. Imbabura presents the highest average with 20,33 due to the better consistence of that Provincial Health Office.

Average time promoters work was not, in any case, 2 hours a day as stated in the regulations, but an average of 3.57 was found.

Every promoter serves an average of 45 families in each province. (See annex, chart 3)

On the other hand, as well as for promoters' output along a six month period, it was found that every one of them has performed an average of 31,17 home visits, 5,37 meetings with the communities, 7,66 latrine were built , since all these depends mostly on the economical resources

available. Pregnacy control rate showed an average 7,21 and similarly, 31,78 children were cared for, and 31,20 adults and an average of 4,09 patients referred were reported. (see chart 4).

This is more clearly seen at provincial levels, thus, in home visits Esmeraldas presents an average of 26,58 (during six months, valid in all cases) Morona 20,94. Esmeraldas presents an average of latrines built of 6,56, Imbabura 4,75, Morona 5,48 and Bolivar 11,33 thanks to the economical support received by the communities from the Private Institution called "Plan Internacional". Regarding services in Esmeraldas directly after childbirth we found an average of 8,91, in Imbabura 7,20, in Bolivar 2 and in Morona 2,69. Children referred average 6,25 in Esmeraldas, 4,20 in Imbabura, 4,75 in Bolivar and 2,69 in Morona. (see annex, charts 5 and 6).

Regarding promoter's perception about supervision interventions, we have the following: 50,7 of promoters point out that only on few opportunities he has been visited by the supervisor while in the community, however taking into account that not all contacts have the express purpose of supervising, and that not all contacts are planned, it would result in an even lower supervision contacts average.

54,7 % observe that the supervisor always reponds to the needs presented, 52% answer never to this question. The supervisor receives enough support from the MOH for this task.

53,3% of promoters state that the supervisor always goes over the reporting forms.

69,3% declare that the supervisor never goes with him during home visits, Similarly, 74,7% say that he never visits family gardens, equally, 82,7% state the supervisor never visits or helps building latrines and never

checks the usage of water (61,3%)

Finally, 65,3 state that the supervisor always care for the patients referred. This in case the supervisor is at the same time the sub-center's physician. (see annex, chart Nr. 7)

After this revision it is possible to anticipate that the supervision system needs adjustments, regarding supplies provission system and functional definition according to responsible PHC levels.

By applying Standard Regression Coefficients which analize the number of hours a day worked by the promoter (depending variable) as they relate to education levels, the result is 'to higher level of education the promoter presents, the larger number of hours he works, having the nurse auxiliary as supervisor'; meanwhile,'when the supervisor's role is performed by the physician, to higher level of education presented by the promoter, the smaller number of hours the promoter works',as a tendency. (see annex, chart 8).

Continuing at the same level of analysis, we observe that promoters with higher degree of education perceive the inefficiency of present supervision, regardless of the agent or type of agent.

When the nurse auxiliary performs the role of supervisor, higher supervision levels result in a better output from the promoter when building latrines. On the other hand, if the number of contacts increase between the nurse auxiliary and the promoter, the number of pregnancies detected increase, and of women cared for directly after childbirth. Likewise, the number of hours spent in home visits, the number of adults and children cared for also increase. (See charts Nrs. 14, 15, 16, 17, 18 and 19 in the annex)

When the supervisor's role is performed by either the Rural Physician, General Physician, Health Educator or Sanitation Inspector the general result is a reduced output. This leads us to consider the nurse auxiliary as the most convenient supervisor located at health levels such as Health Post and Health Sub-center.

b) Supervision Agents' Survey Findings

The average age for supervisors is 29.19 years, finding a slight tendency for males in this role. The average educational level is situated at a post- high school education.
The average number of promoters supervised by one agent is 2,5.
He has a limited knowledge of the supervision process. This is confirmed by a limited revision of the promoter's activities.

The supervisors recognize that their role highly contributes to the achievement of high levels regarding community health status. At the same time they perceive that the MOH does not grant enough importance to the supervisor role performed within their global activities. (see annex, chart Nr. 20)

Regarding the specific supervision process, we found that 55% of the supervisors always collect information about the promoters' activities based on forms, 61% of supervisors sometimes call for community meetings, only 47% sometimes observe the promoter's work directly, 58.8% has never met a group of promoters, and only 29% check if the promoter has necessary materials and medicine. (See annex, chart Nr. 23)

82,4% of the promoters state that a more complete training is necessary for the development of their role, some think the need is for larger economic resources (88,2%), they commonly believe that a

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plannification at central levels, together with the definition of time assigned for the role is necessary. (see annex , chart 21).

On the other hand, all promoters state that training supporting activities are necessary for the improvement of their roles. 91,2% point out that they need programming directions, as well as guidelines on plannification and evaluation, 91 to 98% consider they requiere of knowledge on techniques which will make them skillful in community organization, in interpersonal communication, in health education and in leadership training. (see annex, chart Nr. 24)

Among the different types of supervisors presently existing, the one that presents a better knowledge on the process and activities regarding supervision is the nurse auxiliary. 81% of nurse auxiliaries think they are responsible for collecting the forms filled out by the promoters, while only 28.5% of physicians considered this as their responsability. 64% of nurse auxiliaries believe they should always explain the objectives and tasks to the promoters, while only 50% of physicians believe it so. (see annex, chart 25).

And, regarding activities performed by the promoters which shall be surveyed by the supervisor together with the promoter, we find that: 64% of nurse auxiliaries always survey complementary feeding while only 50% physicians do that. 76% nurse auxiliaries always go over oral rehidration therapies, while only 41% doctors do so. 50% nurse auxiliaries always check the water, while only 23 % physicians do that. (see annex, charts 26 and 27).

Along the supervision process, we find that to the supervisor's higher educational level corresponds a larger number of promoters supervised. Similarly, older supervisors contribute with larger number of hours

worked, while a lower supervisor's category* results in a better knowledge of the supervisor's tasks (See annex, chart 28).

Within the Standard Regression Coefficient Analysis we find that a supervisor who is responsible for a larger number of promoters performs a smaller number of contacts and shows reduced knowledge about supervision. Similarly, if the supervisor has been more extensively trained, he will develop a larger number of contacts. (See annex , charts 29, 30 and 31).

c) Summary of Findings

1. REGARDING PROMOTERS:

Descriptive Data:

- Promoters meeting average frequency is once a month, with a possible supervisor.
- Promoters contribute with an average of three hours and a half of their time a day.
- Supervisors are located outside community levels (often at sub-center and higher levels).
- The promoters perceive the supervisors as elements partially involved in their own supervision activities.

T Tests:

- Slight statistic differences among Provinces are shown, regarding the basic characteristics of the promoters and the perceptions on the effectiveness of the supervisor and his output.

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* The supervisor's category refers to the State Health System: Health Post, which is the lowest level, Health Sub-center, then, County Hospital and teln, Provincial Health Office, etc.

Regression Coefficient Analysis

- *The promoters show tendencies to produce better outputs when they are supervised by community levels.*
- *More monthly contacts and more hours worked a day tend to be associated to a higher output.*
- *Female promoters achieve larger number of contacts, larger number of hours worked and a higher output.*
- *Promoters with higher education levels perceive that their supervisors are little effective, while promoters with lower education levels do not.*

2. *REGARDING SUPERVISORS:*

Descriptive Data:

- *Supervisors are responsible for an average of 2,5 promoters.*
- *Supervisors contact promoters approximately 15 times per year, however, not all of these contacts are expressed supervision interventions.*
- *Supervisors feel that the MOH does not recognize or price their work.*
- *Supervisors believe that having better economic resources and training would greatly help to contribute to a better work.*
- *Supervisors have received reduced training for their roles as supervisors.*
- *Supervisors feel that the supervision responsabilities have not been defined well enough.*

Regression Coefficient Analysis

- To more supervision contacts correspond less promoters supervised.
- Older supervisors and female supervisors often contribute more hours to their task.
- Younger supervisors carry out more activities surveys together with the promoters and have a broader knowledge about the supervision concepts.
- Those supervisors more closely identified with community levels such as nurse auxiliaries and physicians have broader knowledge about supervision.
- The nurse auxiliaries are more effective in their role as supervisors because they are more closely related to communities and because their social status is more closely alike the promoter's.
- Older supervisors are in charge of more promoters.

2. Statement of Alternatives

a) Constraints and Decision Variables

By defining constraints as those happenings, facts or variables which we cannot control or manage, we may indicate that concerning the supervision system, the variables determined are the following:

Community Participation: As we stated before, the relationship Popular Organizations-State is often filled with stress showing diverse ranks and intensity, given the vertical characteristics of the State's Agents interventions. The organizations do not consider participation as a mechanical addition nor a strategy.

- The economical mechanisms are not fast nor active. Bureaucratic regulations and proceedures delay the delivery of economical resources used for promoters' bonus and supervisors' allowances. This outcomes in an unsatisfactory condition and disadjustments regarding the promoters'work.
- Scarce economical and logistics resources. State budget is constantly reduced, much more regarding social benefits budget.
- Unacceptable communication road infrastructure. Ecuadorean rural areas and specially disperse rural communities do not count with a minimum road net to improve their communication and development processes; therefore, it is extremely difficult for these communities to obtain a more complex Health Care.
- Rainy seasons: this objective constraint largely limits communications. This happens right at high risk periods against health, specially in the coastal Pacific areas and the Eastern areas.
- Characteristics of the present social structure: Certainly the present rural status expresses an acute peasant social margination process leading to a very strong migration movement defined as stationary and permanent. This produces new health demands at community levels and rudimentary responses to the abrupt changes, in general.
- Formal as opposed to non-formal medical interventions: The several integrated particularities generated from diverse ethnic elements generates stress between conventional medical perceptions and popular behaviours adjusted to pathologies of magic and religious origin, which is, consequently hard to soothe within the modern concepts.

However, operational methodology provides us with working channels useful to reduce the negative impact generated from the constraints to permissory levels in some cases and, in others, the negative load is likely to be changed into positive load.

For instance, regulations state that an active popular participation is a desired element for the development of PHC Strategy, however, the research study led the involved performers to reflexion about this, in order to design the punctual mechanisms for the participation concerning supervision, objectively developing on the participatory desire from the community.

Bureaucratic economic constraints to supervisory activities were solved through the provision of information regarding the cost and frequency of the development in a precise manner. This has enormously facilitated the decision taking process at different levels. Therefore, this constraint became a decision variable.

Similarly, the acute economical resources scarcity impact was reduced thanks to the development of necessary expenses for success. This let performers take timely decisions in order to carry out their budgetary negotiations in a better way.

The research study demonstrated that the female promoters are more efficient regarding preventive care delivered to mother-child unit. Consequently, decisions tending to prefer women for promoter roles will reduce the negative input of migration since men are more likely to move.

Among the decision variables we find the definition of contacting frequencies, the most competent agent (skill-behaviour), cost, type and addressee of the information, role of coordination among the

the MOH different hierarchy levels, the technical elements grouped under supervision and the supervision routes.

b) Design of Alternatives

The design of alternatives has been guided by the assessment and discussion of a set of constraints and of the decision variables associated to supervision, as follow:

1. Best number of contacts between the supervisor and the health promoter.: The alternatives include 4, 6 and 12 contacts per year in order to choose the most convenient but also the most easily practicable one.

2. Category within MOH Hierarchy where the supervisors belong to: The findings from the statistic analysis indicated as the most convenient level those being closest to the communities, such as Health Sub-Center and Post. Nevertheless, as we advance even more, we can highlight the nurse auxiliary as the most convenient supervisor agent likely to develop this role towards the promoters. Additionally, as seen in the data analysis made, the alternatives also foresee supervision levels towards the supervisor of the promoters, and the supervision quality, considering administrative, planification and technical programming issues. (See annex, charts 1 and 2).

3. Minimizing supervisors' traveling time and expenses: Linked to the last consideration, the next step consisted in analyzing the type of supervisor agent according to advantages and disadvantages and correspondign decision policies as they relate to the cost-effectiveness of each agent. This includes salaries, social benefits, social security, daily allowances, according to the different cate-

gories they belong to, (central level, Provincial Health Office, Health Center, Health Sub-center and Health Post). (See annex, chart Nr. 32).

4. The condition of authoritative vs. participatory supervision: The analysis highlight the nurse auxiliary as the supervising agent more closely socially located to community. This guarantees a reduced authoritarianism. The best alternative guarantees a better participatory process.

5. Necessary training for supervisors: Among the decision policies foreseen by the alternatives obviously the training aspect regarding the role and functions of the supervisor is found. This will be developed according to the cultural and economical development limitations found in the different areas and provinces of the country, as a result of the research study.

6. Logistic assigned must be satisfactory for supervisors: The alternatives according to the critical routes produce responses which include allowances and traveling costs. Of course, the most convenient will be chosen.

7. The degree of evaluation data used by supervisors to give feed back to the promoters: The alternatives stated inter relate different supervision levels with different types of supervision leading to the systematic exchange of information regarding programming activities.

8. the degree of motivation given to supervisors for their role concerning their other tasks as MOH agents: As stated, the research study concludes that the supervisors feel that the MOH does not recognize or appraises supervision roles. Therefore, within decisionpolicies, rewarding and punishment systems should be impossed according to the development of

significant concepts about population's health status.

9. Community interaction level: Alternative 2 specially highlights this aspect through participation of local and regional organizations, and through coordination mechanisms involving MOH levels. (See annex, graphic 1.)

c) Selecting the Most Convenient Alternative

Thus far, the tools used in the field provided information generated specially at the meeting point of the values set for the variables involved. The three alternatives tentatively organized were subject to further analysis by the team. The result was the proposition of the best convenient response alternative.

In a first stage, and together with a frequency analysis, the team defined the convenience and fitness of the health agent considering his effective generating capability at low costs. For this purpose, a preliminary data matrix was prepared (see annex, chart 32). It consisted in crossing variables such as type of likely health agent with advantages and disadvantages, decision policies, agent's category and salary, etc. The next step was defining exactly the minimum costs for the best agent using the "decision tree" tool. (see annex, graphic Nr. 3). This process led us to the selection of the nurse auxiliary as the health agent most convenient and unexpensive. (see annex, chart 33).

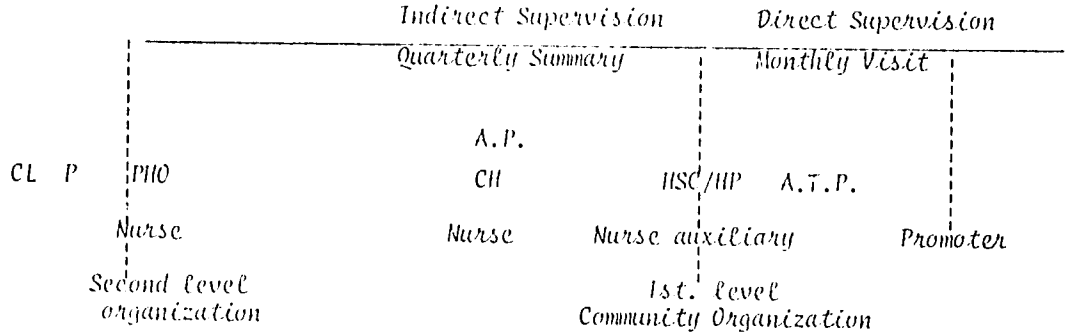
After this we went on relating the analysis of distances, preparing charts including categories to situate the closest supervisor and cross this information with distance, type of transportation, daily salary, allowances assigned to him, days supposed to be assigned

to supervision tasks and fares.* The assessment of this set of variables permitted the team to figure supervision costs per Provinces. This means that we designed supervision routes (see annex, charts Nrs. 35, 36, 37, 38, 39. 40, and 41).

On the other hand, and as it was stated before, an aspect considered as important, was the development of the contents of supervision aimed at guaranteeing a higher efficiency. The contents developed were shaped in forms used for indirect or direct supervision. The direct supervision would be performed by a nurse auxiliary monthly, and the indirect supervision by the County Level or Provincial Level nurse every three months summarizing and systematizing information.

Most Convenient Alternative Variables

TENTATIVE SUPERVISION RESPONSE



CODES:
A: Administrative Supervision
T: Technical Supervision
P: Planning and Evaluation
CL: Central Level MOH
PHO: Provintial Health Office
CH: County Hospital
HSC/HP: Health Sub-center/Health Post

* Some of these variables constitute additional information requested by qualified informers situated at Provincial Health Offices and the Central levels of the M.O.H.

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The variables played for this responsewere the following:

- Supervision Level: The research study remarked (following the Objective of obtaining a method capable of maximizing effectiveness while minimizing costs) that Health Posts and Sub-Centers were the most appropriate levels to carry out supervision interventions, given their proximity to the promoter and the community, additionally, these levels develop PHC Strategy within their functional profiles.

- Most Competent Agent: Among a series of possible alternatives the research study indicated that the nurse auxiliary was the agent most likely to successfully perform supervision tasks because of his proximity to the promoter, but specially because within the social status he is relatively situated inside the same category as the promoter's. This determines a higher communication level following community's cultural rules and behaviours. The research study also showed that the nurse auxiliary is the person who has greater influence on the child-mother unit, to carry out maternal-infant mortality reduction activities. This is demonstrated through the productivity indexes of the different agents. The nurse, the rural physician, the physician belonging to central or provincial levels, exercise more curative tendencies in their performances and relatively lower acquaintance with peasant reality. These considerations contributed to reject these agents for the role of promoters' supervisors at direct level.

- Frequency: Descriptive statistic data analysis averaged 12 contacts per year with the health promoter performed by the

different agents and levels. Adding this situation to the considerations above, let us determine a monthly contact as the most appropriate frequency for supervision interventions, however, we shall note that the evaluation of the model tested will finnaly determine the appropriateness of this frequency.

- Contacting Lenght: Following an exhaustive analyisis regarding activities and criteria to be considered during supervision interventions, found in the chart titled "Direct and Indirect Supervision According to Time and Activity" (Annex Paper Nr. 4) a 4 hour lenght is tentatively set for each contact. It is necessary to note that as the number of contacts increase, also the supervisor's skill in the management of the direct supervision tool increases. In other words, as routines are assumed, contacting time might be reduced to a minimum lenght of 2 hours and a half or three hours.

- Maximum Number of Promoters Assigned to a Supervisor: The alternative presented a maximum of 4 and a minimum of 1 promoter for each supervisor.

- Supervising Costs: Equally, this variable is operationally disclosed in the charts referred to before. They include distances, type of transportation, cost of fares, allowances and traveling time.

- Community Interaction: This is an important variable within this alternative, while PHC Strategy is a set of actions which must be assumed by the community, therefore community participation is also expressed through the organization's assumption of supervisory

functions at local as well as at regional levels. In other words, by first and second level organizations.

Between the alternative statement phase, and the alternative testing phase, the staff of the Fundación Eugenio Espejo went through an unpredicted though undoubtely interesting working process. Said process concerned the specific experience of the supervision problem.

The process significantly involved MOH and FODERUMA Officers, who, as for chronological recount, dedicated the months of March, April and May 1985 to the task.

The interesting aspects mentioned were born during the development of methodological issues generated by the supervision study before testing the theoretical alternative. Such responsive alternative could not be tested as a mechanical and a fortiori action, but, we should first solve several other problems regarding the outreach and contents of the supervisory interventions and the operationality of testing processes.

Undoubtely, supervision problems constitute a decision system involving certain complexity, since some actors of different nature take part in it. On one side, the agents and levels of the formal health system are present, and on the other side, the representatives from the community. Thus supervision, for the first actors, is solved through a functional organizative design of action based on the assignment of roles and resources.

For the following actors the supervision problem means a discussion about the contents and functionality of the actions under the indicators and points of view of their own cosmovision, tradition, and perception of their own needs.

Ecuador, as many other Latin American countries, is characterized by having a social structure where different nationalities interact, involved in a different process of resistance-integration facing a conventional and modern prevailing society. Such nationalities express their specificities or particularities through their cultural behaviours, which are nothing but the production and reproduction of the life processes in a practival and objective way.

Said life-centered performances constitute the action's totalizing comprehensive focus integrating the parts of an organic entity, where the productivity relationships are linked with and melted into family relationships and power structure. They are born as a result of ideological philosophy explanatory ssystems. Said systems, on their turn, are expressed through mithical rituals and religious/magic practices.

This could well be the basis of the cohesion and identity sense felt by our indian communities, and which, regarding PHC Strategy constitutes the starting point for the designed of that to be called community participation.

The relationship indian community-health national system of PHC Strategy would be the raw material or the entrance towards a higher level or phase where such relationship is processed.

At this level the health promoer "joins" two worlds: The popular and the conventional. Through data discussion, (direct and indirect supervision) at the bottom of the community, the process of origin of ideas is given, by setting conducting guidelines of the health process with State's participation. This is something the popular organization must do or is doing through workshops, seminars, and other technical appropriate channels.

The mentioned process generates results expressed in actions which differ from the preliminary ones in some aspects; i.e., they become higher level actions shaped as technological innovative and management PHC interventions. This would permit a sense of possession by part of the community and which, at the same time, reinforces its cohesion and identity.

WHAT IS SUPERVISION?

Supervision is defined through its components:

- CONTROL: It is produced as a link and articulating action performed by the community (promoter) towards higher and hierarchic levels of the formal health system. This action observes its objective sense according to PHC regulations.

- SUPPORT: The observation and assessment of actions corrects mistakes, assigns rewards and motivates correct interventions.

- SYSTEMATIZATION: Through data collection (direct and indirect supervsion forms and later analyisis) the action proc ess is assumed resulting in a set of tendencies and results.

- FEEDBACK: Systematic information power is given by the socialization through the multiple communication channels. Information is delivered and re-processed at different levels:

  - Nurse auxiliary - Promoter - Community.
  - Nurse of county or provincial level - Nurse auxiliary.
  - Provincial Health Office - County Hospital.
  - Provincial Health Office - Central Level.
  - 2nd Level Popular organization - County Hospital - Provincial Health Office - Central Level.
  - 2nd Level popular organization - Community.

This communication system is developed at special levels: workshop, seminar, panel, conference, etc.

Additionally, we believe that researching, evaluating, training and programming are essential characteristics of supervision, which must be described and analized in the light of criteria, of activities according to components, of methodologic channels expressing activities, assisted by specific registering tools.

All this has been expressed in the summary chart titled "Direct and Indirect Supervision According to Time and Activities" (see annex, chart Nr. 13).

The following is an explanatory display of the mentioned chart:

1. RESEARCH:

a) Documental.- By going over promoter's information, found in the AP (1.....8), trying to state a balance between preventive and curative activities, and to get to kn .. the situation regarding materials and medic ine provission, frequency and quality of the references and counter-references, etc.

b) Field Research.- B y observing basic aspects of PHC Strategy, such as community development, preventive interventions addressed to people as well as to environment

Regarding community development, it should be noted that the actions refer to the supervisor's revision of the correspondence between the promoter's activities and the c ommunity's social, economical and cultural needs (this is performed through interviews with community leaders). This is very important given the multinational status of our society, which specially relates to a totalizing

vision of reality perceived by the community, where the solution to health problems is correspondingly developed through the solution to other other development issues such as: economics, education, and the systematic valuing of their own living practices. Thus, the community participates in an environment which overpasses the limits of medical approach (biologica-physical) on their road to health access. It is here where the importance given to the promoter's coordinating actions lies. He must coordinate with other community or institutional elements of diverse categories, in order to obtain solutions to multiple problems (development promoter).

Regarding basic sanitation interventions addressed to the environment, the supervisor must, through a visit to the community, observe the quality of human consumption water, the system of elimination of excretas , the type of crops cultivated in family gardens, its use and limitations. Similarly, the home visits will facilitate the knowledge and registration of the relationship promoter-family . (Such visits include observation and interviews, in order to determine feelings such as mutual reliance , the degree of sanitation presented by the house, zoonosis, luminosity, over-crowding, ventilation.) Other aspects such as degree of acceptance of sanitation behaviours by people (regarding food, personnal hygiene, water purification methods) and technical quality of interventions (asceptic, anticepsis, medical prescriptions) are also to be considered.

2. EVALUATION:

As stated before, another characteristic of the supervision process is evaluation. Such characteristic must be expressed along the development of some criteria as follow:

- Priority: Not all promoter's activities involve the same quality everywhere. Therefore, such activities must be orderly listed according to the objectives of the community, of PHC strategy, and according to the articulation. Such categories guide action giving it objectives values, and permanent status. i.e., a community needing a school teacher might be helped out by the promoter in such activities before the correspondant legal institution, in this case, the Ministry of Education.

- Sufficiency: By analizing the properness or unproperness of the statement of policies and programs.

- Progress: By comparing what was planned to what was achieved. Goal accomplishment according to the plans and the chronogram.

- Efficiency: To examine relationship between the results obtained and the resources or means used.

- Effectiveness: Cost-effectiveness analysis, degree of satisfaction or unsatisfaction in front of the strategy (degree of achievement of stablished objectives and goals for the program).

- Impact: By asessing the degree in which the promoter's interventions influence community development, and the influence the community has on the strategy and conception of health (assessment of the changes produced in sanitary development and socio-economical development).

3. TRAINING:

Intrinsecally, through the interviews and joint visits with the promoter, supervision expresses an in-situ training process since it highlights actions and locates them along a rational and active process. Such process has been defined as continuous education.

Expressely, the analysis of data registered in the supervision tools leads, at other levels, to the elaboration of conclusions about prevailing tendencies and processes of accomplishments and problems, which in turn, trains performers on the situation.

4. PROGRAMMING:

The research and evaluation of actions based on specific criteria and forms leads to the ordering and conduction of a PHC process in a way in which community needs are articulated with activities, regarding time and economic - technical resources within a frame of limitating and facilitating factors which indicate possible action. Direct and indirect supervision tools lead to such activity which specially lies at county hospital level feeding in this way a process of regional programming.

5. RESPONSE TESTING:

The response testing designing processwas jointly followed and developed by representatives of the Department of Community Development of the MOH and representatives of FOVERUMA together with the research team. Therefore, the response testing in the field was a decision shared by the State Health Officers who, consecuently, gave all their collaboration.

The criteria followed followed for choosing the testing areas were:

- To work in the same provinces where the first phase of the research developed , keeping the categories of testing and controlling provinces, in order to permit Semi-experimental techniques to be developed.

- Comparing was made possible thanks to the existence of base information of experimental provinces and control provinces. Therefore, the changes occurred in the first ones could be logiccally atribuated to the response implemented.

- The provinces chosen should b e a representative sample of the ecological and cultural different provinces of the country.

Thus, the provinces chosen included two highlandean, two coastal, and two eastern provinces. Nevertheless, limitations at the coastal area stopped us from carrying out the work there:

a) In the Province of Esmeraldas, UNICEF, the MOH, FODERUMA, the Ministry of Social Welfare coordinated actions in order to provide multisectoral technical support to three areas of this province within the development of Integrated Rural Development Projects.

Within the health component of such interventions, and following the strategy of PHC, this coordinating institutions developed a model to respond to the supervision and supplies problems of the health promoters.

The solutions proposed consist in :

- Forming a supervisory team which include a physician heading the interventions in the area, a nurse and a sanitary inspector.

- The team will be responsible for approximately 20 promoters.

- The promoter must be visited monthly at least once by every one of the team members.

- During said visits, the physician will focuss on medical attention, and will supervise and train the promoter in managerial and technical aspects, the nurse will emphasize on nurse services, and the inspector in environmental santitation.

- During the visit the team will: collect information from the promoters, request the necessary implemants for the promoters, and distribute them, they will also revise the programmatic model and suggest changes.

This tentative response is presently under experimentation in the province of Esmeraldas. The MOH agreed upon the unconvenience of working there now.

We clearly understand that it is not quite proper for us to comment on such model,; however, we can not avoid realizing the high costs of its operation, and even more when considering that other institutional resources are involved in it.

b) In the Province of Guayas, on the other hand, there existed several difficulties between the Provincial Health Office and the Popular Organization, making it impossible for us to intervene.

Therefore, authorized by the MOH, we went on with the work in four provinces as detailed:

PROVINCES OF EXPERIMENTATION AND CONTROL PER NUMBER OF PROMOTERS AND TYPE OF SUPERVISION ACCORDING TO THE RESPONSE

TYPE OF PROVINCE	NR. OF PROMOTERS	NR. OF SUPERVISORS DIRECT	INDIRECT
CONTROL			
Pastaza	11	6	---
Morona	16	4	---
EXPERIMENTATION			
Imbabura	15	9	3
Napo	14	6	2
TOTAL:	56	25	5

SOURCE: PIRUC RESEARCH.
ELABORATION: PRICOR - FCL TEAM

b) IMPLEMENTATION OF THE TEST

By the end of May and beginning of June, the PRICOR Research Team simultaneously moved to Napo and Imbabura in order to implement the response test.

In the Eastern (Amazonean) Province of Napo, the work was developed in the Cantones (Counties): Francisco de Orellana, (Coca) and Tena. The test began as follows:

The first step was to hold a meeting between the PRICOR Team, the Director of Priority Programs of the Province Health Office of Napo

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and the nurse auxiliaries of the Health Posts and Health Sub-centers the nurses of the respective cantones, the Health promoters of the the mentioned cantones, the Representative of Community Development at Central Level, (he also came with us to Coca) and the representatives from hte Popular Organizations: Union de Nativos de la Amazonía Ecuatoriana (UNAE) from Coca, and the Federación de Organizaciones Indígenas de Napo (FOIN) from Cantón Tena.

During four days, this group of health performers carried out the following activities:

a) Description and detailing of the research study carried out.
b) Analysis and detailing of the supervision tools.
c) Detailing of the variables included in the model.
d) Delivery of technical tools and elaboration of supervision routes.

Description and Detailing of the Research Study Carried Out:

The description of the provinces and places where first-hand information was collected and of the levels and units of analysis that structured the supervision problem was made through slides.

The process of analysis of the first phase was enrichened by the participation of promoters and nurse auxiliaries, thanks to the motivation given by the group dinamics implemented and grouped under the technique of nominal group.

Analysis and Detailing of the Supervision Tools:

Reading and thinking about every one of the parts and questions within the supervision tool (see annex, direct supervision tool) permitted the personnel to get acquainted with the tool.

This mechanism led to the modification of the chart designed for immunizations, since the initial one presented difficulties for the implementation, specially regarding age groups, it was modified according to the opinion of the physicians and nurse auxiliaries attending. The ages were so grouped in three categories: 1-29 days, 1 month to under one year old, and one year to under 5 years old.

Detailing of the Variables Included in the Model

At a first moment, this issue was handled through the explanation of of the characteristics of the supervision roles, which include: research, evaluation and on-going training.

Secondly, the variables included in the response were clearly detailed:

- The level most likely for the promoter to approach: Health Sub-Center, Health Post and Cantón Hospital.
- The most convenient agent: nurse auxiliary.
- The monthly contacting frequency
- The period of contacting: 4 hours.
- The number of promoters under a supervisor: at least one and 4 at most.
- Supervision costs.
- Tools.

Participation of Community Organizations:

At this point we must note that popular organizations participate following a double model:

a) At specific community levels : formal organizations leaders (cabildos, asociations, cooperatives) and non-formal or natural organizations based on power holding born at the logics of conforma-

av'

tion and functioning of the Ayllu (elders, chiefs, etc.). The role of the community at this point consists in the evaluation and coordination of the promoters' activities around the specific objectives of PHC and the community.

b) At cantonal, regional and/or provincial levels, community participation is born, expressed and developed at the second level organization, represented by the UNAE in Coca and the FOINin Tena. At provincial level by the coordination of these three under the third level CONFENIAE.*

The role of these second and third level organizations consists in the coordination of actions with promoters and agents at canton and provincial levels of the formal health system around the evaluation, training and programming of PHC strategy and the overall community interests, of these organizations.

Something to be noted here is the excellent and complete open mind to discussion and coordination, specially among the Napo Provincial Health Office (represented by the director, the person in charge of of prioritary programs, and the nurses) and the organizations at canton level before mentioned. On the other side, the participation of these organizations, could, in their opinion, be more direct by going with the supervisors at least once every three months, depending in every case upon their availability or assignation of nurse auxiliaries to the organizations economiccally afforded by the MOH, which, would guarantee the development and enrichening of the strategy even more.

Delivery of Technical Tools and Elaboration of Supervision Routes:

The final part of this process consisted in distributing the direct supervision forms and the manual used to fill the information in the formularies by the auxiliaries. It must be noted that promoters, as well as auxiliaries extensively handled and studied the tool and

CONFENIAE: Confederación de Nacionalidades Indígenas de la Amazonía Ecuatoriana.

practiced its application.

Parallelly the supervision routes charts were improved, to clearly express the number of promoters and the geographical area corresponding to each supervisor: cost, type of transportation, distance, and traveling time necessary for the accomplishment of the task of supervision (See annex, chart Nr. 40)

c) EVALUATION OF THE TEST

Among the set of techniques offered by the operational research methods for the development of the test, this research study chose the modality called Quasi-experimental, which permits to establish a relationship of cause-effect within a sample.

We worked with a provincial sample due to the fact that we had to consider provincial systems in order to implement the experimental design. Two provinces were taken as experimental and the other two as of control, in order to have the possibility of establishing differential ranks which could be attributed to the innovating effect of the response. The purpose also was to determine a pre-test condition as opposed to a post-test condition.

QUASI EXPERIMENTAL MODEL OF THE TEST

		Previous data		Data from experience
Previous - Subsequent Test	C	O		O
			Response	
	E	O	X	O

- The test lasted for five months (July- November 1985)
- The required observation for this test was done by monitoring the variables included in the response and through the technical tools designed for the purpose.

- Monitoring activities happened at three stages: At the beginning, in the middle and at the end. In this way, the comparison and assessment of the development of the specific variables and of the experimental set was made possible in order to evaluate the response and make the necessary adjustments.

- For the final evaluation three specific tools were designed and simultaneously applied in the provinces, both the experimental and the control ones:

INTERVIEW # 1: Addressing the Health Promoter, included variables as: Identification, Units of reference, type of transportation, supervising agent, supervisor's assistance per PHC interventions, supervision activities per frequency, supervisor's perception.

INTERVIEW # 2: Addressing the supervisor, included variables as: identification, Nr. of promoters reporting to the supervisor, time assigned to the task, frequency of contacts per month, supervision interventions according to the promoter's occupational profile, perceptions on the value of supervision, travel expenses, etc.

INTERVIEW # 3: Addressing the promoter and evaluating output: Included variables as: Identification, levels of reference, number of promoter's interventions according to occupational profile, managerial activities, suggestions, and community leader's perception.

FINDINGS:

PROMOTER'S PERSPECTIVE

- The promoters in the experimental provinces received an average of 3,44 visits from their supervisors during a 5 month period. Meanwhile, the promoters in the provinces of control averaged 1,20 visits during the same period. The expected average for the experimental group was higher, but one of the communities in the Amazonean area is located at 12 hours walking from the supervisor, which results in a low visiting rate. The average in the control provinces was higher than expected, because in the Province of Bolivar there is a private organization (Plan Internacional) working which carries out more frequent visits to the promoters. However, the difference produced by the responsing strategy was significant (see annex, chart Nr. 44)

- The supervisors in the provinces of experimentation meet during and average of 9 hours with their promoters during a five month period, while the provinces of control present an average of 3.2 hours. (see annex, chart nr. 45)

- In the experimental group the supervisors meet community leaders for an average of 2.7 times, while the control group averaged 0,6 times (see annex, chart nr. 46)

- In the provinces of experimentation the supervisors have gone with the promoters visiting pregnant women at home for an average of 2,9 times per community during a five month period, while in the provinces of control the average is 0.83 times (see annex, c hart nr. 47)

- Regarding visits to newborns and their mothers at home paid by the promoter together with the supervisor, the experimental group averaged 2,66 per community while the control group averaged 0,12 times (see annex, chart Nr. 48).

- As for sick children visited by the promoter together with the supervisor, during a five month period the experimental group averaged 2,5 per community while the group of control presented 0,37 visits (see annex chart Nr. 50).

- And the average of sick adults visited by the promoter together with the supervisor was 2,4 per community in the experimental group and 0,5 in the control group. (see annex, chart Nr. 51)

- The average number of inspections to the water source carried out by the promoter together with the supervisor was 3 in the experimental provinces while in the provinces of control was 0,3 (see annex, chart n r. 52).

- Other visits with the purpose of indicating the way of obtaining pure water and the importance of such fact were paid to the families by the promoter together with the supervisor in an average of 1 visit per community in the experimental group while the control group showed 0.08 (see annex, chart nr. 53).

- Regarding the number of inspections to latrines made by the promoter and the supervisor together, during the same 5 month period, in the experimental provinces it showed to be 2,4 times per community, while it was 0,16 times in the provinces of control (see annex, chart Nr. 54).

- Regarding the number of observations about bargage disposal performed by the promoter and the supervisor together, the average number found in the experimental group was 2,9 and 0,16 in the control group. (see annex, chart nr. 55).

- As for the administrative activities carried out by the supervisor including revision of the information system followed by the promoter and the revision of the map of the community, the average presented in the experimental provinces was 3,1 times and 3,2 times, while the average in the provinces of control was 0,16 and 0,08 (see annex, charts 56 and 57).

ANALYSIS OF THE "T-TEST"

Under this analysis there are certain variables which obtained high significance (100%) and indicated the following:

- In the experimental provinces the supervisors tend to support preventive and curative activities more than in the provinces of control (see annex, chart nr. 58).

- Among the activities showing more support are: Conferences, pregnancy control, curative interventions addressed to children and adults, control of diahrrea and respiratory diseases, sanitary education, inmmunizations, control of bargage disposal, and handling of regulations and panphlets.

- The promoters working at the provinces of experimentation belie ve the supervisors are the most competent people to develop that task (see ahnex, chart nr. 59).

- A larger number of monthly visits occurred in the provinces of experimentation than in the provinces of control (chart N r. 59 in annex).

- The supervisors in the provinces of experimentation remain longer periods with their promoters than the supervisors in the provinces of control do. (See annex, chart Nr. 59).

- The supervisors in the provinces of experimentation are more effective regarding the development of the supervision contents than the supervisors in the other provinces are. (see annex, chart nr. 60).

ANALYSIS OF THE "T-TEST"

SUPERVISOR'S PERSPECTIVE

- In general, the supervisors in the provinces of experimentation showed better skills for the development of their tasks. Specifiecally, those supervisors received a training course which lasted about one week, and this meant significant differences with respect to the provinces of control. (see annex, chart nr. 61).

- The supervisors in the experimental group were in charge of an average of 2,1 promoters, while the supervisors in the provinces of control had a higher average of promoters: 3,6 promoters per supervisor (see chart Nr. 62 in the annex).

- The supervisors of the experimental group go over promoters' activities a larger number of times, and they also feel their tasks are being better appraised than before (By the MOH) (see annex, charts 63 and 64).

- The supervisors of the experimental group are more efficient than the ones in the group of control regarding knowledge in supervisory interventions and going over the promoters' activities (see annex, chart 65).

OTHER FINDINGS:

In the provinces of experimentation the average supervision cost per each agent was 259,32 sucres* while the cost per supervisor in the group of control was 540,71. This means the experimental group showed a cost of 50% less than in the group of control (see annex, chart nr. 66).

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* Local currency in July 1985. One dollar = 113. sucres at that time.

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PROMOTER'S OUTPUT

The Health Promoter's Output in the Provinces of Experimentation as well as in the Provinces of Control is described according to thework during the last month. So framed, the findings to be described are:

- In the experimental provinc. there are 1.5 new family gardens average per community, while i control Provinces showed no new family gardens at all (see annex, chart 67).

- Inganeral, the prometers in the provinces of experimentation show higher output than the prometers in the provinces of control, in as much as about 100% . Remarkable indicators are Nr. of pregnant women detected, Nr. of pregnant women under control, and control of healthy children. This can be observed in chart nr. 68 in the annex.

- The prometers of the experimental group show higher output regarding first aid interventions for children and adults than the control group of supervisors. (see annex, chart Nr. 69).

- Regarding activities aimed at increasing c onsumption of safe water rates, the provinces of experimentation showed to be higher. (see annex, chart N r. 70).

- Prometers in experimental groups have been 500% more involved in latrine construction activities than those in control groups. (see annex, chart 71).

- Regarding garbage disposal, the experimental group has a higher percentage of families that throw it and a higher percentage of those that bury it. (see annex, chart 72).

- The experimental provinces have showed 100% more output regarding conferences delivered to the communities than the provinces of control. Subjects of such conferences included people's health and environmental care activities. (see charts 73 and 74 in the annex).

- The promoters of the experimental group are also characterized by higher output in other health and community development interventions in general (see annex, chart Nr. 75)

CHART NR. 2.

SUPERVISING AGENTS AND OTHERS PREPARED TO BE SUPERVISORS, INTERVIEWED IN THE PROVINCES OF ESMERALDAS, GUAYAS, IMBABURA, BOLIVAR, MORONA AND NAPO ACCORDING TO THEIR CATEGORIES.

SUPERVISOR:	Number
Nurse Auxiliary	36
Community	7
Sanitary Inspector	2
Nurse	25
Health Educator	8
Rural Physician	47
Physician	14
TOTAL	139

Source: Direct Research

Ellaborated by the PRICOR-FEE Team.

CHART NR. 3.

DESCRIPTIVE DATA (PER PROVINCES)

	ESMERALDAS			IMBABURA			GUAYAS			BOLIVAR			MORONA		
	n	x	SD	n	x	SD	n	x	SD	n	x	SD	n	x	SD
Age	15	35.00	7.28	10	28.90	8.28	18	29.78	10.55	16	26.25	4.70	16	29.75	7.25
Sex	15	0.73	0.46	10	0.20	0.42	18	0.67	0.49	16	0.69	0.48	16	0.87	0.34
Education	15	2.07	0.80	10	2.30	1.49	18	2.35	0.49	16	2.00	0.52	16	1.94	0.44
Community Population	13	249,46	77.30	5	582.20	127.22	--	--	--	16	203.31	75.70	16	130.63	89.98
Number of Contacts	14	15.29	15.71	9	20.33	26.05	17	11.65	14.60	15	17.60	16.69	14	10.00	7.65
Number of Hours	15	5.00	1.60	10	3.50	2.07	18	3.50	1.38	16	3.31	1.14	16	4.50	7.63
Supervisor's Effectiveness	12	33.58	8.86	6	33.50	11.74	8	33.63	5.13	12	34.08	5.95	14	36.93	2.67

CHART NR. 4

DESCRIPTIVE STATISTICS - (TOTAL SAMPLE)

	n	$\bar{x}$	SD		n	$\bar{x}$	SD		n	$\bar{x}$	SD
Age	75	29,95	8,21	Home visits	53	31,17	27,63	People served (Children)	54	31,75	22,5
Sex: 1= male 2= female	75	0,67	0,48	Community meetings	52	5,37	4,49	People served (Adults)	54	31,80	27,74
Education: 1= elementary not completed 2= Elementary, compl. 3= High school not completed	75	2,12	0,75	Gardens	18	8,33	9,58	Pregnacies	39	7,21	12,58
Community Population	50	229,94	152,24	Food Supply	23	28,61	36,38	Services directly after childbirth	40	4,78	5,90
Number of contacts per year	69	14,07	15,73	Potable water	42	27,43	38,87	Patients referred (Children)	21	5,86	3.30
Hours per day	75	3,57	3,71	Latrines built	35	7,66	10,67	Patients referred	22	4,09	4,28
Supervisors' effectiveness	52	34,60	6,75								

CHART NR. 5

STATISTICS ON OUTPUT

(PER PROVINCES)

	ESMERALDAS			IMBABURA			GUAYAS			BOLIVAR			MORONA		
	n	x	SD	n	x	SD	n	x	SD	n	x	SD	n	x	SD
Home visits	12	26.58	31.03	10	55.70	18.47	--	--	--	15	42.73	32.67	16	20.94	21.55
Community Meetings	12	7.25	4.45	9	5.00	4.44	--	--	--	16	4.31	2.58	15	5.20	5.92
Gardens	4	2.75	2.87	--	--	--	--	--	--	10	11.17	14.03	8	9.00	7.31
Complementary Food	5	78.40	44.22	6	26.67	26.30	--	--	--	12	8.83	8.12	--	---	---
Safe water	11	60.18	64.23	6	15.83	12.35	--	--	--	10	16.50	18.98	15	15.33	7.03
Latrines Built	9	6.5	10.74	4	4.75	5.56	--	--	--	12	11.33	14.93	10	5.40	4.06

CHART NR. 6

STATISTICS ON OUTPUT

(PER PROVINCES)

	ESMERALDAS			IMBABURA			GUAYAS			BOLIVAR			MORONA		
	n	x	SD	n	x	SD	n	x	SD	n	x	SD	n	x	SD
Children receiving care	12	32.25	33.76	10	22.80	26.19	--	--	--	16	34.38	30.99	16	34.44	16.82
Adults receiving care	12	29.67	34.93	10	18.30	24.88	--	--	--	16	36.19	25.66	16	37.44	24.73
Pregnancies	10	8.90	5.23	6	16.17	30.84	--	--	--	14	3.07	2.02	12	6.58	5.80
Care after Childbirth	11	8.91	6.70	5	7.20	11.19	--	--	--	11	2.00	1.18	13	2.69	1.75
Children reffered	4	6.25	3.95	5	4.20	4.08	--	--	--	4	4.75	3.78	8	2.00	1.31
Adults reffered	1	19.00	0.00	4	4.75	4.11	--	--	--	11	3.33	2.81	6	2.17	0.98

CHART NR. 7

HEALTH PROMOTERS'S ACTIVITIES REVISED BY

THE SUPERVISOR .

THE SUPERVISOR ,	n	ALWAYS	SOMETIMES	NEVER	DOESN'T ANSWER
1. Has visited you in the community?	75	38.7	50.7	9.3	1.3
2. Does he often and regularly visit you?	73	37.3	37.3	21.3	4.0
3. Does he grade your activities and suggest improvements?	72	66.7	16.0	13.3	4.0
4. Do both of your hold meetings together with the community?	73	41.3	26.7	28.0	4.0
5. Does he respond to the needs presented?	74	54.7	29.3	13.3	2.6
6. Does he participate in the community works and projects?	74	26.7	25.3	46.7	1.3
7. Has he ever solved any problem detected?	72	34.7	37.3	24.0	4.0
8. Does he receive enough support from the MOH?	68	16.0	22.7	52.0	9.3
9. Does he revise together with you the reporting forms?	74	53.3	21.3	22.7	2.6
10. Does he check if the necessary supplies and medicine are available?	72	24.0	32.0	40.0	4.0
11. Does he observe your wrk and give the necessary help?	73	29.3	25.3	41.3	4.0
12. Does he provide you with on-going education?	73	28.0	28.0	41.3	2.7
13. Does he pay home visits with you?	73	13.3	13.3	69.3	4.0
14. Does he visit family gardens with you?	64	4.0	6.7	74.7	14.7
15. Does he visit/build latrines with you?	72	6.7	6.7	82.7	4.0
16. Does he check for safe water?	71	16.0	16.0	61.3	6.7
17. Does he check on data accuracy?	70	44.0	9.3	40.0	6.7
18. Does he care for the patients reffered by you?	71	65.3	16.0	12.0	6.7

Source: Direct Research. Elaboration: PRICOR-FEE Team

CHART NR. 8

NUMBER OF HOURS WORKED BY THE PROMOTER A DAY ACCORDING TO INDICATORS

Number of Hours when the Supervisor is:	STANDARDIZED REGRESSION COEFFICIENTS					
	Education[a]	Sex[a]	Age[a]	Supervision Level[b]	Total R^2	Lenght F
Nurse Auxiliary	.21*	-.27**	-.17	-.19*	.18	3.73**
The Community	-.14	-.23**	-.20*	-.04	.14	2.94**
Sanitary Inspector	.08	-.15	-.20*	.34**	.27	6.33**
Nurse	.15	-.22**	-.18	.09	.15	3.10**
Health Educator	-.20*	-.23**	-.14	.02	.14	2.92**
Rural Physician	.15	-.23**	-.18	.18*	.18	3.72**
Physician	-.19*	-.23**	.14	.03	.14	2.93**

a: Promoter
b: Supervisor
*p: .10
**p: .05

CHART NR. 9

"T - TESTS" FOR DIFFERENCES AMONG PROVINCES

	ESMERALDAS			IMBABURA			GUAYAS			BOLIVAR			MORONA		
	t	n	Sig.[a]	t	n	Sig.	t	n	Sig.	t	n	Sig	t	n	Sig
Home visits	-.65	51	0.52	-0.57	51	0.57	--	--	--	-1.97	51	0.06	1.81	51	0.08
Community meetings	1.80	45	0.08	0.32	45	0.75	--	--	--	1.32	45	0.19	0.05	45	0.96
Gardens	-1.31	15	0.21	--	--	---	--	--	--	-0.88	15	0.39	-0.24	15	0.81
Complementary Food	5.01[b]	21	0.00	0.15	21	0.88	--	--	--	3.27	21	0.00	3.77	--	--
Safe Water Contacts	3.73	40	0.00	0.79	40	0.44	--	--	--	1.02	40	0.31	1.53	40	0.14
Latrines Built	-0.35	33	0.73	0.57	33	0.57	--	--	--	-1.50	33	0.14	0.79	33	0.44

a: Double probability
b: Significant values (p .05) underlined

Source: Direct Research
Elaboration: PRICOR-FEE Team

CHART Nr. 10

"T-TESTS" FOR DIFFERENCES AMONG PROVINCES

	ESMERALDAS			IMBABURA			GUAYAS			BOLIVAR			MORONA		
	t	n	Sig.[a]	t	n	Sig.	t	n	Sig.	t	n	Sig.	t	n	Sig.
Children Receiving Care	0.07	52	0.95	1.14	52	0.26	--	--	--	-1.45	52	0.66	-0.46	52	0.65
Adults receiving Care	-0.30	52	0.77	1.74	52	0.09	--	--	--	-0.75	52	0.46	-0.97	52	0.34
Pregnancies	0.46	37	0.65	-1.98	37	0.06	--	--	--	1.65	37	0.11	0.26	37	0.80
Care After Childbirth	2.99[b]	38	0.01	-0.98	38	0.33	--	--	--	1.89	38	0.07	1.58	38	0.12
Children Referred	1.66	19	0.11	-0.26	19	0.80	--	--	--	-0.59	19	0.56	2.18	19	0.04
Adults referred	5.55	20	0.00	-0.33	20	0.74	--	--	--	0.59	20	0.56	1.32	20	0.20

a: Double probability
b: Significant t values (p .05) underlined

Source: Direct Research
Ellaboration: PRICOR-FEE Team.

CHART NR. 11

DESCRIPTIVE STATISTICS ON SUPERVISING LEVELS

Supervisor	n	$\bar{x}^{a}$	S.D.
Nurse Auxiliary	36	1.57	0.66
Community	7	1.00	0.00
Sanitary Inspector	2	1.50	0.71
Nurse	25	1.96	0.89
Health Educator	8	3.00	0.00
Rural Physician	47	1.91	0.66
Physician	14	1.86	1.03

[a] 1 = Health Post
2 = Health Subcenter
3 = Health Center, MOH, Prov. Health. Office, FODERUMA

Source: Direct Research
Ellaboration: PRICOR-FEE Team.

CHART NR. 12

NUMBER OF ANNUAL CONTACTS BETWEEN THE PROMOTER AND THE SUPERVISOR PER INDICATORS
(PROMOTERS' PERSPECTIVE SHOWN)

Number of contacts when the supervisor is:	STANDARDIZED REGRESSION COEFFICIENTS					
	Education[a]	Sex[a]	Age[a]	Supervision Level	Total Lenght R^2	F
Nurse Auxiliary	-.02	-.17	-.07	.17	.29	1.26
The Community	.03	-.21*	-.09	.17	.07	1.28
Sanitary Inspector	.02	-.20*	-.06	.00	.04	0.80
Nurse	.00	-.25**	-.12	-.32**	.14	2.66**
Health Educator	-.05	-.20*	.03	.06	.05	0.85
Rural Physician	.04	-.21*	-.05	.17	.08	1.33
Physician	-.07	-.20*	.02	-.05	.05	0.05

a: Promoter

b: Supervisor

*p .10

**p .05

SOURCE: Direct Research

ELLABORATION: PRICOR-EEE Team

CHART NR. 13

PROMOTERS' PERCEPTION ON SUPERVISORS' EFFECTIVENESS PER INDICATORS

Supervisor's effectiveness perceived when the supervisor is:	STANDARDIZAED REGRESSION COEFFICIENTS					
	Education[a]	Sex[a]	Age[a]	Supervision Level	Total R^2	Lenght F
Nurse Auxiliary	-.33**	.01	-.01	.33**	.17	2.43*
The Community	-.26*	-.06	.02	.12	.09	1.19
Sanitary Inspector	-.28*	-.04	.03	.08	.08	1.08
Nurse	-.23*	.03	.09	.32**	.18	2.49**
Health Educator	.05	-.26*	-.06	-.11	.09	1.16
Rural Physician	-.26*	-.04	.04	-.18	.11	1.47
Physician	-.26*	-.04	.04	.09	.08	1.12

a: Promoter
b: Supervisor
*p .10
**p .05

SOURCE: DIRECT RESEARCH

Ellaboration: PRICOR-FEE Team.

CHART NR. 14

INDICATORS OF PROMOTERS' OUTPUT. (WHEN THE SUPERVISOR IS A NURSE AUXILIARY)

DEPENDANT VARIABLES	STANDARDIZED REGRESSION COEFFICIENTS				
	SUPERVISION LEVEL[b]	NUMBER OF CONTACTS[c]	NUMBER OF HOURS[d]	TOTAL R^2	LENGHT F
Home Visits	-.08	.14	.38**	.17	2.74**
Community Meetings	-.06	-.07	.08	.02	0.21
Gardens Implemented	.06	-.49	.40	.37	1.26
Supplementary Food Distributed	-.09	-.02	.01	.01	0.04
Safe Water Provision	-.25	.09	-.08	.08	0.65
Latrines built	.47**	.18	-.18	.33	2.57
Children receiving Care	-.16	-.07	.41**	.19	3.00**
Adults receiving Care	-.31**	-.02	.31**	.18	2.92**
Pregnancies detected and Served	-.21	.68**	.05	.48	7.28**
Care given directly after Childbirth	-.32*	.62**	-.11	.46	4.83**

a: Efficiency Measurements during the first and second semester, 1983
b: Supervision levels are measured as: 1. Health Post, Mission. 2: Health Subcenter, 3. Health Center, MOH, PEO, Foder
c: Contacts between the Supervisor and the Promoter
d: Hours served by the promoter daily.
*p .10
**p .05
SOURCE: Direct Research
ELLABORATION: PRICOR-FEE Team.

CHART NR. 15

INDICATORS OF PROMOTERS' OUTPUT. (WHEN THE SUPERVISOR IS A PHYSICIAN)

	STANDARDIZED REGRESSION COEFFICIENTS				
DEPENDANT VARIABLE:	SUPERVISION LEVEL	NUMBER OF CONTACTS	NUMBER OF HOURS	TOTAL R^2	LENGHT F
Home Visits	.24	.15	.33**	.22	3.64**
Community Meetings	-.13	-.08	.12	.03	0.37
Gardens Implemented	.10	-.45	.33	.39	1.27
Supplementary Food Distributed	-.26	-.01	-.05	.07	0.34
Safe Water Provission	.13	-.06	.08	.03	0.25
Latrines Built	-.09	-.23	.26	.12	0.64
Children receiving care	-.10	-.08	.42**	.16	2.70**
Adults receiving Care	-.13	-.05	.32	.11	1.55
Pregnancies detected and served	-.37**	.05	.75**	.56	10.20**
Care given directly after childbirth	-.17	.60*	-.07	.38	3.66**

*p .10
**p .05

SOURCE: Direct Research
ELABORATION: PRICOR-FEE Team.

CHART NR. 16

INDICATORS OF PROMOTERS' OUTPUT. (WHEN THE SUPERVISOR IS A RURAL PHYSICIAN)

	STANDARDIZED REGRESSION COEFFICIENTS				
DEPENDANT VARIABLE:	SUPERVISION LEVEL	NUMBER OF CONTACTS	NUMBER OF HOURS	TOTAL R^2	LENGHT F
Home Visits	-.13	.15	.36**	.19	2.88**
Community Meetings	-.05	-.07	.07	.02	0.20
Gardens Implemented	.28	-.63	.53	.45	1.49
Supplementary Food Distributed	.24	.05	-.09	.05	0.25
Safe Water Provission	.40**	-.04	.18	.17	1.59
Latrines Built	-.11	-.26	.18	.12	0.67
Children receiving care	-.01	-.06	.40**	.16	2.50*
Adults receiving care	.05	-.04	.31**	.09	1.34
Pregnancies detected and served	.07	.03	.68**	.44	6.25**
Care given directly after childbirth	.19	.00	.63**	.38	3.70**

*p .10
**p .05

SOURCE: DIRECT RESEARCH
ELLABORATION: PRICOR-FEE Team

CHART NR. 17

INDICATORS OF PROMOTERS' OUTPUT. (WHEN THE SUPERVISOR BELONGS TO THE COMMUNITY)

	COEFFICIENTS OF STANDARDIZED REGRESSION				
DEPENDANT VARIABLE:	SUPERVISION LEVEL	NUMBER OF CONTACTS	NUMBER OF HOURS	TOTAL R^2	LENGHT F
Home Visits	-.13	.15	.38**	.19	2.89
Community Meetings	.02	.08	-.07	.01	0.17
Gardens Implemented	-.19	-.50	.36	.42	1.43
Supplementary Food Distributed	-.19	.01	.03	.04	0.17
Safe Water Provission	-.02	-.06	.10	.02	0.13
Latrines Built	-.19	.21	-.22	.15	0.82
Children Receiving Care	.14	-.08	.42	.18	2.84**
Adults Receiving Care	.02	-.03	.30	.09	1.31
Pregnancies detected and served.	.06	.67**	.02	.44	6.21**
Care given directly after Childbirth	-.12	.58**	-.02	.37	3.42**

*p .10
**p .05
SOURCE: Direct Research
ELLABORATION: PRICOR-FEE Team

CHART NR. 18

INDICATORS OF PROMOTERS' OUTPUT. (WHEN THE SUPERVISOR IS A HEALTH EDUCATOR)

	COEFFICIENTS OF STANDARDIZED REGRESSION				
DEPENDANT VARIABLE:	SUPERVISION LEVEL	NUMBER OF CONTACTS	NUMBER OF HOURS	TOTAL R^2	LENGHT F
Home Visits	.14	.14	.36**	.19	2.94**
Community Meetings	.04	-.07	.08	.01	0.18
Gardens Implemented	.12	-.44	.33	.39	1.29
Supplementary Food Distributed	-.49**	-.05	.06	.24	1.44
Safe Water Provission	.18	.09	-.09	.05	0.39
Latrines Built	.41*	-.30	.10	.27	1.68
Children receiving Care	.18	-.07	.37**	.20	3.11**
Adults receiving Care	.29**	-.04	.25*	.17	2.74**
Pregnancies detected and Served	-.45**	.04	.81**	.62	12.82**
Care given directly after childbirth	-.32	.66**	.04	.44	4.70**

*p .10
**p .05

SOURCE: DIRECT RESEARCH
ELLABORATION: PRICOR-FEE Team.

CHART NR. 19

INDICATORS OF PROMOTERS' OUTPUT . (WHEN THE SUPERVISOR IS A HEALTH INSPECTOR)

	STANDARDIZED REGRESSION COEFFICIENTS				
DEPENDANT VARIABLES	SUPERVISION LEVELS	NUMBER OF CONTACTS	NUMBER OF HOURS	TOTAL R^2	LENGHT F
Home Visits	-.10	.14	.40**	.18	2.77**
Community Meetings	.04	-.07	.07	.01	0.18
Gardens Implemented	.39	--	.50	.58	2.17
Supplementary Food Distributed	--	.01	-.02	.01	0.01
Safe Water Distributed	--	.11	-.06	.02	0.20
Latrines Built	--	.21	-.23	.11	0.97
Children Receiving Care	--	.40**	-.06	.16	3.84**
Adults Receiving Care	--	.30**	-.03	.09	1.99
Pregnancies detected and served	--	.66**	.03	.43	9.57**
Services given directly after childbirth	--	.59**	-.04	.35	5.10))

*p .10
**P .05

SOURCE: DIRECT RESEARCH
ELLABORATION: PRICOR-FEE Team

CHART NR. 20

DESCRITPTIVE STATISTICS ON THE SUPERVISOR

VARIABLE	HIGH SCORE INDICATES	NUMBER	MEDIA	S.D.
Age	Old Person	32	29.19	4.35
Sex	1. Female 2. Male	33	1.36	0.49
Education	Post-high school educ.	34	2.12	1.01
Number of Promoters supervised	High number of promot.	34	2.50	1.80
Supervisor's knowledge about superv. process	Limited knowledge about the supervision process	32	12.91	2.69
Joint checking on promoter's activit.	Limited revision of activities	28	21.75	4.45
Number of supervis. hours a month	Many hours	28	21.32	21.46
Number of contacts w/ promot, per year	Many contacts	29	15.14	21.28
Number of days spent in training	Many training days on supervision	8	11.88	11.72
Type of supervision contribution to higher health status of the community	1. Positive 2. Limited	34	1.06	0.24
MOH's appraisal on supervisor's role.	1. MOH apparaises 2. MOH does not appraise	33	1.85	0.36

SOURCE: Direct Research
Ellaboration: PRICOR-FEE Team.

CHART NR. 21

MODIFICATIONS NEEDED FOR THE IMPROVEMENT OF SUPERVISION

SUPERVISORS' PERCEPTIONS ON CHANGES NECESSARY TO IMPROVE THEIR ROLES:	NECESSARY*	NOT NECESSARY
1. More Training	82.4	17.6
2. Financial resources	88.2	11.8
3. Transportation	67.6	32.4
4. Planning at Central Level	79.4	20.6
5. More time	61.8	38.2
6. Supervision Manuals	55.9	44.1

n = 34

* Percentage

SOURCE: Direct Research

ELLABORATION: PRICOR-FEE Team

CHART NR. 22

REVISION OF ACTIVITIES TOGETHER WITH THE PROMOTER

OVER WHAT ACTIVITIES DO YOU USUALLY GO TOGETHER WITH THE PROMOTER?	ALWAYS	SOMETIMES	NEVER	NO RESPONSE
1. Promotion of immunizations	70.6	11.8	11.8	5.8
2. Promotion of supplementary feeding	58.8	29.4	5.9	5.8
3. Promotion of O.R.T	58.8	23.5	11.8	5.8
4. Promotion projects	32.4	26.5	35.3	5.8
5. Promotion of family gardens	17.6	38.2	38.2	5.8
6. Home visits	26.5	50.0	14.7	8.8
7. Detection of people to be cared for: pregnant women and newborns.	41.2	32.4	20.6	5.8
8. Service to frequent morbility rates	44.1	41.2	8.8	5.8
9. Dental Care	23.5	26.5	47.1	2.9
10. First Aid	41.2	44.1	8.8	5.8
11 Improvement in the provission of water	41.2	32.4	20.6	5.8
12. Construction of latrines and disposal of bargage	17.6	38.2	38.2	5.8

n = 34

* Percentage

SOURCE: Direct Research
ELLABORATION: PRICOR - FEE Team

CHART NR. 23

SUPERVISORS' PERCEPTION ON THE PROCESS OF SUPERVISION

WHAT ARE THE COMPONENTS OF SUPERVISION?	ALWAYS	SOMETIMES	NEVER	NO RESP.
1. Data collection about activities following MOH Forms.	55.9	11.8	29.4	2.9
2. Notice of community meetings	20.6	61.8	17.6	0.0
3. Direct observation of promoter's work	35.3	47.1	17.6	0.0
4. Promotion of on-going education as needed	55.9	32.4	11.8	0.0
5. Definition of the objectives and tasks to be accomplished by the promoter	58.8	26.5	14.7	0.0
6. Notices of meetings with groups of promoters	17.6	20.6	58.8	2.9
7. Being sure if the promoter has the necessary medicine and supplies and provide them if necessary.	29.4	41.2	29.4	0.0

n = 34

* percentage

SOURCE: RESEARCH
ELLABORATION: PRICOR-FEE Team

CHART NR. 24

NECESSARY TRAINING TO IMPROVE SUPERVISION ACTIVITIES

SUPERVISOR'S PERCEPTION ON THE TRAINING NEEDS IN ORDER TO BE A BETTER SUPERVISOR:	NECESSARY	NOT NECESSARY
1. More clinic information	91.2	8.8
2. Planning and evaluation program	97.1	2.9
3. Skills on community organization strategy	91.2	8.8
4. Skills on interpersonal communication	94.1	5.9
5. Health Education Techniques	97.1	2.9
6. Training in Leadership	91.2	8.8

n = 34

* Percentage

SOURCE: DIRECT RESEARCH

ELLABORATION: PRICOR-FEE Team

CHART NR. 25

KNOWLEDGE OF THE SUPERVISOR ABOUT THE PROCESS OF SUPERVISION

WHAT ARE THE COMPONENTES OF SUPERVISION?	ALWAYS	SOME-TIMES	NEVER
1. Data collection about activities following MOH forms.			
Nurse Auxiliary	81.3	6.3	12.5
Physician	28.6	21.4	50.0
2. Notice of community Meetings			
Nurse Auxiliary	29.4	47.1	23.5
Physician	7.1	85.7	7.1
3. Direct Observation of Promoters' Performance			
Nurse Auxiliary	35.3	47.1	17.6
Physician	28.6	50.0	21.4
4. Promotion of on-going education			
Nurse Auxiliary	58.8	41.2	0.0
Physician	57.1	21.4	21.4
5. Definition of objectives and tasks			
Nurse auxiliary	64.7	17.6	17.6
Physician	50.0	42.9	7.1
6. Notices of meetings with promoters			
Nurse Auxiliary	23.5	5.9	70.6
Physician	7.7	30.8	61.5
7. Concern about promter's needs regarding medicine and supplies.			
Nurse Auxiliary	29.4	35.3	35.3
Physician	28.0	50.0	21.4

n = 32

* Percentage

SOURCE: Direct Research
ELLABORATION: PRICOR-FEE Team.

CHART NR. 26

REVISION OF ACTIVITIES BY THE SUPERVISOR TOGETHER WITH THE PROMOTERS

OVER WHAT ACTIVITIES DO YOU GO TOGETHER WITH THE PROMOTER?	ALWAYS	SOMETIMES	NEVER
Immunizations			
Nurse Auxiliary	76.5*	5.9	17.6
Physician	75.0	16.7	8.3
Supplementary Food			
Nurse Auxiliary	64.7	29.4	5.9
Physician	50.0	41.7	8.3
O.R.T.			
Nurse Auxiliary	76.5	11.8	11.8
Physician	41.7	41.7	16.7
Project Development			
Nurse Auxiliary	35.3	41.2	23.5
Physician	25.0	8.3	66.7
Family Gardens			
Nurse Auxiliary	17.6	52.3	29.4
Physician	8.3	33.3	58.3
Home Visits			
Nurse Auxiliary	31.3	43.8	25.0
Physician	25.0	66.7	8.3
Detection of people to be cared for: pregnant women and newborns			
Nurse Auxiliary	43.8	18.8	37.5
Physician	46.2	46.2	7.7
Service to most frequent morbidities			
Nurse Auxiliary	41.2	52.9	5.9
Physician	58.3	25.0	16.7

n = 32

* percentage

SOURCE: DIRECT RESEARCH
ELLABORATION: PRICOR-FEL Team

CHART NR. 28

STRUCTURAL VARIABLES RELATED TO THE PROCESS OF SUPERVISION

DEPENDANT VARIABLE	COEFFICIENT OF STANDARDIZED REGRESSION				TOTAL LENGHT	
	EDUCATION	SEX	AGE	LEVEL of SUPERVISION[a]	R^2	F
Number of Contacts	-.42	.28	-.20	.14	.22	1.11
Number of Hours	-.10	-.52 **	.65**	.10	.53	4.62**
Revision of the Activities	-.18	.42**	-.57**	-.31	.47	3.55**
Knowledge about supervision	.16	-.03	-.57**	-.52**	.52	4.29**
Number of Promoters Supervised	.53 **	-.01	.67**	_.05	.51	4.16**

[a] 1. Health Post, Mission
2. Subcenter
3. Health Center, MCH, SHO, Federuma

*p .01
**p .05

CHART NR. 29

STRUCTURAL VARIABLES RELATED TO THE SUPERVISION PROCESS.-

DEPENDANT VARIABLE	STANDARDIZED REGRESSION COEFFICIENT					TOTAL LENGHT
	EDUCATION	SEX	AGE	SUPERVISION LEVEL[a]	R^2	F
Number of Contacts	-.19	.33	-.25	-.20	.22	1.08
Number of Hours	-.25	-.51**	.72**	.26	.54	4.46**
Revission of Activities	-1.05**	.30	-.37**	.86**	.56	4.70**
Knowledge about Supervission	-.99**	-.13	-.33	1.01**	.55	4.52**
Number of Promoters Supervised	.59	-.06	.65**	-.08	.54	4.44**

[a]
1. Nurse Auxiliary
2. Nurse
3. Rural Physician
4. Physician

*p .01
**p .05

Chart No. 22

SYSTEM OF VARIABLES ASSOCIATED TO THE SUPERVISION PROCESS

DEPENDANT VARIABLE	NUMBER OF PROJECTERS	STANDARDIZED REGRESSION COEFFICIENT TRAINING	SUPERVISION LEVEL	PERCEPTION ON MOH CONTRIBUT.	PERCEPTION ON SUPERV. CONTRIBUT.	TOTAL LENGHT R^2	F
Number of Contacts	-.55**	.78	.01	.10	--	.59	6.87**
Number of Hours	.36	-.11	-.11	-.12	-.11	.14	0.60
Knowledge about Supervision	-.37**	-.16	-.14	.22	.32*	.49	3.89**
Satisfaction of the activity	-.36	.22	-.16	.28	.31	.15	1.76

*p .01
**p .05

CHART NR. 31

SYSTEM OF VARIABLES ASSOCIATED TO THE SUPERVISION PROCESS

DEPENDANT VARIABLE	STANDARDIZED REGRESSION COEFFICIENT					TOTAL LENGHT	
	NUMBER OF PROMOTERS	TRAINING	PROFESSION	PERCEPTION ON MOH's CONTRIBUT.	PERCEPTION ON SUPERVISOR'S CONTRIBUTION	R^2	F
Number of Contacts	-.53**	.78**	-.09	.10	--	.60	7.10**
Number of Hours	.37	-.13	-.16	-.09	-.07	.15	0.64
Knowledge about supervision	-.43**	-.17	.09	.26	.28	.48	3.72**
Revission of the activity	-.41*	.21	.09	.31	.28	.34	1.64

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*p .01
**p .05

CHART NR.

CRITERIA TO SELECT THE MOST CONVENIENT SUPERVISOR ACCO

Possible Supervision Agents According to Advantages, D

AGENT	ADVANTAGES	DISADVANTAGES	DECISORY POLICIES	CATEGORY	SALARIES NC	JP	NC
PHYSICIAN Physician Rural Physician	There is positive correlation as of pregnancies, # of contacts, #of hours, per home visits & per children served. Accessibility + tech. train. Low # Rev. act. Higher score on accesib. + # of contacts.	No econom.rsrc. No incidence on comm. devlpmnt. Vertical relat. M- Promoter. Unacquaintance w/ peasant sit. No positive correlationsh. Lack of econmc resrcs. Verticality Health Care ds. not infere in Comm Devlpmnt.	Definition of functns. Financ. Traini. More Traini. More economic resources Definit. of func. " " "	1 2 3 4 5 6 RURAL	19.000 21.000 23.000 25.000 27.500 30.000	19,000 21.000 23.000 25.000 27.500 30.000	19.000 21.000 23.000 14.700
NURSE	Exist. resrc. Possibility fr programming Lack of time for supervis. Low # reviss. activities towards prom.	Lack of economic resources.	" " "	RURAL 1 2 3 4 5 6	13.500 14.700 15.900 17.400 19.600 21.000	13.500 14.700 15.900 17.400	13.500 13.500 14.700 15.900 17.400
NURSE AUXILIARY	Optimum # Contacts. + # of positive correlationsh. Medium lvl of suprv. qualif. Horizontal Relationship More economic		Definit, of fnctns Training, Resources, Allowances. Plann, at centr. lvl. Support from higher lvls manuals, transport.	1 2 3.			10.800 11.000 11.600
HEALTH EDUCATOR	Positive in # of prom. hours, in pregnancies served. Medium level of qualifications for task.	Negative accesibility. Lack of time, economic resources, allowances, transp.	Definition of functis. Training Economic Resoruces. Transport,	9		13.520	

12

DING TO THE RELATION COST-EFFECTIVENESS

sadvantages, Decisory Policies, and Income.

30%** Am. Re.	SOCIAL BENEFITS (13-14-15)	SOCIAL SECURITY COST	TOTAL INCOME P/ MONTH	TRAVEL EXP.	ALLOW.
24.700	3.516	1.681.50	29.897.50		
27.300	3.683	1.858.50	32.841.50		
29.900	3.850	2.035.50	35.785.50		
32.500	4.016	2.212.50	38.728.50		
37.750	4.225	2.433.70	42.408.70		
39.000	4.433	2.655.00	46.088.00		
22.050***	3.115	300.95	25.525.95		
17.550	2.975	1.194.75	21.719.75		
17.550	2.975	1.194.75	21.719.75		
19.110	3.115	1.300.95	23.525.95		
20.760	3.255	1.407.15	25.332.95		
22.620					
24.700					
27.300					
14.040	2.660	1.171.80	17.851.80		
14.300	2.683	1.193.50	18.176.50		
15.080	2.753	1.258.60	19.091.00		
13.660 (funct-ional)	2.976	1.196.50	27.832.50		

SANITARY INSPECTOR	Positive correlationship in # of contacts for children served, adults served, pregnancies detected and served. Care after Childbirth.	Negative Correlations regarding environment, sanitation, served water, latrines, community meetings, wardens, low # of contacts, inactive, trans & adj.	Training Transport Financing				

* 15° + 11° + 15° services
** 30% additional in Amazonean Region
*** RURAL PHYSICIAN, 50% addit. in Amazonean Regions

SOURCE: Direct Research
ELLABORATION: PRICOR-FLU Team

CHART NR. 55

COMPONENTS OF DIRECT SUPERVISION TOWARDS HEALTH PROMOTERS*

SUPERVISION LEVEL	AGENT	FREQUENCY	TIME (LENGHT)	NUMBER OF PROMOTERS SUPERVISED (MAXIMUM)	MAXIMUM	MINIMUM	AVERAGE	TOOLS
HSC/HP	Nurse Auxiliary	monthly	4 hours	4	4.555.40	999.60	Supervision Costs 2.776.50 Percentage S: 72% VcS: 26.5% P: 1.5%	Forms Manuals Tools

COMPONENTS OF THE INDIRECT SUPERVISION TOWARDS HEALTH PROMOTERS
SUPERVISING THE SUPERVISORS (NURSE-NURSE AUXILIARY)

C. H. HSC-HP P.C. HSC-HP	Nurse	quarterly	4 hours	5	8.164.00 (5.112.70)	1.370.90	Supervision Costs 6.155.00 (5.118,80) Percentage S: 42% VcS: 40% P: 18%	Forms Manuals Directions

SOURCE: DIRECT RESEARCH - MOH
ELLABORATION: PRICOR-FEE Team
* Currency at June 1985: 1 US $: 113,50 sucres.

CHART NR. 54

DISTRIBUTION OF PROMOTERS PER LEVELS OF SUPERVISION AND COSTS (GUAYAS PROVINCE)

LEVEL	COMMUNITY	DISTANCE ROUND TRIP km.	TYPE OF TRANSP.	DAILY SALARY	ALLOWANCES	TRAVEL EXPEN.	DAYS TAKEN	TOTAL PER TRIP	FARES
HSC Palestina	Galapagos Playones	52	Car	709,60	290		1	999,80	80
	Guajaba La Carmela	20	Car	709,60	290		1	999,80	50
HSC Santa Lucía	Barbasco Porvenir	18	Car	709,60	290		1	999,80	40
	San Pedro Villa Bermejo	30	Fluvial	709,60	290		1	999,80	60
HP Bermejo Abajo	Monte Oscuro	14	Walking	709,60	290		1	999,80	--
	Bajay Cabuya	150	Fluvial	2128,60		1.740.00	3	3868,60	240
HP Peñal	Santa Clara	30	Boat	709,60	290		1	999,80	60
	El Mate	20	Boat	709,60	290		1	999,80	40
HP Laurel	Las Peñas Judith	16	Boat	709,60	290		1	999,80	40
	Ricaurte Largo	20	Car	709,60	290		1	999,80	40
HP Junquillal	Ricaurte Grande	20	Car	709,60	290		1	999,80	40
	Cabuyal Ricaurte	30	Car	709,60	290		1	999,80	60

SOURCE: Direct Research
ELLABORATION: PRICOR-FEE Team

CHART NR. 55

DISTRIBUTION OF PROMOTERS PER LEVELS OF SUPERVISION AND COSTS

PROVINCE OF NAPO

LEVEL	COMMUNITY	DISTANCE ROUND TRIP KM	TRANSPORT	DAILY SALARY	ALLOWANCES	TRAVEL EXPENSES	NUMBER OF DAYS	TOTAL COST PER TRIP	FARES
HSC Misahuallí	Punishalcana	60	Walking	867,80		1.160	2	1.895,60	150
HSC Ahuano	Santa Rosa	70	Fluvial	867,80	290		1	1.157,80	150
HP Chontapunta	Río Blanco	30	Walking	867,80		580	1	1.447.80	
	Bella Vista	30	Fluvial	867,80	290		1	1.157,80	80
HP Puerto Rico	Guacamayo	60	Fluvial	867,80	290		1	1.157,80	150
	Puma Punta	30	Fluvial	867,80	290		1	1.157,80	80
	Puerto Salazar	10	Fluvial	867,80	290		1	1.157,80	30
HP Puerto Murialdo	Macana Cocha	6	Walking	867,80	290		1	1.157,80	
CH Coca	Armenia*	6	Fluvial	867,80	290		1	1.157,80	30
	Puerto Colón*	60	Fluvial	867,80	290		1	1.157,80	150
	Payamino*	40	Fluvial	867,80	290		1	1.157,80	100
HSC San Carlos	Montufar Fco. de Asis	120	Car	867,80	290		1	1.157,80	260
HP Primavera	San Carlos	14	Fluvial	867,80	290		1	1.157,80	40
	Armenia* Payamino* Puerto Colón *	200	Fluvial	867,80	290.	1.160	3	4.053,40	500
HSC Limoncocha	Pompeya	6	Fluvial	867,80	290		1	1.157,80	20
HP Samona	Itaya	1	Fluvial	867,80	290		1	1.157,80	20
	Chiroisla	140	Fluvial	867,80		580	1	1.447,80	350
	Sinchichigta	140	Fluvial	867,80		580	1	1.447,80	350

CHART NR. 55

(Continued)

LEVEL	COMMUNITY	DISTANCE ROUND TRIP KM.	TRANSPORT	DAILY SALARY	ALLOW-ANCES	TRAVEL EXPENS.	NUMBER OF DAYS	TOTAL COST PER TRIP	FARES
HSC Evop Su-shufindi	Inca								
HSC San Fco, Lago Ag.	Rumipamba San Miguel	120	Car	$67,80	290		1	1.157,80	300
HSC El Carmen de Putumayo	Tigre Playa	20	Fluvial	$67,80	290		1	1.157,80	60
HP Paloma Roja	Singue	50	Fluvial	$67,80	290		1	1.157,80	150
HSC Jambelí	Cochapamba	20	Car/walk.	$67,80	290		1	1.157,80	60
	Unión Guacamayo	20	Car/walk.	$67,80	290		1	1.157,80	40
HSC Sevilla	Js. Gn. Poder	20	Car/walk.	$67,80	290		1	1.157,80	40
HSC Cascales	San José	20	Car/walk.	$67,80	290		1	1.157,80	40
HSC Lumbaquí	Chuscayacu	20	Car Walk.	$67,80	290		1	1.157,80	40
HSC Reventador	Pandayacu	35 q	Car/walk.	$67,80	290		1	1.157,80	60
	Dashiño	12	Car/walk.	$67,80	290		1	1.157,80	30
HSC Chaco	Cascabel	25	Car/Walk.	$67,80	290		1	1.157,80	50
HP Loreto	Huataracu	6	Walking	$67,80	290		1	1.157,80	
HP Cosanga	Huamaní	40	Car	$67,80	290		1	1.157,80	50
HP Cotundo	Nvo. Sto Dgo.	6	Car	$67,80	290		1	1.157,80	20

CHART NR. 56

DISTRIBUTION OF PROMOTERS PER LEVELS OF SUPERVISION AND COSTS
PROVINCE OF BOLIVAR

LEVEL	COMMUNITY	KM- DISTANCE ROUND TRIP	TYPE OF TRANSPORT	DAILY SALARY	ALLOWANCES	TRAVEL EXP.	NR. OF DAYS	TOTAL COST PER TRIP	FARES
HSC Sánchez	Rayoyamba	18	Car	709,60	290		1	999,60	50
HSC Salinas	Los Arrayanes Pambabuela	50	Car	709,60	290		1	999,60	120
	Yacubiana	8	Walking	709,60	290		1	999,60	20
	Pachanche	32	Car	709,60	290		1	999,60	70
	Apahua	12	Car	709,60	290		1	999,60	30
	El Rayo	15	Car	709,60	290		1	999,60	40
HSC Guanujo	La Moya	18	Car/walk.	709,60	290		1	999,60	40
	Quindihua	46	Car	709,60	290		1	999,60	100
	Caldamayacu	34	Car	709,60	290		1	999,60	80
	San Juan Llaudundango Bramadero Chico	26	Car	709,60	290		1	999,60	70
HSC Santa Fe	Pianda	10	Car	709,60	290		1	999,60	30
	Monjas	50	Car	709,60	290		1	999,60	120
HSC Caluma	Charquiyacu	12	Car	709,60	290		1	999,60	30
	Tablas de Libertad	76	Car	709,60	290		1	999,60	150
HSC Echeandía	Los Laureles			709,60	290		1	999,60	40
HSC Caluma	La Palma	20		709,60	290		1	999,60	40
	Huaidiagua	40		709,60	290		1	999,60	80
HSC San Simón	Pachagrón Cachisagua Cruzcichi San Antonio								

CHART NR. 56 (contd)

LEVEL	COMMUNITY	KM - DISTANCE ROUND TRIP.-	TYPE OF TRANSPORT	DAILY SALARY	ALLOWANCES	TRAVEL EXP.	NR. OF DAYS	TOTAL COST PER TRIP	FARES
HSC San Lorenzo	Canduya	20	Car	709,60	290		1	999,60	40
HSC Santiago	Toteras	20	Car	709,60	290		1	999,60	40
HSC San Vicente	Ingubí	30	Car	709,60	290		1	999,60	60
HSC San Pablo	Sadirumipamba	20	Car	709,60	290		1	999,60	50
	Cerritos	32	Car	709,60	290		1	999,60	70
	Cascarillas	12	Car	709,60	290		1	999,60	40
	Santa Rosa de Cerritos								
HSC San José de Tambo	Chnaguil	50	Car	709,60	290		1	999,60	100
HSC Bélevan	Guapo	40	Car/walk.	709,60	290		1	999,60	80
CSH Chilcanes	La Cruz de Perezan	15	Car/walk.	709,60	290		1	999,60	30
	Perezan	20	Car/walk.	709,60	290		1	999,60	40
	Pacay (Rumipamba)	25	Car	709,60	290		1	999,60	50
HSC Sta Rosa	Chaguangoto	40	Car	709,60	290		1	999,60	80
	Torrecloma	80	Car/walk.	709,60	290	580	2	2869,20	200
	San Gerardo Tabas Pampa	80	Car/walk.	709,60	290	580	2	2869.30	200
HSC Balzapamba	Tiandagote	28	Car	709,60	290		1	999,60	60
HSC La Magdalena	Sana Lucía	40	Car	709,60	290		1	999,60	80

CHART NR. 57

INDIRECT SUPERVISION - DISTRIBUTION OF HEALTH POSTS AND SUBCENTERS ACCORDING TO HEALTH CENTERS AND HOSPITALS IN GUAYAS

LEVEL	COMMUNITY	KM- DISTANCE ROUND TRIP	TYPE OF TRANSPORT	DAILY SALARY	ALLOWANCES TRAVEL EXP.	NR DAYS	TOTAL COST PER TRIP	FARES
CSH Daule	HSC Santa Lucía	50	Car	$70,90	500	1	1.370,90	100
	HSC Palestina							
	HP Laurel	80	Car	$70,90	500	1	1.370,90	160
	HP Junquillal	80	Car	$70,90	500	1	1.370,90	160
	HP Pital	130	Car/boat	$70,90	500	1	1.470,90	250
	HP Betanjo de Abajo							

CHART NR. 58

INDIRECT SUPERVISION - DISTRIBUTION OF HEALTH POSTS AND SUBCENTERS ACCORDING TO HEALTH CENTERS AND HOSPITALS
PROVINCE OF NAPO

LEVEL	COMMUNITY	DISTANCE KM ROUND TRIP	TYPE OF TRANSPORT	DAILY SALARY	ALLOWANCES	NUMBER OF DAYS	TOTAL COST PER TRIP	FARES	TRAVEL EXPENS.
HC-H Tena	HP Chontapunta HP Puerto Rico HSC Misahuallí	550	Car/boat	1.073,80	500	2	2.573,80	650	1.000
HC-H Baeza	HSC Chaco HP Cosanga	100	Car	1.073,80	500	1	1.573,80	200	
	HP Cotundo	148	Car	1.073,80	500	1	1.573,80	200	
HC-H' Coca	HP Loreto	140	Car	1.073,80	500	1	1.573,80	300	
	HP Pto. Murialdo	160	Boat	1.073,80	500	1	1.573,80	300	
	HP Semana HSC Limoncocha HP Primavera	240	Boat	1.073,80	500	2	2.573,80	500	1.000
HC-H Lago Agrio	HSC San Fco. HSC Coop. Sushufindi	70	Car	1.073,80	500	1	1.573,80	150	
	HP Paloma Roja HSC El Carmen	420	Car /boat	1.073,80	500	3	3.573,80	1.000	2.000
	HSC Jambelí HSC Sevilla HSC Cascales HSC Lumbaqui HSC Reventador	150	Car	1.073,80	500	3	3.573,80	300	2.000

CHART NR. 59

INDIRECT SUPERVISION - DISTRIBUTION OF HEALTH POSTS AND SUBCENTERS ACCORDING TO HEALTH CENTERS AND HOSPITALS IN THE PROVINCE OF BOLIVAR

LEVEL	COMMUNITY	DISTANCE KM ROUND TRIP	TRANSPORT	DAILY SALARY	ALLOW-ANCES	TRAVEL EXPEN.	NR. DAYS	TOTAL COST PER TRIP.	FARES	DRIVER SALARY/DAY	DRIVER ALLOC.	DRIVER TRA EXPE.	DRIVER GAS	DRIVER MAIN	DRIVER TOTAL COST
HC Chéchanes	HSC Sta. Rosa de Agüeda	80	Car	870,90	500		1	1.370,90	200						
HC Sn. Miguel	HSC S.J. Tambo	60	Car	870,90	500		1	1,370,90	120						
	HSC S.Vicente	22	Car	870,90	500		1	1,370,90	50						
	HSC Sn.Fabio HSC Bilovan HSC Balzapamba	104	Car	870,90	500	1.000	2	5.241,80	220						
HC Chimbo	HSC Santiago	16	Car	870,90	500		1	1.370,90							
	San Lorenzo San Simón	26	Car	870,90	500		1	1.370,90	60						
HSC Guaranda	HSC Sta Fé HSC Caluma HSC Echeandía HSC Camarón	264	Car	870,90	500	2.000	3	5.112,70		786,84	300	1.200	528	254,80	764,50
	HSC Guanujo HSC Simiatug HSC Salinas	114	Car	870,90	500	1.000	2	3.241,80		786,84	300	600	228	306,50	615.00

CHART NR. 40

DIRECT SUPERVISION - DISTRIBUTION OF HEALTH PROMOTERS PER LEVELS OF SUPERVISION AND COSTS
CANTON FRANCISCO DE ORELLANA - PROVINCE OF NAPO (SUPERVISION ROUTES)

LEVEL	COMMUNITY	ROUND KM	TRIP HRS.	TRANSPORT	ALLOWANCES	TRAVEL EXPENSES	FARES	TOTAL COST PER TRIP	NR. OF DAYS
HSC Lémon-cocha	Pompeya	120	6	Boat		550	1.000	3.050	2
	Itaya	46	1:30	Boat		550	1.000		
HP Loreto	Chontacocha	20	5	Walking	290			290	1
	JP Montúfar Fco de Asís	40	2	Car		1.060		1.060	2*
HP Avila	Amazonas	40	8	Walking		1.060		1.060	2
HP Puerto Murialdo	Limoncocha	50	2	Boat	290		600	820	1
	Inca Fco Colón	25	1	Boat	290		500	790	1
CH Fco de Orellana	Payamino Armenia	40	2	Car	290		120	410	1
	San Pablo	40	3	Car-walking	290		140	430	1
	San Carlos	24	1	Boat	290		100	390	1

Total cost of supervision per month: 7.320.oo

* For the way back, transport must be taken next day.

CHART NR. 41

DISTRIBUTION OF PROMOTERS PER LEVELS OF DIRECT SUPERVISION AND COSTS : PROVINCE OF IMBABURA

LEVEL	COMMUNITY	DISTANCE ROUND TRIP (KM)	TRANSPORT	ALLOWANCES	TRAVEL EXPENSES	NUMBER OF DAYS	TOTAL COST OF TRIP	FARES
HP Pataquí	Pataquí	2	Walking	290		1	290	
Quichinche	Panecillo	3	Walking	290		1	290	
HSC Tocuman	San Luis Agualongo	4	Walking	290		1	290	
	Carabuela	6	Walking	290		1	290	
C.H.Cotacachi	Topo Grande	8	Car walking	290		1	290	140
	Cabera	4	Walking/car	290		1	290	100
HSC Quiroga	Morales Chupa	4	Car walking	290		1	290	
	Totaquí	4	Car walking	290		1	290	
	Moroches	4	Car walking	290		1	290	
HSC Ambuquí	Chota	20	Car	290		1	290	60
	San Clemente	30	Car walking	290		1	290	40
HSC Pimampiro	Chaguayacu	12	Car	290		1	290	40
Chugá	Sitio	6	Walking	290		1	290	
	Guagalá	4	Walking	290		1	290	
	Palmar Chico	20	Walking	290	500	2	290	
San Fco. Sigsipamba	La Merced	12	Walking	290		1	290	
	Sanshipamba	10	Walking	290		1	290	
HP La Carolina	Guajará	60	Car	290		1	290	100
							5.720	480

Total: 6.200 per month
Total during 6 months: 37.200

SOURCE: Direct Research
ELLABORATION: PRICOR - FEE Team

CHART NR. 42

INDIRECT SUPERVISION: IMBABURA

PROVINCIAL LEVEL RESPONSIBLE FOR INDIRECT SUPERVISION.	LEVEL RESPONSIBLE FOR INDIRECT SUPERVISION AT CANTON LEVEL	LEVEL THE SUPERVISOR BELONGS TO	COMMUNITIES WITH PROMOTERS WHO ARE TARGET OF DIRECT SUPERVISION	NUMBER OF SUPERVISORS AND PROMOTERS PER LEVEL OF INDIRECT SUPERVISION	
				SUPERVISORS	PROMOTERS
Provincial Health Office of Imbabura (Community Development)	Cotacachi Canton (County) Hospital (nurse)	C.H. Cotacachi	Topo Grande Calera	2	5
		HSC Quiroga	Morales Chupa Iltaqui Morochos		
	Otavalo Canton (County) Hospital (nurse)	Quinche	Panecillo	3	4
		HP Pataquí	Pataquí		
		Ilumán	San Luis Agualongo** Carabuela*		
		HSC Ambuquí	Chota San Clemente	5	9
		HSC Pimampiro HP La Carolina	Chalguayacu Cuajará		
		Chugá	Sitio Guagalá Palmar Chico		
		San Fco. Sigsipamba	La Merced Sanshipamba		

SOURCE: DIRECT RESEARCH
ELLABORATION: PRICOR-FEE TEAM.

* Carabuela promoter is not incorporated as such, bec :se he has not been trained yet. He is participating as volunteer and has received some traini at the County Hospital and guiding from the nurse auxiliary of Ilumán, his activities are limited to preventative actions. The Provincial Health Office has requested training for him.

** San Luis' Promoter enjoys a 2 month license (July-August). Carabuela and Sn. Luis belong to Ilumán, which has to be taken into account when evaluating the implementeation of the response.

CHART NR. 15

DIRECT AND INDIRECT SUPERVISION PER ACTIVITY AND TIME

COMPONENTS	CRITERIA	ACTIVITIES	METHODOLOGY GENERAL	METHODOLOGY SPECIFIC	TOOLS	TIME
RESEARCH	DOCUMENTARY	Go over information about preventive and curing activities	Analysis	- Construction guides and tools. - Registering the balance of preventive and curative act.	Guides, forms and directions AP-ASS+Form. Supervision.	15'
		A. ADMINISTRATIVE - Revision of supplies - Supervision assistance - Payment of bonus - Filling in the forms - Register of references and contra-references	Observation of instruments, forms, medicine and materials	- Dialogue based on a supervision guide		15'
		B. COMMUNITY DEVELOPMENT - Joint revision with leaders, health committees and other 1st level organ. - Correspondence among comm. needs and promoter's activities social, cultural, and economic. - Degree of coordination among the promoter-community and public and private institutions: Ministeries, Sectoral Governmental Offices, local levels, and P.V.O. s.	Visits/meetings with leaders, comitees and others.	- Register in the supervision forms.		30'
	FIELD	C. OBSERVATION OF PREVENTIVE BEHAVIOURS 1. Environmental Sanitation: ° Water = sources = location (access) Maintenance, quality ° Elimination of excreta = - Type: Latrine, open field, etc. - Location - Maintenance - Technological Resources	Visiting an area within the comm. zone (sample)	- Registering observations in the supervision forms	Supervision Forms	30'

FIELD

- Garbage Disposal =
  - Type and manner
  - Location

2. Family Gardens:

- Type of Crops
- Maintenance
- Provisioning
- Cosntraints

3. Home Visit:

- On ocassion: (Pre-natal, nata~, and post-natal)
- Promoter:
  - knowledge
  - attitude
  - behaviour
- Family:
  - Preventive Behaviours
    Neatness.
    Luminosity
    Ventilation
    Absence of overcrowding
    Zoonosis
    Hand washing
    Protection of food
    Immunizations
    Others
- Quality of Realtionship
  - Rapport
  - Aprehension
  - Receptivity
- Specific Observations of Environmental Sanitation
- Efectiveness of references and contra-references

Joint visit with the health promoter.

- Registering observations in the supervision form.

D. CURATIVE (on ocassion)
- Technical steps regarding:
  Shots, healing and administering medicine.

Assisting the promoter on curing activit.

- Use of guides

CHART NR. 44

NUMBER OF COMMUNITY VISITS PER MONTH DURING THE LAST FIVE MONTHS (JULY-NOV 85)

PROVINCE	AVERAGE (VISITS)
IMBABURA	3.38
NAPO	3.50
EXPERIMENTAL PROVINCES	3.44
BOLIVAR	3.00
MORONA	0,81
PROVINCES OF CONTROL	1,90

SOURCE: Direct Research

ELLABORATION: PRICOR-FEE Team

CHART NR. 45

NUMBER OF HOURS THE SUPERVISOR SPENT WITH THE PROMOTER DURING THE MONTHLY VISIT, DURING THE LAST FIVE MONTHS (JULY NOVEMBER 1985)

PROVINCE	AVERAGE (HOURS)
IMBABURA	12,5
NAPO	5,8
EXPERIMENTAL PROVINCES	9
BOLIVAR	2,2
MORONA	3,7
PROVINCES OF CONTROL	3,2

SOURCE: Direct Research
ELLABORATION: PRICOR-FEE Team

CHART NR. 46

NUMBER OF MEETINGS HELD BY THE SUPERVISORS WITH THE COMMUNITY LEADERS DURING THE VISITS DURING THE LAST FIVE MONTHS (PER SUPERVISOR)

PROVINCE	AVERAGE (MEETINGS)
IMBABURA	3
NAPO	2,5
EXPERIMENTAL PROVINCES	2,7
BOLIVAR	1,5
MORONA	0,2
PROVINCES OF CONTROL	0,6

SOURCE: Direct Research

ELLLABORATION: PRICOR - FEE Team

PROGRAMMI

PRIORITIZATION: LIMITING ASPECTS AND FACTORS OF ACTIVITIE GOALS

- Coordination for problem solving	Inter and extra communit.	Formal and non-formal leaders and representatives from institutions
- Design and programming of strategies for the functioning of the Health Committee	On needs felt.	- Economical - Regarding Health: Infrastructure Prevention Curative
3. Prevention:		
3.1 Environmental Sanitation	1st phase: Promotion	1st Phase: Campaign of use: home visits, meetings.
3.1.1 Outside of the house Disposal of excreta Garbage Disposal Safe Water Control of vectors, vehicles and reservoires.	2nd phase: obtention of resources	2nd Phase: techniques, materials, funding.
	3rd. phase: execution	3rd Phase: Participation: community labor, meetings.
3.1.2 Inside the house: Hand washing Food protection Neatness Zoonosis House: ventilation luminosity overcrowding human protection Home techniques for water purification		
3.2 Mother-child - Training pregnant women - Training mothers directly after birth. - Training mothers regarding newborns References - Nursing - Monitoring - Immunizations		
3.3 Nutrition P.A.A.M.I. Community, Family and School Gardens.		
4. 4.1 First Aid: References and Contra-references - control of diahrrea (SRO).		

		E. OTHER PUNCTUAL OBSERVATIONS				
EVALUATION	FITENESS	- Qualitative Judgement on the correspondence among basic socio-economical needs (social and health priorities) and actions in permanent and articulating processes	Analysis or criticism of behaviours observed according to each criterion.	Registering results on guides or supervision forms	Guides and Supervision Forms	30'
	SUFFICIENCY	- Qualitative judgement of the program magnitude or aoutreach: accomplishment of goals				
	PROGESS	Comparison between efectuated actions & actions foreseen adjusted to the plan and chronogram, behaviours, guidelines and respurces (H.M.E.)				
	EFFICIENCY.	Assesment on the properness of the problems, goals and resources.				
	EFFECTIVENESS	Qualitative judgement on the degree of satisfaction or unsatisfaction regarding the PHC Program. Cost-effectiveness*.				
	EFFECT	Influence of the activities in Community Development				
TRAINING	CONTINUOUS (PLANNED)	1. Administrative 2. Community Development 3. Preventive 4. Curative	Theoretical-practical	Suggestions Corrections according to the E.M.C. Program	Use of the guides and forms of training & supervision	30'
	ARTICULAT. (NOT PLANNED, CASU.)	1. Administrative 2. Community DEvelopment 3. Preventive 4. Curative	Theoretical-practical Test	Suggestions Corrections		
G	ATIONSHIP ds, activ/ ime)	1. Administrative Supplies: Medicine, Materials, Forms, Bonus			Use of guides and forms of supervision & training	30'

CHART NR. 47

NUMBER OF HOME VISITS TO PREGNANT WOMEN PERFORMED BY THE SUPERVISOR AND THE PROMOTER DURING THE LAST FIVE MONTHS (PER SUPERVISOR)

PROVINCE	AVERAGE (VISITS)
TUNGURAHUA	3
NAPO	2,8
EXPERIMENTAL PROVINCES	2,9
BOLIVAR	0,12
MORONA	0,06
PROVINCES OF CONTROL	0,83

SOURCE: DIRECT RESEARCH
ELLABORATION: PRICOR-FEE Team

CHART NR. 48

NUMBER OF HOME VISITS TO MOTHERS DIRECTLY AFTER CHILDBIRTH AND TO NEWBORNS PERFORMED BY THE PROMOTER TOGETHER WITH THE SUPERVISOR DURING THE LAST FIVE MONTHS (PER SUPERVISOR)

	PROVINCE	AVERAGE (VISITS)
EXPERIMENTAL PROVINCES	IMBABURA	3,15
	NAPO	2.6
		2,85
PROVINCES OF CONTROL	BOLIVAR	0
	MORONA	0,06
		0,04

SOURCE: DIRECT RESEARCH
ELLABORATION: PRICOR-FEE Team

CHART NR. 49

NUMBER OF HOME VISITS FOR HEALTHY CHILD GROWTH MONITORING PERFORMED BY THE PROMOTER TOGETHER WITH THE SUPERVISOR DURING THE LAST SIX MONTHS (PER SUPERVISOR)

PROVINCE	AVERAGE (VISITS)
IMBABURA	3,15
NAPO	2,21
EXPERIMENTAL PROVINCES	2,66
BOLIVAR	0,25
MORONA	0,06
PROVINCES OF CONTROL	0,12

SOURCE: DIRECT RESEARCH
ELLABORATION: PRICOR-FLE Team

CHART NR. 50

NUMBER OF SICK CHILDREN SERVED BY THE PROMOTER TOGETHER WITH THE SUPERVISOR DURING THE LAST FIVE MONTHS .

PROVINCE	AVERAGE (Services)
IMBABURA	3,15
NAPO	1,9
EXPERIMENTAL PROVINCES	2,5
BOLIVAR	0
MORONA	0,56
PROVINCES OF CONTROL	0,37

SOURCE: DIRECT RESEARCH
ELLABORATION: PRICOR-FEE Team

CHART NR. 51

NUMBER OF SICK ADULTS SERVED BY THE PROMOTER TOGETHER WITH THE SUPERVISOR DURING THE LAST FIVE MONTHS

PROVINCE	AVERAGE (Services)
IMBABURA	3,15
NAPO	1,7
EXPERIMENTAL PROVINCES	2,4
BOLIVAR	0,5
MORONA	0,5
PROVINCES OF CONTROL	0,5

SOURCE: DIRECT RESEARCH
ELLABORATION: PRICOR-FLE Team

CHART NR. 52

NUMBER OF VISITS TO THE SOURCES OF WATER PERFORMED BY THE PROMOTER TOGETHER WITH THE SUPERVISOR DURING THE LAST 5 MONTHS.

PROVINCE	AVERAGE (VISITS)
IMBABURA	3,15
NAPO	3
EXPERIMENTAL PROVINCES	3
BOLIVAR	0,9
MORONA	0
PROVINCES OF CONTROL	0,3

SOURCE: DIRECT RESEARCH
ELLABORATION: PRICOR-FEE TEAM

CHART NR. 53

NUMBER OF HOME VISITS PERFORMED TO PROMOTE THE USE OF SAFE WATER BY THE PROMOTER TOGETHER WITH THE SUPERVISOR DURING THE LAST FIVE MONTHS

PROVINCES	AVERAGE (VISITS)
IMBABURA	0,5
NAPO	1,4
EXPERIMENTAL PROVINCES	1
BOLIVAR	0,25
MORONA	0
PROVINCES OF CONTROL	0,08

SOURCE: DIRECT RESEARCH
ELLABORATION: PRICOR-FEE TEAM

CHART NR. 54

NUMBER OF OBSERVATIONS OF THE CONDITIONS OF THE LATRINES PERFORMED BY THE PROMOTER TOGETHER WITH THE SUPERVISOR DURING THE LAST FIVE MONTHS

PROVINCE	AVERAGE (OBSERVATIONS)
IMBABURA	3,15
NAPO	1,8
EXPERIMENTAL PROVINCES	2,4
BOLIVAR	0,5
MORONA	0
PROVINCES OF CONTROL	0,16

SOURCE: DIRECT RESEARCH
ELLABORATION: PRICOR-FEE Team

CHART NR. 55

NUMBER OF OBSERVATIONS ON GARBAGE DISPOSAL PERFORMED BY THE PROMOTER TOGETHER WITH THE SUPERVISOR DURING THE LAST FIVE MONTHS

PROVINCE	AVERAGE (OBSERVATIONS)
IMBABURA	3,15
NAPO	2,7
EXPERIMENTAL PROVINCES	2,9
BOLIVAR	0,5
MORONA	0
PROVINCES OF CONTROL	0,16

SOURCE: DIRECT RESEARCH

ELLABORATION: PRICOR-FEE Team

CHART NR. 56

NUMBER OF REVISION OF THE APPLICATION FORMS PERFORMED BY THE SUPERVISOR TOGETHER WITH THE PROMOTER DURING THE LAST SIX MONTHS OF 1985

PROVINCE	AVERAGE (REVISIONS)
IMBABURA	3
NAPO	3,1
EXPERIMENTAL PROVINCES	3,1
BOLIVAR	0,5
MORONA	0
PROVINCES OF CONTROL	0,16

SOURCE: Direct Research
ELLABORATION: PRICOR - FEE Team

CHART NR. 57

NUMBER OF REVISIONS OF THE MAP OF THE COMMUNITY PERFORMED BY THE SUPERVISOR TOGETHER WITH THE PROMOTER DURING THE LAST SIX MONTHS OF 1985

PROVINCE	AVERAGE (REVISIONS)
IMBABURA	3,15
NAPO	3,2
EXPERIMENTAL PROVINCES	3,2
BOLIVAR	0
MORONA	0,12
PROVINCES OF CONTROL	0,08

SOURCE: DIRECT RESEARCH
ELLABORATION: PRICOR-FEE Team.

CHART NR. 58

PROMOTER'S ACTIVITIES RECEIVING SUPPORT FROM THE SUPERVISOR*

ACTIVITY	GROUP OF CONTROL			EXPERIMENTAL GROUP				
	n	$\bar{x}$	DS.	n	$\bar{x}$	DS	t	Sig
Conferences	20	1.50	.76	27	.70	.87	3.27	0.00
Sanitary Education	20	1.60.	.68	27	.78	.93	3.33	0.00
ED & IRA Control	20	1.50	.92	27	.59	.93	2.59	0.01
Immunizations	20	1.10	.97	27	.56	.89	2.00	0.05
Pregnancy Control	20	1.65	.75	27	.37	.74	5.84	0.00
Curative-Children	24	1.21	.98	27	.30	.67	3.93	0.00
Curative-Adults	24	1.21	.98	27	.41	.80	3.22	0.00
Latrines	21	1.66	.66	27	.81	.83	5.23	0.00
Source of Water	21	1.52	.81	27	.70	.82	3.44	0.00
Baggage Disposal	21	1.76	.62	27	.67	.78	5.23	0.00
Use of medicine	21	1.90	.30	27	1.22	.89	3.36	0.00
Management of forms and pamphlets	21	1.71	.72	27	.70	.91	4.17	0.00

* High Value = insufficient

The average is the value. It means the average grade obtained by the supervisor, provided by the group of promoters in the control and experimental groups. The highest score equals insufficient: (Didn't give support = 2
Insufficient support = 1
Sufficient Support = 0)

CHART NO. 59

VARIABLES ASSOCIATED TO THE PROCESS OF SUPERVISION
(PROMOTER'S PERCEPTION)

VARIABLE	GROUP OF CONTROL			EXPERIMENTAL GROUP				
	n	$\bar{x}$	DS	n	$\bar{x}$	DS	t	Sig
Total months supervised.	24	1.54	1.67	27	3.48	1.50	-4.37	0.00
Visits in July	24	.66	1.17	26	8.41	7.82	-4.50	0.00
Visits in August	24	.29	.62	27	8.56	7.58	-5.32	0.00
Visits in September	24	.46	1.17	27	11.48	6.29	-8.45	0.00
Visits in October	24	.88	1.60	27	6.63	6.91	-3.94	0.00
Visits in November	24	.38	.87	27	7.51	7.55	-4.46	0.00
Comm. Visits = Months	24	1.83	2.74	27	3.44	1.58	-2.61	0.01
Time spent in the Community[a]	24	5.46	5.23	27	9.26	5.12	-4.77	0.00
Time spent with promoter[b]	24	3.19	3.16	27	8.99	5.47	-4.56	0.00
Supervisor's convenience (person)[c]	24	.50	.51	27	.88	.32	-3.30	0.00

(a); Per visit (b): per visit (c) Is Supervisor convenient ? Yes = 1 No = 0

CHART N.R. 60

VARIABLES ASSOCIATED TO THE COMPONENTS OF THE SUPERVISION

(PROMOTER'S PERCEPTION)

VARIABLE	GROUP OF CONTROL			EXPERIMENTAL GROUP				
	n	$\bar{x}$	DS	n	$\bar{x}$	DS	t	Sig
Meetings with community[a]	24	1.00	1.87	27	.59	.93	1.00	0.16
Meetings with leaders	24	0.63	1.69	27	2.70	1.90	-4.11	0.00
Visiting Family Gardens	24	0.00	0.00	27	1.63	2.02	-3.94	0.00
Visiting Pregnant women	24	0.08	0.28	27	2.93	2.06	-6.71	0.00
Visiting New borns and their mothers	24	0.04	0.20	27	2.85	1.96	-7.00	0.00
Visiting Healthy children	24	0.13	0.45	27	2.67	1.86	-6.52	0.00
Visiting sick children	24	0.38	0.71	27	2.52	1.91	-5.19	0.00
Visiting sick adults	24	0.50	1.02	27	2.41	2.01	-4.20	0.00
Visiting water sources	24	0.29	0.69	27	3.07	1.92	-6.72	0.00
Home visits-safe water	24	0.08	0.41	27	.93	1.59	-2.52	0.01
Visits Latrines	24	0.17	0.56	27	2.44	2.08	-5.19	0.00
Garbage problems	24	0.17	0.48	27	2.93	1.88	-6.98	0.00
Revision of Forms	24	0.17	0.64	27	3.11	1.78	-7,66	0.00
Revision of Maps	24	0.08	0.28	27	3.19	1.81	-8.25	0.00
Revision of Diagnosis	24	0.04	0.20	27	2.78	2.06	-6.46	0.00
Medicine and Materials	24	0.38	0.71	27	3.26	1.75	-7.55	0.00

(a) In six months

CHART NR. 31

TRAINING OF SUPERVISORS

	GROUP OF CONTROL			EXPERIMENTAL GROUP				
	R	$\bar{X}$	DS	R	$\bar{X}$	DS	t	Sig
Training of Supervisor	10	0.5*	0.58	14	0.07	0.27	2.6	0.01
Training Methods	7	1.0**	0.0	14	0.29	0.47	3.95	0.00
Lenght Training course for supervisors	8	0.0***	0.0	15	0.8	0.25	8.52	0.00

*: 0 = YES 1 = NO

**: 0 = Course 1 = Basic information

***: Number of weeks

SOURCE: Direct Research

ELLABORATION: PRICOR - FEE Team

CHART NO. 62

YEARS THE SUPERVISOR HAS BEEN PERFORMING THIS ROLE AND NUMBER OF PROMOTERS PER SUPERVISOR IN PROVINCES OF CONTROL AND EXPERIMENTAL

	PROVINCES OF CONTROL			EXPERIMENTAL PROVINCES				
	R	$\bar{x}$	DS	R	$\bar{x}$	DS	t	sig
Years Worked as supervisor	10	2.0	1.49	15	1.15	0.48	2.07	0.02
Promoters under one Supervisor	10	3.6	3.12	15	2.01	0.9	1.81	0.04

SOURCE: Direct Research

ELLABORATION: PRICOR-FEE Team

CHART NR. 63

ACTIVITIES PERFORMED BY THE SUPERVISOR TOGETHER WITH THE PROMOTER (SUPERVISOR'S PERCEPTION)

	PROVINCES OF CONTROL			EXPERIMENTAL PROVINCES				
	R	$\bar{x}$	DS	R	$\bar{x}$	DS	t	Sig
Activities they always perform together	10	3.9	2.88	15	7.6	3.42	2.8	0.00
Activities the supervisor sometimes performs together with the promoter	10	3.8	2.29	15	2.7	2.28	1.14	0.00
Activities the supervisor never performs together with the promoter	10	4.3	3.34	15	1.4	2.06	2.69	0.00

CHART NR. 64

ACTIVITIES THE SUPERVISOR NEVER PERFORMS AND PERCEPTIONS OF VALUE AND USEFULNESS
(SUPERVISOR'S PERCEPTION)

ACTIVITIES	PROVINCES OF CONTROL			EXPERIMENTAL PROVINCES				
	R	$\bar{x}$	DS	R	$\bar{x}$	DS	t	Sig
Activities the Supervisor never performs	10	2,0	2,23	15	1,2*	1,01	2,6	0,01
Supervision input to community health status	10	0,0	0,0	13	0,0*	0.0	0.0	0,00
MOH's Appraisal on Supervision	10	1,0	0,0	15	0,7***	0,46	1,83	0,01

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* Always = 0 Sometimes = 1 Never = 2

** Yes = 0 No = 1

*** Yes = 0 No = 1

CHART NR. 65

SUPERVISION'S EFFECTIVENESS

	GROUP OF CONTROL			EXPERIMENTAL GROUP				
	n	$\bar{x}$	DS	n	$\bar{x}$	DS	t	Sig
Knowledge about Supervision (a)	10	14.90	4.18	15	10.53	1.91	3.18	0.00
Revision of Activities	10	24.40	5.87	15	18.07	5.34	2.73	0.01
Total effectiveness of supervision	10	39,3	9,58	15	28,40	6.33	3.44	0.00

(a) High value: little effectiveness
Scale 19 (-) 57
good (-) bad

CHART NR. 66

MONTHLY COSTS OF SUPERVISION PER PROMOTER* (AVERAGE)

	GROUP OF CONTROL	EXPERIMENTAL GROUP
Transport	3,15	115,33
Lodging	28,57	39,33
Board	197,14	104,66
TOTAL	540,71	259,32

*: Local currency: sucres in July, 1985
1 US $ = 113 sucres.

CHART NR. 67

NUMBER OF FAMILY VEGETABLE GARDENS PER NUMBER OF COMMUNITIES AND PER PROVINCES:

PROVINCES	NUMBER OF COMMUNITIES	NUMBER OF VEG. GARDENS	X
Imbabura	13	33	2.5
Napo	14	7	0.5
TOTAL EXPERIMENTAL PRV.	27	40	1.5
Bolívar	8	0	0
Morona	16	0	0
TOTAL PROV OF CONTROL	24	0	0

CHART NR. 68

NUMBER OF ACTIVITIES ADDRESSING PEOPLE ACCORDING TO TYPE OF PROVINCES

PROVINCES	NUMBER OF COMMUNIT.	PREGNANCIES DETECTED	PREGNANCIES UNDER CONTROL	NEW BORNS AND THEIR MOTHERS	HEALTHY CHILDREN - 5 CONTROLLED	NUMBER OF VISITS TO CHILDREN W/ DIAHRR.	TOTAL NUMBER OF VISITS	X
IMBABURA	13	14	13	13	43	36	119	9.15
NAPO	14	12	15	6	18	31	82	6.30
TOTAL EXPERIMENTAL PROVINCES	27	26	28	19	61	67	201	7.44
BOLIVAR	8	6	4	5	0	23	38	4.75
MORONA	16	6	12	12	9	26	65	4.06
TOTAL PROVINCES OF CONTROL	24	12	16	17	9	49	103	4.29

SOURCE: Detect Research

ELLABORATION: PRICOR-FEE Team

CHART NR. 5

NUMBER OF FIRST AID SERVICES DELIVERED TO CHILDREN AND ADULTS PER REFERENCES AND CONTRA-REFERENCES PER PROVINCES.

PROVINCE	NUMBER OF COMMUNIT.	FIRST AID SERVICES DLVRD. CHILDREN	ADULTS	TOTAL	NUMBER OF REFERENCED	NUMBER OF CONTRA-REFE.	X FIRST A PER COMMU
TABABURA	15	33	37	70	2	0	5.4
NAPO	14	20	21	41	0	0	2.9
TOTAL EXPERIMENTAL PROVINCES	27	53	58	111	2	0	4.1
BOLIVAR	8	30	22	52	1	0	6.5
MORONA	16	3	8	11	1	1	0.6
TOTAL PROVINCES OF CONTROL	24	33	30	63	2	1	2.6

CHART NR. 70

NUMBER OF PERFORMANCES PER TYPE OF ACTIVITY TO INCREASE SAFE WATER CONSUMPTION IN THE FAMILIES, PER PROVINCES.

PROVINCES	HOME VISITS		CONFERENCES		NO ACTIVITY	
	N	%	N	%	N	%
TABABUKA	9	36	1	50	2	9.1
NAPO	7	28	1	50	5	22.7
TOTAL EXPERIMENTAL PROV.	16	64	2	100	7	31.8
BOLIVAR	4	16	0	-	4	18.1
MORONA	5	20	0	-	11	50.0
TOTAL PROVINCES OF CONTROL	9	36	0	-	15	68.2
TOTAL	25	100	2	100	22	100.0

CHART NR. 72

NUMBER OF FAMILIES INTERVIEWED PER COMMUNITY AND NUMBER OF FAMILIES THAT BURY, INCINERATE, AND THROW THE GARBAGE AWAY, PER PROVINCES.

PROVINCES	NUMBER OF COMMUNIT.	NUMBER OF FAMILIES	NUMBER OF FAMILIES THAT INCINERATE		NUMBER OF FAMILIES THAT BURY		NUMBER OF FAMILIES THAT THROW AWAY		NOT KNOWN NR. FLIES.	
			NR	%	NR	%	NR	%	NR	%
IMBABURA	12	568	149	26.2	40	7.04	379	66.7	-	0
NAPO	14	427	26	6.0	20	4.7	304	71.2	77	18.0
TOTAL EXPERIMENTAL PROVINCES	26	995	175	17.6	60	6.0	683	68.6	77	7.7
BOLIVAR	8	464	120	25.9	10	2.2	334	71.9	-	0
MORONA	12	330	-	0	10	3.	320	97.0	-	0
TOTAL PROVINCES OF CONTROL	20	794	120	15	20	2.5	654	82.5	0	0

CHART NR. 71

NUMBER OF LATRINES BUILT DURING THE LAST MONTH ACCORDING TO PROVINCES

PROVINCE	NUMBER OF LATRINES	$\bar{X}$
IMBABURA	5	0,38
NAPO	6	0,43
TOTAL EXPERIMENTAL PROVINCES	11	0,41
BOLIVAR	2	0,25
MORONA	0	0
TOTAL PROVINCES OF CONTROL	2	0,03

$\bar{X}$ = Average number of latrines built per community during one month.

CHART NR. 73

NUMBER OF COMMUNITIES PER PROVINCE, AS RELATED TO NUMBER OF CONFERENCES PER COMMUNITY, PER PROVINCES

PROVINCE	NUMBER OF COMMUNITIES	NUMBER OF CONFERENCES	$\bar{X}$
IMBABURA	13	15	1.2
NAPO	14	12	0.9
TOTAL EXPERIMENTAL PROVINCES	27	27	1.0
BOLIVAR	8	2	0.25
MORONA	16	9	0.56
TOTAL PROVINCES OF CONTROL	24	11	0.46

CHART NR. 74

DISTRIBUTION OF PROVINCES PER NUMBER OF CONFERENCES, ACCORDING TO MORE FREQUENT SUBJECTS.

GENERAL SUBJECT	SUBJECTS	EXPERIMENTAL PROVINCES: IMBABURA NR	IMBABURA %	NAPO NR	NAPO %	TOTAL NR	TOTAL %	PROVINCES OF CONTROL: BOLIVAR NR	BOLIVAR %	MORONA NR	MORONA %	TOTAL NR	TOTAL %
HEALTH (PEOPLE)	DENTAL	-	0	1	8.3	1	3.6	-		-		-	
	MOTHER-CHILD	8	50	-	0	8	28.5	1	50	4	40	5	41.7
	DISEASES	-		1	8.3	1	3.6	-		-		-	
	MEDICINE	-		1	8.3	1	3.6	-		-		-	
	TOTAL	8	50	3	25	11	39,4	1	50	4	40	5	41.7
ENVIRON-MENT	WATER	3	18.7	5	41.6	8	28.5	-		5	50	5	41.7
	LATRINES	3	18.7	2	16.6	5	17.8	1	50	-		1	8.3
	GARBAGE	2	12.5	-	0	2	7.1	-		-		-	
	TOTAL	8	50	7	58.3	15	53.5	1	50	5	50	6	50
COMMUNITY	NUTRITION/ GARDENS	-	0	2	16.6	2	7.1	-		1	10	1	8.3
TOTAL		16	100	12	100	25	100	2	100	10	100	12	100

CHART NR. 75

DISTRIBUTION OF PROVINCES AS RELATED TO NUMBER OF PROMOTER'S ACTIVITIES WITH COMMUNITY GROUPS PER TYPE OF ACTIONS

TYPE OF ACTION	ACTIVITY	EXPERIMENTAL PROVCS.						PROVINCES OF CONTROL					
		IMBABURA		NAPO		TOTAL		BOLIVAR		MORONA		TOTAL	
		NR.	%	NR	%	NR	%	NR	%	NR	%	NR	%
COMMUNITY ORGANIZATION	DEVELOPMENT PRJCT	1	16.6	1	10	2	12.5	-		-		-	
	PROMOTION 1st & 2nd LEVEL ORGANIZATION	-		3	30	3	18.8	-		2	33.3	2	28.5
	COMMUNITY LABOR	4	66.7	5	50	9	56.2	-		1	16.7	1	14.3
	TOTAL	5	83.3	9	90	14	87.5	-	0	3	50	3	42.8
HEALTH (PEOPLE)	HOME VISITS	1	16.7	1	10	2	12.5	-		1	16.7	1	14.3
	PROMOTION PREMI	-		-		-		-		1	16.7	1	14.3
	TOTAL	1	16.7	1	10	2	12.5	-	0	2	33.3	2	28.5
ENVIRONMENT	FUMIGATION	-		-		-		1	100	-		1	14.3
	WATER CHANNELS	-		-		-		-		1	16.6	1	14.3
	TOTAL	-		-		-		1	100	1	16.6	2	28.5
TOTAL		6	100	10	100	16	100	1	100	6	100	7	100

V. SUPPLIES

As we stated before, the supavision system must consider supplies as one of its components. They are necessary in some of the activities of the promoter: first aid services require elementary tools and materials, the conferences require of simple didactic material, simple symptomatology and referencial /contrareferencial morbidity require require of materials and medicine suitable to promoter's management.

RELEVANCE OF SUPPLIES

It must be noted that the process of health promotion performed by the promoter towards the community is carried out inductively, i.e., starting from the definition of punctual diseases, one may determine the causes and apply preventive behaviours. Therefore, supplies become essential to optimize simple curative activities to be performed by the promoter.

Such statement coincides with the World Bank Report, 1975, where the basic health problems affecting Third World Countries are dealt with (demography, malnutrition, bad sanitary conditions, unproper housing). It expresses that such problems "must be handled through long-term actions, however, some assistential behaviours cannot be avoided, and within them, the timely provision of medicine is imperative."

The supplies subsystem regarding health promoters, if regularly followed, supervised, and timely supplied, will increase rapport and the degree of satisfaction from the community towards the other activities (community participation, health promotion, reference-contra-reference) accomplished by the health promoter.

SUPPLY SYSTEM

INPUT	PROCESS	OUTPUT
- Program (selection) - Resources Human Materials Medicine Financial - Transport - Level of Provission	- Purchase - Storage - Distribution - Use - Reposition	- Amount and Quality of materials and medicine which are suitable and permited. - Suitable Time and place. - Minimum Costs

1. Analysis of the Problem

The Report about the diagnosis of the MOH's area of supplies administration was concluded in January 1982. Said report expresses the diversity of organigrams depending upon the level, the heterogeneous condition and the disarticulation among the levels. Human resources are not available, and decisions have not been taken at high levels, functions have been often repeated, and the units have undertaken non-required responsabilities. Every out of the levels sets goals and priorities regardless of the objectives of the MOH.

The findings of such diagnostic report, regarding supplies indicate:

"The non-existence of a proceedure or programming methodology regarding supplies, as a response to a volume of activities to be developed in the different health programs carried out by the MOH, constitutes a large deficiency which leads to the non delivery of adequate services and the low quality of health care, provoking:

- Dropping out of the health services by the population, from the urban health centers (County, provincial, regional hospitals) or private hospitals, or from traditional health deliverers.

- Lack of confidence is felt from the target population towards the health system.

- The present situation regarding the supplies system shows that the operational plan and the budget estimates are two independent items; meanwhile, since supplies is part of budget, then the budget estimates for this item is being separately accounted, and not within the expected program development.

  On the other hand, the problem goes deeper because budgetary estimates for supplies only consider a total amount and do not punctualize items and type of supplies to be purchased.

And, the health promoters' situation is even worse. They have not been considered under the diagnosis mentioned, and they actually reproduce the formal system's mistakes: every promoter, trying to respond to community needs, intends to solve problems unexpectedly, seldom asking for advise from the MOH's agents, and it often is the apothecary who "advises" the promoter in determining which medicine is useful for the community, deciding upon the selection of medicine which is the responsability of the technical - administartive level that designs the regulations.

In April, 1983, the "Manual for Administration of Supplies" by the MOH is published. It regulates programming, purchase, delivery, storage, distribution and control of supplies; it additionally determined levels of responsabilities , not considering health promoters. This meant that the Health Promoters Program was considered out of the regulations at least regarding supplies. It must be noted that the omission might

also have to do with the fact that the MOH is assisted by Foderuma in the purchase, storage, and distribution of supplies for health promoters. This Cooperation is legalized under the "Primary Health Care Regulations" developed by the MOH National Department of Community Development, which, regarding supplies expresses: " ....this activity will be the responsability of the Central Level that will provide the necessary materials and implements for the good development of the program. Such materials will be delivered as follows: The first delivery will be handed over at the beginning of the promoter's work in his community, a stock of supplies is at the same time sent to the corresponding Provincial Health Office so it will hand it over to the promoter "(...)" The second delivery is done once every year, also through the Provincial Health Office, which, based on a retrospective analysis of consumption during a six month period, and considering the population, and the frequency presented by the medical team regarding community visits, will send enough supplies to the programatic areas, in order to facilitate the provisioning by the promoters "(....)". Requirements for extra- provisions and repositions will only be approved previous an analysis made by the MOH's Department of Community Development".

The materials and medicine selected by the technical committee to be administered by the health promoter are found under the same regulations:

1. Antipyretic, analgesic .....salycilic acetyl acid (Tabs)
2. Antacid.....bicarbonate of soda
3. Antispasmodic.....papaverina (tabs, drops, susp.)
4. Antiparasitic.....hexahydrate of piperazine (susp.)
5. Scabiouser.....benzil benzoate (solution)
6. Ophtalmic ointment.....tetracycline (ointment)

7. Oral Rehydration Salts.....oralite (packs.)

8. Fluorine salts.....Fluorine (packs.)

9. Antiseptic and desinfectants .

10. Tools and devices

The micro health post given to the health promoter at a very beginning is conformed by the supplies indicated in chart nr. 2. Therefore, all the promoters receive their first delivery of supplies in their micro-health posts.

The mission (situated in Napo, Morona, Esmeraldas) is an alternative source. It is sometimes timely and regular in service delivery, due to its proximity and access to the health promoters, however, it is controversial because of its non-accomplishment of official regulations in most of the cases.

The Goals set for this research are:

1. To determine the variation of supplies demand by the health promoters (punctualizing supplies required, the amount and the time).

2. To determine the time and constraints found from the moment the order is set by the health promoter to the moment he receives it. (establishing the necessary "top time").

3. To minimize total transportation costs of supplies from the provission centers to the the health promoters*

4. To minimize total transportation time of supplies from the provission centers to the health promoters.

5. To minimize total costs of inventory on orders and storage of supplies in a storage center.*

* To minimize the added value of supplies costs.

In this way we will:

Prepare an alternative operational model to provide the most efficient, effective, practicable and feasible response: a graphical, logistic and information giving model will be designed so to exactly determine the human, financial and material resources necessary attempting universality and variety within the model, i.e., applicable to every circumstance foreseen in the communities, regarding health promoters' tasks. As it can be noted, a diagnosis of the present situation and an alternative model capable of offering timely solutions to the problems faced will be designed.

As in supervision, the research phase highlighted two basic components:

1. The decision (comptrolable) variables and the constraints (not likely to be comptrolled because of aspects outside of the supplies subsystem).

2. Those variables contributing to and expressing the supplies activities.

The first component called for the survey of:

- Target population in the communities
- Distance among the promoter and the supplies provissioning center.
- Complexion levels among the health promoter and the center of provision.
- Knowledge of the managers about the supplies subsystem.
- Level of rewards per efficiency in setting orders.
- Different type of transportation used from th promoter to the provissioning center.
- Costs of transportation
- Time of transportation
- Number of orders not served during a period longer than a week.
- Number of orders obtained vs. orders set.

As for the second part, the consistence of supplies provision was surveyed through its components:

- Control of supplies inventory at the health micro posts.
- Maintenance of a minimum stock
- Orders and delivery of supplies based on possible purchase and supplies according to the consumption within the community.
- Supervision : evaluation, continuous education and programming.
- Sources, levels and type of provisioning of supplies

The next step was the elaboration of tools for supplies observation included in the supervision tools. They permitted to collect the quantitative and qualitative information required.
The variables additionally considered were:
As for the promoter:

- Opinions on components, movilizations, sources of provisioning, consultants, responses, quantitative and qualitative problems regarding supplies.
- Frequency, quantity and type of supplies.
- Information used to require and obtain supplies: forms.
- Costs, extra expenses, purchase and sale of supplies.
- Use of supplies: evaluation management of supplies
- Knowledge, attitude and behaviours about traditional materials and medicine (Phytotherapy and others)

As for the supervisor:

- His role in supplies provisioning towards promoters
- Expenses, frequency, constraints in delivery.
- Estimates of supplies provisioning
- Control, assistance and support in supplies management. Things the promoter administers.

Universe and Sample of the Supplies Component

This critical problem or area was considered in the same proposed sample used for supervision: Esmeraldas, Guayas, Imbabura, Bolivar, Napo and Morona. The forms were applied to 86 health promoters, to possible supervisors, to qualified informers (leaders, missioners, public officers of central levels, provincial county and parrish levels, and of the private sectors : drugstores and apothecary's shops).

The 139 possible supervisors were considered as possible suppliers. Considering their levels of involvement, they will be indirectly or directly involved in the process of supplies.

a) Results obtained:

Restrictive Variables:

- It is difficult to establish the program efficiency due to the incomplete status of supplies regulation. This must be gradually completed considering every step or proceedure regarding actions to be performed using supplies: management, consumption, price plus transport expenses, decrease of funds because of free deliveries, more flexible alternatives of immediate provisioning, consultants, accomplishment of orders of contrareference, and regular supervision.

- Presently the technical normative level is also operative, maintaining an exclusive mechanism for supplies provision and and expensive and slow proceedures regarding re-provisioning.

- Separation from the supplies subsystem towards the promoters from the MOH supplies operation per levels.

- The promoters work out of the process and regulations, taking "necessary" behaviours which are not under the program, and which raise costs and lower effectiveness of this community service.
- The rapid variation of supplies costs due to currency exchange rates, taxes, inflation, devaluation, etc.

Decision Variables

- The present PHC regulations in part fulfill the unintegrated area of supplies to promoters regarding policies, plans and programs from the MOH. Such regulations permitted us to slightly approach evaluation, given the uncompleteness of goals and regulations.
- Additionally, Foderuma's decision of providing supplies to promoters is a relevant task while the MOH is unable to perform such provision.
- The existence of a National Program of Basic or Essential Medicine has been highly favourable for the ellaboration or application of an alterantive model. Said program works with a net of services per categories, from drugstores type "A", to community stores. These units are implemnted in the province, county and parrish capitals offering a wide coverage of service. They are autonomous in supplies purchase, storage and financial aspects, as long as they are under the selected established supplies. Basic medicine are less expensive thanks to letters of understanding subscribed among the MOH and the Companies producing them. The resources under the program (human, physical,) are afforded by the Government.

The diagnosis-evaluation findings confirmed our hypothesis : Results obtained from the present administrative supplies system:

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- The first provission sent by Foderuma (Quito) to the community and specifically to the promoter, takes 103 days (Chart nr. 1). This is the same case for the subsequent annual deliveries.

- The cost of medicine and materials sent by Foderuma is increased in about 50% to 100% because of storage, transport, salaries, traveling fees, (chart nr. 2).

- The total cost (included the increase) per every item sent by Foderuma to the promoter is lower than the price of the item itself if bought in private drugstores (chart nr. 3).

- Consumable items can be acquired free by the promoter through the supervisor, nurse auxiliary of the closest health unit (chart nr.4).

SHO: State Health Office

- The most unexpensive provisioning point is the SHO store, however, this unit has the fewest supplies useful for the promoter. (chart nr. 3).

- The second mostunexpensive place is the Basic Medicine Store (chart nr. 3).

- The supervisor/nurse auxiliary might obtain the supplies from the SHO store or from the popular drugstore, by adding to his/her own orders the amounts required by the promoter(s). This behaviour was observed twice, as spontaneous and unforeseen actions.

- Among the 86 health promoters surveyed (35% of national totals) from the 6 provinces, the medicine which was used the most was the Pirantel Pamoate (Combantrin), known by its commercial name. This is an average statistical finding; however, when studying the differences and ranks among promoters we note that the consumption rate is highly differential, which means that the amount used in each

community is diverse: One community has consumed 1 tab while another community has consumed 600 tabs during a quarter. The concentration of communities is low: 7 out of the 86 communities consume 117 tabs as an average.

- The second most used medicine is the salycilic acetyl acid, known as "aspirine", equally showing a wide range of consumption among the communities with promoter.

- The third one is ferrous sulfate, fourth: papaverina, fifth: bicarbonate of soda, sixth: "violeta de genciana", seventh: acetaminophem, eight: O.R.S., ninth: piperazine, tenth: antidiarreic (caolyne pectine) eleventh: benzil benzoate, twelfth: Phenyl dimethyl pyrazolone (Baralgine), thirteenth: ophtalmic terramycine. These data were categorized according to the average quarterly consumption; however, it must be noted that a high differencial ranges are present these data: some consume minimum or none while others consume high amounts .

- The causes for this heterogeneous consumptions are:
  - Diverse number of population served by the health promoters: It ranks between 300 and 1.200 people.
  - Level of access highly differentiated among communities with promoter and centers of sales of supplies, which facilitates or constraints the consumption of basic simple administration medicine.

The diverse provisioning systems were evidenced in the sample when finding that 65 of the health promoters acquire and manage medicine not considered likely for their management, purchased at private or public drugstores. Amon these the most common antibiotic is ampiciline, never administered in

efficient dosages, followed by penicilline and thetracicline. In a lower proportion, others such as "maleato de metil ergobacina" (methergin), metociopramida (plasyl), Iodic substances (yodosalil), anti-grippal, anti-coughants, anti-spasmodics, antipaludic, antiparasytharics, are acquired. The before mentioned fact is increased at non-official, non-formal levels by the constant, almost absolute use of resources of familiar/traditional therapeutics presently emphasizing on phytotherapeutics which, as stated before, respond to an empyric historic and socio-cultural rationality (chart nr. 5).

To summarize, medicine demands vary very much as for quantities consumed dpecially; as for time taken between order and delivery it is highly different also, since this has not been clearly regulated according to the specific characteristics of promoters. For the development of responsive alternatives we consider feasible to systematize supplies to health promoters.

The opinion survey applied to the sample of promoters determined that all the promoters that go out of the regulations when ordering supplies (56%) and who go to public or private drugstores, set orders orally, not using forms or written requirements. This is also valid for promoters working with supporting institutions (religious) except for Makuma, in the Province of Morona Santiago.

All the promoters that need to be re-provissioned off-regulations (i.e, out of Federuma's system) including those who buy medicine forbidden for their management, must leave the community on their own, which leads to a rank of abandonment of the health activity within the community during 1-6 days. Of course they perform at the same time personnal errands, but often they go out exclusively for tasks concerning their

roles as promoters: purchase of medicine, PHC delivery, receiving their bonus. The cost of this departure ranks between $ 40 and 3800 (as it is the case of the Province of Morona).

Only 15% of the promoters express that they have the necessary supplies and the main constraint reported is the scarce budget available. This fund is increased by the purchase of medicine delivered at the beginning or annually; however the survey states that the value is non-recoverable in a 100% of the deliveries, because much has to be give: free. This limited fund has to be managed without any technical orientation. The presenta average amount for this revolving fund is $1.200 sucres, with differencial ranks (from 0 to 6.000)

The item materials is considered under supplies, thus, 45% of the promoters express that they presently have the necessary tools for first aid care, delivered in the first provision.

85% of them do not have didactic material to support their prioritary program of health education, through conferences with community groups.

2. DEVELOPMENT OF RESPONSES

When considering that the nurse auxiliary from the closest health unit is the most convenient promoter supervision agent, due to the reasons indicated before, we thought it necessary to consider within the supervision system the supply subsystem, since evaluation, training and programming tasks, which she/he must accomplish, also cover teh supply subsystem managed by the promoter.

By supervising supplies, certain unforeseen, intuitive, subjective and external suggestions and behaviours adopted by the promoter were avoided, regarding medicine and materials management, also facilitating a more dynamic and better supply supervision subsystem covering the processes of purchase, temporary storage, transport, help in decision taking, decrease of continuous loss, and in general, a defined improvement of the community's cost-effectiveness, keeping a minimum level of stock, by un-centered planification according to the local characteristics

It is thus how the important constraint concerning logistics and costs to be faced by the promoter has been ovoided. Additionally, by counting on periodical information, the strategic model of increased spiral is likely to be created to function in cases of limited resources: the cycles of the spiral of initial planning and supplies- are minimized in time and outreach. Later on, the small increases developed thanks to supervision support, lead to the evaluate and rapidly adjust the supplies plans. The experience obtained minimizes the possiblity of making mistakes and wasting the scarce resources available.

Finally, the systematization of the operational level will permit the normative level to develop a plan to stablish a model to be worked beginning from the bottom up, i e , first considering the needs and

the resources available, which will asess:

- Conforming a logistics planning team, which would presently be comprised by the person responsible of suplies in Fodenuma, and, later on, the team enlarged and formed by thedivision of community development and the technical selection committee in charge of supplies for promoters. It will be responsible for proceeding with the necessary steps for the participation of the supplies program to the promoters within the sole MOH supply system. This will be useful for providing the promoter the necessary supplies to the promoter through the immediate level (health post or subcenter) on a timely basis.

- By improving delivery of medicine, the accomplishment of promoters' objectives will be made possible and feasible : Decreasing morbi-mortality rates under the program of coverage extension· additionally, the preventive programs develop an indirect and necessary support which inferes in community's perception. The quality of the service given, not only regarding the promoter, but also the reference unit will be improved, since supplies supervision, performed systematically and persistently, will gurarantee a better administration of the therapeutic directions given by the most easily available doctor, and which will have to be accomplished by the health promoter.

- By regulating promoters' supplies logistics together with the macrologistics of all MOH levels, the result would be the information valuable for evaluations and periodical reports useful to feed a system of supplies priorities, where vaccines would be selectively channeled, together with medicine, materials,

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tools, we consider that the route towards the obtention of a health policy will be systematically followed in this way, from the bottom up, since the quasi-experimental work developed will more realistically conclude with the objective needs and availability of demand and offer following a criterion of efficiency and effectiveness.

- Finally, the first results of the supplies process within the promoters' supervision program, will openly show the amount of resources available, regarding the human, technical, financial and material resources, and additionally, logistics. This will also permit a systematization of the program by designing an organigram, inventory of resources, flow charts, necessary to indicate the sequence of activities in the process of logistics and its links. Identifying faults might be foreseen by using the "euristic" methods or pretension, supported by the decision theory, which uses methods such as the decision tree and decision models, as well as polycriteria techniques, which would present less risk in stablishing minimal operational goals using the mini-maxi strategy criteria to identify minimal necessary changes to gradually improve supplies delivery to promoters. In this way, the phases of a supplies system, i.e., of a system capable of being developed, stablishes planning, executing and evaluating processes.

Having the theoretical frame detemined, we proceed to the ellaboration of the model according to the supervision model, which can include:

INPUT PROCESS OUTPUT

INPUT	PROCESS	OUTPUT
To Determine:	Periodical Delivery -Reception Execution:	Evaluation
Team of Logistics issues	– Responsables: Nurse Auxiliary	- Internal: Direct Supervision
Resources Available	- Resources: Allowances and Transp.	- External: Impact, effects, using the information obtained.
Faults: Restrictive Variables	- Monitoring	
Decision Variables	- Flexibility: FCE Team	
Alternative Responses	- Tools: Inventory forms Order forms	
	- Overall Management Approach: S.M.O. - M.O.H.	

The environment where the supplies model was applied was the set of provinces selected in the supervision model: Imbabura and Napo, with the Provinces of Control of Bolivar and Morona, during the same time period, to the same number of health promoters and supervisors.

When considering the findings or results obtained we were able to graphically design a model to inform about the present situation regarding logistics, and resources.

The Restrictive Aspects:

- Because it is an alternative response presently under experimental stage the financial resources could not easily be used, in despite of the minimum need of them (average : 12.000 sucres a month = 70 dollars a month per province). Therefore, the personnel (nurse auxiliaries) developing supervision roles were not paid nor their allowances or transportation costs. Nevertheless, these people accomplished their tasks in almost 100% of their programmed labour.

- Although the Letter of Understanding between Fodenuma and the MOH ended in August 1985, and was immediately renewed, the monthly bonus to be delivered to the health promoter was retarded during the exact same 6 months in which the model was applied. This obviously led to complaints and lack of interest, or even to justification of non-accomplishment of activities by the promoters. To summarize, the most important cosnstraints are referred to the economical-administrative issues, which is easily manageable.

The experimental province of Imbabura presented a particular situation which can be mentioned as a constraint to the application of the model: There was a previously implemented "model" developed by the conventional level of supervision "nurse", who proposed a usppport to the promoter trying to avoid foreseable problems regarding supplies. She supported the promoters on ordering medicine, so that the promoter would regularly go to the SHO and would be advised in using the scarce funds available, controlled in its use, and stopped in trying to acquire medicine in other sources of provision of medicine not likely for the promoter to administer. This proposal was operating from the beginning of the program, and was accepted by the promoters, however, presently, only 4 out of 16 promoters (25% of the province remain in the model developed. The rest had lost control of funds due to the necessary gifts made of medicine to the population or to expenses made in other activities , or by unknowledge of the purpose of such funds.

We found it impossible to replace this model with the one we were proposing: i.e, have the nurse auxiliary regularly collecting information necessary for the supply system, while she was performing the supervision tasks, using two forms: the first one is the monthly medicine inventory to be filled in by the supervisor, and the other the medicine order jointly ellaborated by the supervisor and the promoter at non-stablished dates, according to

the minimum level of stock and the economical possibilites of purchasing what is ordered. Seeing that the funds of those promoters who go to the SHO in Ibarra, Imbabura are deposited in the Office and show current operation , the promoters were questioned about the advantages and disadvantages of this process compared to our alternative response. They did not show preference towards any of them, since they have to go to the Capital of the Province anyway, in order to accomplish extra-sanitary tasks. Anyway, our criterion prefers the model which tends to un-center supplies subsystem and line the actions towards the local programming and uncentered activities.

Interview to Possible Supervisors Regarding Supplies.

FINDINGS OF THE INTERVIEW.

The Health unit immediate to the promoter is the health post or sub-center. Supplies management by the nurse auxiliary is scarce, temporary and restricted, due to the limited therapeutical knowledge she has. On the contrary, the rural physician is an agent capable of using any medicine for sale in the country or outside.

In this way, the rural physician can easily formally supply the promoter with the materials and medicine he periodicecally requests.

Based on the statement above, we approached the closest rural doctor to the promoters and we carried out a research of the medicine available at the moment we applied the form.

The results of that inventory were:

The medicine quarterly used by the rural physicians which are more easily available to the health promoters under this research were the antibiotics mostly, the rest are analgesic, antifever, vitamines and others which also belong to the list of basic medicine.

Categorized by quantities used, from the highest to the fewest, the following is the list of the 24 more important medicine:

Ampicilline, acetaminophen, metronidazol, erithromicine, piperacine, polyvitamine, buscapine, aspirine, panthelmin, combantrine, trimethoprine-sulfisoxasol, diazepam, dipirona, caolyn-pectine, nystatine, tetracycline, gentamicine, Complex B, dextro-metorphane, megacilline, benadryle, metochlopramide, benecetazile.

As we can see, among the medicine used we find 7 antibiotic and 1 antimicotic, three anthi-parasites and one anthi-amoebas, four analgesic, antipiretic and others.

The amounts of medicine used were not necessarily given to the patient by the community drug chest, since it has an initial assignment equivalent to 20.000 sucres for the medicine revolving fund. If the medicine chest did not exist, there is a fund of 6.000 to 10.000 sucres which will be re-imbursed. The patient often purchases the medicine in private stores.

The rural physician or the nurse auxiliary are involved in the supply system of the MOH in such a deep way that they request the medicine from the MOH s State health office or popular drugstore, obtaining the respective discounts in the price of medicine. (25%).

The information collected also indicates the absence of a proper provision to guarantee a minimum level of stock. This has not been solved since in the county capitals where the health posts and sub-centrs are located there are already private drugstores functioning. Those regularly increase the prices of medicine affecting the costumers which belong to the disperse and concentrated rural sectors.

Since this research tries to improve levels of cost-benefit of the rural communities, specially disperse, we consider that the model we must implement would have the main practical objective of lowering the cost of supplies to improve the purchase and obtain recovering or secondary prevention of the patient who was not requiring it· the benefit will be intrinsec. Equally, we can state that the analysis of cost-benefit developed around State, through its institutions in PHC utilizing

rural promoters, would improve and optimize the effects of this program counting on the same funds assigned for the purpose, accomplishing, in this way, the economic and social feasibility, leading to translate the economical profit in social profit.

Thus, by having carried out so far an evaluation of the portions already implemented, i.e., an "ex-post" study, now, because we are trying to apply a quasi-experimental model able to detect problems and correct them, we must produce a responsive alternative.

This alternative will be subject to a feasibility analysis and to the application of a decision taking method. In this way we will basiccally know about the response which better suits the cost-benefit analysis: the "ex- " evaluation.

In the same way that we estimate the cost and benefits of the present situation studied, we will now estimate the cost and benefit in the alternative selected for the experimental application.

MODELING THE SYSTEM:

To conform this alternative we used some decision models beginning from the components of the input of the alternative supplies subsystem, having to confront them with the objectives of the supplies program indicated before . First Step:

a. agen
b. resources
c. regulations components of the input.
d. tools.

Having the objectives and the possible alternatives we are able to ellaborate a strategy selected as the most useful one:

a) Regarding the agent, there was a previous decision of choosing the nurse auxiliary as the most convenient agent. This decision was taken by applying a decision model where every one of the agents was considered as a system (physician, rural physician, nurse, sanitary inspector, educator and nurse auxiliary). Their particular features were assessed regarding the health promoter and considering the maximum availability of the program.

b) The resources necessary for the agent to accomplish the task of providing supplies would not be changed, since the research did not pretend to modify the conditions, but, on the contrary, using the same material and financial resources tried to optimize the usefulness. The materials and medicine selected, as well as funding were not different from the conventional regulations.

c) Regulations: The regulations for conventional management of supplies indicated in the manuals for the health promoters were taken into account and enlarged according to the methods of criteria selection for alternatives with multiple criteria. The result of this methodology was the decision of providing medicine and materials from the nearest health unit to which the supervisor has access. This provisioning should be carried out in a regular basis, and not specifying the constant moments, since the regularity of delivery-reception of materials and medicine was given by the fund of medicine available, which, was scarce in most of the micropests, as it was indicated before. It also depended on the number of population covered and on the demand. We were thus giving the necessary flexibility to the regulation, still applying to it the patticular conditions determined. Another regulative change

introduced here was the permission given to purchase medicine using the added fund - which was being done by all the promoters although it was not considered under the manuals. However, the nurse auxiliary, as supervision agent, would guide decision taking process by the promoter and would provide the medicine and materials conveniently possible. This decision would let us close or systematize supplies and minimize the risk of using medicine not likely for promoter's administration. The promoter would be able to administer those complicated medicine under the system of contra-references which would be favoured in quantity and quality by the systematic visiting of the supervisor

Since the supervisor would be the provider, this would mean the transportation was responsability of the supervisor. Estimates of the necessary costs were made, and developed in the chapter pertaining to supervision. This developed a work hypothesis which would try to solve the problem of supplies - regarding transportation costs by means of the supervisor - which suggested that the expenditures for storage and distribution were meant to cover travel expenses (allowances and transportation). We did not work with this hypothesis because it fell out of the project's objectives but we mention it as a possible variable for future decisions to be taken attempting to analyze cost-effectiveness.

d) A decisory item which could not be controlled by this project was the amount available in the promoter's revolving fund. This fund, we insist, is scarce and the promoter is not advised regarding the way he shall manage it. The first step was already given when we systematized the information through the tools - forms : record of inventory peridoiccally filled in and record of orders. Such tools

will be useful for the person in charge of the PHC Program utilizing health promoters at provincial level in order to know about the management of said funds. It is important to note that, according to the information collected, the diperse rural communities do not have proper monetary values available: the scarce money they have is used for purchasing groceries, clothes, paying for land rental, in several cases. Their funds are often insufficient for the expenses mentioned, therefore they are also insufficient for medicine making the promoters (100% of the cases visited) give them for free and 6 of the 78 promoters (8%) refused to sell them to avoid negative comments towards the promoter or the program.

As a second step in modeling the supplies subsystem, we stablished the conditions to be obtained on accomplishing the objectives:

Our primary attempt is to lower the cost of medicine for the population, by supporting the promoter and supervisor in order to give them access to the formal health system. The MOH will make vaible in a best way the program of coverage extension, giving a great usefulness to the public expenditures dedicated to the program. We consider this is the begining of a long process of systematization of an adequated manageme1n of supplies which in the future will lead to the development of programs based on previous experience showing acceptable results. The most important point would be to recognize the advantages of the systematic approach to the analysis of cost-effectiveness and decision taking, in order to develop an alternative which will grow and develop to improve the health status of the rural communities. The medicine and materials used by the promoter should be considered as categorized under primary and secondary prevention, since items such as vaccines, fluorine, chlorine,

belong to the first one and O.R.S., belong to the second category, as well as analgesic, antipyretic, antiparasites.

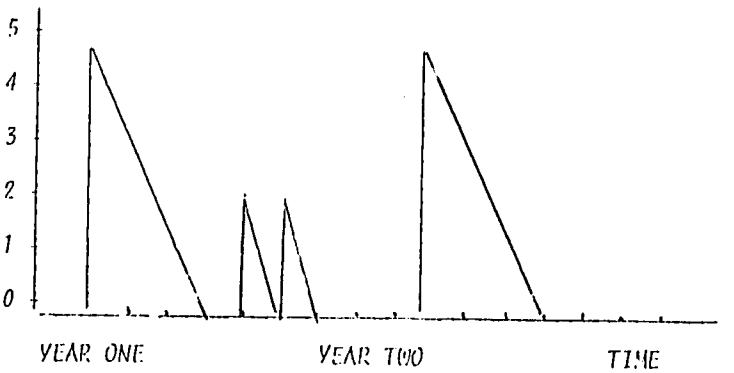
Our third step was to prepare events to collaborate with the accomplishment of the objectives: the supervisor in his plan of local programas prepares together with the promoter a series of activities to support the task: conferences, home visits, etc.

We also considered important to guide the supervisor on the regular assistance regarding the management of medicine and materials.

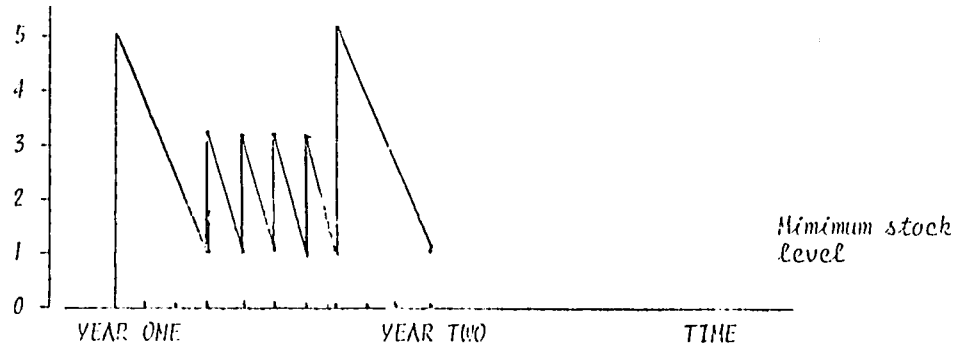
This is not a one way model (from the bottom up), but it has to be worked in the other way too. It must be given feedback to make relevant modifications using promoter's support and community participation. These two elements would even be involved in decision taking.

By counterpossing the alternative of supplies and materials with the set of heterogeneous activities which are presently taking place, we can confirm the advantages of the alternative presented through graphic models;

1. Relationship between qmount of supplies per determined lenght and present situation.



2. ALTERNATIVE: Relationship between amount of supplies per determined lenght and foreseen situation.



3. The graphic model of the decision tree, indicated in supervision, permited us to know quantity and quality of the best decision according to the availability and to cost-effectiveness.

4. Another important graphich models were the topogrphic surveying where the availability of the formal system was valued, (health posts and subcenters) regarding access of promters: distances, time types of transport, frequencies and cost of traveling were considered.

ALTERNATIVE RESPONSES

- The most easily available places for the implementation of a supplies system were determined by mathematical analysis. This model offered the advantage of installing in the best convenient place distribution stores, although the cost resulted to be remarkably high.

- The same selection criteria was used to design a graphic model to combine supervision adn supplies in a single model, since both aspects according to the analysis should be covered by the nurse auxiliary.

  The storage places would be the closest operating units which are ususally provisioned by the drugstores of the MOil. After revising the present conditions we found they would fulfill the expectancies of the model, although sometimes the basic medicine is not available for different reasons.

- The alternative model must correct the failures made in the other model. The most signifi cant failure consisted in the lack of control in the acquisition of medicine. Other important failures were : the "hidden costs" consisting in eco. omic losses due to expiration of damage in medicines, the transportation costs, and the lack of orientation for an adequate administration.

The model attempts to correct the failures found in supplies. Therefore the purchase must be detailed, exposed, and understood as a process:

1. Information about consumption: Monthly inventory forms.
2. Considerations on the medicine selection: responsability of the normative-technical level based on periodic reports at operational level.
3. Determination of amounts required: responsability of the supervisor and the promoter according to the resources available
4. Selection of purchase method: through the supervisor.
5. Need assessment considering funds, responsability of the supervisor and the promoter.
6. Location and selectionof dealers: responsability of the supervisor, following established regulations.
7. Determination of terms regarding delivery and reception.
8. Monitoring orders. responsability of supervision levels and according to regulations.
9. Paying for the medicine requested. To be paid by the promoter on reception of order.
10. Distribution of medicine and use of materials, responsability of the promoter according to regulations.

Another problem found was the way of encountering supplies demand, since this situation is presently unknown.

We found the possibility of choosing one of three proposals:

a. Estimations according to population.

b. Estimations according to services.

c. Estimations according to consumption.

The technical characteristics of the program and the technical suggestions led to the adoption of the last method proposed. Nevertheless, the operation of such method called for the availability of past reports to find out about historical data,.

Method b. was also considered as possible to be used, though in specific programs such as the P.A.I. (Immunizations program) and others to be implemented in the future.

c. Others models developed such as supplies provision from the provincial level were considered not-likely to be adopted due to the lack of knowledge of the specific characteristics of the rural communities.

Selection of the Most convenient Alternative

To conclude, the observation performed permitted us introduce the basic components for the systematization of the promoters' supplies in the alternative model. This response was combined with the alternative model developed for supervision. We consider necessary for the supervisor to perform activities related to supplies directly with the promoters. This was a joint decision.

1. MODEL OF PURCHASE, DISTRIBUTION OF MEDICINE AND MATERIALS FOR THE PROMOTER.

Following the model proposed, the direct supervisor (nurse auxiliary) would be able of supplying medicine and materials to the health promoter periodically. *

The process would begin with a written order of medicine and materials set by the promoter to the supervisor. Said order would be jointly studied with the supervisor and he would advise on any necessary technical aspects considering priorities and efficiency in services (cost-benefit) towards the community. Additionally, the supervisor would have a monthly inventory of medicine per promoter to help in the decision of acquisiton and to improve the information system regarding supplies (see forms annex). This is a key document for a future integration of the promoters supplies system to the national systems and to the supplies policies trying to involve PHC strategy in its own worthy magnitude.

Therefore, the vectors shown in the model not only imply supplies provision, but also orientation and continuos training regardings supplies, integrating supplies to the supervision roles.

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* Periodicity was established as a relative factor depending on the specific conditions of each promoter, of the population benefitted and the financial availability of every promoter.

he supervisor, on his turn, receives the order, and the money necessary, and includes it in the request made from the operational unit he belongs to (Post and Subcenter) and orders according to traditional means. We observed that some nurse auxiliaries make the orders at the Provincial Health Offices, and other do it through the medicine stores, therefore, the promoters' orders would not increase costs to this regard. Indirect supervision makes possible the knowledge about the supervision process and supplies process through timely contact (quarterly or semestrally) with the chief supervisor. Later on, the inventories would be revised to adequate plans and programs as programmed. We included evaluations forms trying to obtain a more secure and reliable sistematization. The regulative-technical levels and the decision levels are in charge of designingn the first supply provisioning to the promoters so to obtain a more precise diagnosis of the program growth.

Responding to the objectives of this research, the alternative model would be:

1. Demand and frequency regarding supplies

   - Regarding aspects proper of every community.
   - Varying according to financila avialability'
   - Joint decisions of promoter and supervison.
   - Controlled - closed: through institutional means, according to norms and regulations established.

2. Number of dealers:

   One: the direct or indirect supervison.

Level of provisioning:

Center of provisioning and distribution: Health post and subcenter.

4. Distance and time:

Center of provisioning - Promoter: just as the supervision model.

5. Cost of supplies:

Reduced, since the economic benefits of the basic medicine purchased in the drugstores administered by the MOH are extended to the program (30-40% less)

6. Training in administrative regards.

Courses given in the Health Provincial Offices of Imbabura and Napo, guiding auxiliaries on supervision and supplies regarding promoters activities.

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.. Testing the alternative

3.1 Design of the test:

The alternative created was applied in the provinces mentioned before; two provinces served as experimental and two others as provinces of control.

The provinces of experimentation were Imbabura and Napo; the provinces of control were Bolivar and Morona Santiago.

A training and directions course was given to the respective supervisors - suppliers, in the Provinces of Imbabura and Napo. They were given plenty forms and the tasks were indicated in a guide.

Supplies Alternative to be applied from July through December, 1985.

WHAT IS IT? A support to the health promoter regarding administration of materials and medicine he is allowed to use.

HOW WILL IT BE DEVELOPED?

- Filling in the inventory forms in each monthly visit.
- Analyzing the results: prioritizing needs, and selecting the medicine to be requested afterwards.
- Receiveing the request forms and the economic value of the medicine.

WHEN? Every time it is necessary, according to resources and expenses.: every month, every two months, etc.

WHERE? In the promoter 's community.

WHO WILL BE INVOLVED? The indirect supervisor who will receive every three months the inventory forms. The central level will requiere said information.

WHAT FOR? To improve community service, enlarge coverage, accomplishing regulations and goals.

WHY: Because the nurse auxiliaries came out to be the most prepared personnel for the task.

Everyone of the supervisors of Imbabura and Napo received directions, manual's, and forms necessary in a course at the beginning which lasted for 4 days full time.

After this course the nurse auxiliaries became supervisors and suppliers of materials towards the promoters.

3.2 DESCRIPTION OF THE RESEARCH CARRIED OUT

Once functioning, the research team began their observation activities and monitoring of the alternative model.

They held several meetings with the supervisors in order to get to know new aspects, what they heard most was complaints from the supervisors because they were not given the necessary allowances and transportation fares.

Appart from this, there were no other complains, except for a problem aroses in Imbabura where 4 out of 15 promoters had formed a common fund and deposited in the hands of the Community Development Chief.

The supervisors did not found problems in the implementation of the model.

A parallel monitoring activity was developed at the end of the model application. It consisted in a series of empiric elements which permitted us know the outreach of the program in five months. Since the time was so short, the effects could not be easily known, but the benefits in terms of efficiency (regading offer and demand): greater benefit with the same resources. It we not possible to establish goals due to the foreign restrictive aspects (mile or scarce funds available), but it was accepted that the model applied a better functioning and control of regulations: control in the use of medicine, in the administration of them, and in the purchase of medicine, too. The tools used were interviews, participatory observation, nominal groups, and interviews to qualified informers.

(a)

PROCESS OF PURCHASE AND DISTRIBUTIO

STARTING POINT: FODERUMA. FINAL DESTINY: PROVINCIAL HEALTH

ACTIVITY NR: 1 2 3 4 5 6

DAYS

NR.	ACTIVITY	1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30,31,32,33,
1	Foderuma's PHC Department sets out order	==
2	Foderuma's Administrative Dpt. revises and aproves order	======
3	Central Bank General Administ. offc. aproves order.	==================
4	Foderuma's shopkeeper obtains pre-invoice forms	====================
5	Selection of most inexpensive offer by the Central Bank Administrative Offices.	====================
6	Order to selected Lab., by the Central Bank Admi. Offc., and arrival of produce to Foderuma's warehouses.	====================
7	Shopkeeper arranges packages to be sent to promoters	
8	Shopkeeper distributes orders to warehouses of the Provincial Health Offices	

CHART I

FCES

7

,57,58,59,40,41,42,43,44,45,46,47,48,49,50,1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30,31,32,33,

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(c)

5

,55,56,57,58,59,40,41,42,43,44,45,46,47,48,49,100,1,2,3,4,5,6,7,8,9,

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CHART NR. 2

PRICES OF MEDICINE AND MATERIALS PROVISIONING FOR A HEALTH POSTER DEPENDING FROM FOCSANIA
- PRICES PER UNIT AND TOTAL PLUS ADDED COSTS (TRANSPORT,ADMINISTRATION)-

ITEM	PRESENTATION	PRICE/ UNIT	QUANTITY SUPPLIED	SUPPLY PRICE	ADDED COST PER UNIT	ADDED COST PER SUPPLY	ADDED PLUS UNIT PRICE	ADDED PLUS SUPPLY COST
Hydrogen Peroxide	Jars x 4 ounces	12,96	5	64,80	5,69	18,47	16,66	83,27
Vaseline Oil	Gallcons	600,00	3	1800,00	171,00	513,00	771,00	2.313,00
Cotton	Pack x 1 pound	212,00	1	212,00	160,42	60,42	272,42	272,42
Cotton (sticks)	Pack x 100 units	42,40	1	42,40	12,09	12,09	54,48	54,48
Sterile Gauze	Box x 100 units	500,00	1	500,00	142,50	142,50	642,50	642,50
Antiseptic Alcohol	Gallcons	297,30	1	297,30	84,73	84,73	382,03	382,03
Benzil Benzoate	Jars x 4 ounces	58,00	6	348,00	16,53	99,18	74,53	447,18
Acetobenquiol	Jars x 100 ml.	96,00	3	288,00	27,36	82,08	123,36	370,08
Betalgine	Drops	80,00	6	480,00	22,80	136,80	102,80	616,80
Ophtalmic ointment	Tubes	22,80	5	114,00	6,49	32,49	29,29	146,49
Mal-ilon	Sirup 250 cc	93,00	10	930,00	26,50	265,05	119,50	1.195,05
Ferrous Sulfate	Can x 1000 units	750,00	1	750,00	213,75	213,75	963,75	963,75
Aspirine	Can x 1000 units	1.270,00	1	1.270,00	361,95	361,95	1.631,95	1.631,95
Insecticide	Gallcons	696,44	1	696,44	197,91	197,91	894,35	894,35
Court-plaster	Tubes	620,13	1	620,13	176,75	176,75	796,88	796,88
Band-aids	Boxes x 100 units	40,00	1	40,00	11,40	11,40	51,40	51,40
Papaverol	Suppositories x 100	202,00	1	202,00	57,57	57,57	259,57	259,57

(contd.)

CHART NO. 2 (continued)

ITEM	PRESENTATION	PRICE/ UNIT	QUANTITY SUPPLIED	SUPPLY PRICE	ADDED COST PER UNIT	ADDED COST PER SUPPLY	ADDED PLUS UNIT PRICE	ADDED PLUS SUPPLY COST
Antiseptic	Suppositories	1,70	50	85,00	0,48	24,00	2,18	109,00
Sodium hypochlorite	Drum x 99 pnds.	100,90	1 pnd.	100,90	28,75	28,75	129,65	129,65
"Polleta de Petróleo"	Sets x 100 mls	18,27	4	73,08	5,20	20,82	23,47	93,90
Stud Rehyd. Salts	Envelopes x 20 gr	12,00	200	2400,00	5,42	834,00	15,42	3084,00
Disposable Syringes	5 cc	20,00	12	240,00	5,70	68,40	25,70	308,40
Merthiolate	Bottles x 30 ml	15,00	10	150,00	4,27	42,75	19,27	192,75
DDT Soap	Packages	17,50	10	175,00	4,98	49,87	22,48	224,87
TOTAL		5.778,40		11.879,05	1646,22	5.584,65	7.424,62	15.283,75

* Transportation costs are estimated from the Central Level (Quito) to the capital of the provinces in the country.

CHART NR. 3

PRICE COMPARISON CHART FOR MEDICINE AND SUPPLIES BY SECTOR **

ITEM	UNIT OF MEASURE	COST + FODERUMA	MISSION N = 5	MOH PROV. WAREHOUSE N = 2	POPULAR PHARMACY N = 9	NON-PROFIT N = 16	NON-PROFIT EXCL. MISS. N = 11	PRIVATE PHARMACY PROVINCE CAPITAL N = 8	PRIVATE PHARMACY COUNTY CAPITAL N = 10	PRIVATE SECTOR X N = 18
Aspirine -tablets	1.000	1631,95	800,00* 5	440.00*2	1060,00*7	880,00*14	920,00*9	2412,00 8	2270 10	2553,00 18
Tylenol- Supp.	Each	2.22		2.22 1	1,5 1	1,86* 2	1,86*2	2,25 3	2,85 3	2,5 6
Anti-scabies Lotion	4 oz. bott.	74,53	24,00* 2	30,41*2	30,98*7	30.17*11	30,86*9	66,25 8	59,84*9	62,85*17
Anti-spasmodic	Dropper bott.	102,40	sliding scale 1	only 1	58,50 3	58,50* 2	58,50*2	84,00*3	82,58*7	83,00*10
Calcium Hypochlorite	Drum	129,55	sliding scale 1							
Mol-iron Liquid	250 cc.	117,50	50,00* 3	gal only 1	69,10*2	64,30* 5	69,10*2	98,78*8	88,16*8	93,47*16
Papaverol supp.	Box x 100	259,57	sliding scale 1			sliding scale 1		600,00 2	666,00 1	622,00 3
Oral Rehyd. Salts	Envelope	15,42	free 4	free 2	23,00 1	3,28* 7	7,66*3			
Iron Tablets	1000 tabs.	963,75	250,00* 2		500,00*2	416,66* 4	500,00*2	1450,00 6	756,00*7	1077,69 13
Terramycin Eye Ointmt	Tube	27,29	27,55* 4		24,68*9	24,51*13	23,57*9	31,90 8	32,64 10	32,51 18
Gentian Violet	120 cc	23,47	62,00 3			62,00 3		150,40 5	104,48 8	122,15 16
Cotton	1 pound	212,00	300,00 3	200,00*1	250,00*1	187,50* 4	225,00*2	467,50 4	526,66 3	492,85 7
Alcohol	1 galloon	582,03	312,50* 5	170,00*2		265,00* 7	170,00*2	778,09 7	714,81 9	742,49 16
Hydrogen Peroxide	Bottle-4 oz	16,66	44,66 4	8,90*1	10,17*7	19,46 12	10,00*8	20,90 8	21,55 9	21,24 17
Court-plaster	1 lg roll	796,86	free 1	1300,00 1	only small rolls	750,00* 2	1500,00 1	1166,00 3	1200,00 1	1175,00
Sterile Gauze	Box of 100	642,50	666,00 4		214,00*4	383,00* 8	214,00*4	591,00*6	474,00*7	528,00*13
Insecticide	1 Galloon	894,35	sliding scale 1	bulk only 1	2			604,00*5	836,00*5	720,00*10
Syringes	5 cc each	27,50	15,00* 2		10,24*6	10,92* 8	10,24*6	27,50 4	22,11*9	23,76*13
DDT Soap	Package	22,48	sl scl. 1			1		32,60 7	29,00 5	31,12 12
Merthiolate	30 cc	19,27	7,3* 4	11,47*2	11,89*7	9,41*	10,44*9	21,50 6	18,91*9	19,93 15
			Coast-2 Oriente-3	Coast-2	Coast-3 Sierra-4 Oriente-2					Coast-8 Sierra-6 Oriente-4

CHART NR. 3 (continued)

\+ Total cost = Purchase

Price + Aid shipping, administration and storage costs (expressed in sucres)

* Price lower than Fedexma

** Total % = 34

* Number of facilities stocking items that facilities for which no price information was available appear here but were not taken into account when calculating mean values.

CHART NR. 4

AUXILIARIES WHO HAVE DELIVERED CONSUMABLE SUPPLIES FREE TO HEALTH PROMOTERS N = 34

AUXILIARIES	NUMBER	PERCENTAGE
These who provide Health promoters with supplies free	14	40%
These who don't provide health promoters with supplies free	20	60%
TOTAL	34	100%

CHART NR. 5

PERCENTAGE OF PROMOTERS WHO MAKE PURCHASES OF MEDICINE WHICH IS NOT PERMITTED FOR THEM TO HANDLE - TOTAL NUMBERS AND NUMBER PER MEDICINE IN SIX PROVINCES, 1984.

NUMBER OF PROMOTERS WHO OBTAIN MEDICINE NOT PERMITTED FOR THEM TO HANDLE (N = 56)		%		NUMBER OF UNITS THEY ADVISED TO USE (X)
		56	95	
Tetracycline	(N = 56)	51	91	4 capsules
Penicillins	(N = 56)	52	57	1 Vial
Tetracycline	(N = 56)	51	55	6 Tablets
M. M. Sulphadine	(N = 56)	6	11	3 Tablets
Metoclopramide	(N = 56)	4	7	1 Tablet
Anti-pyretics	(N = 56)	55	98	4 Tablets
Toilet Substances	(N = 56)	42	55	1 Ointment
Anti-spasmodics	(N = 56)	21	38	4 Tablets
Anti-coughmixtures	(N = 56)	17	30	1 Strup

VI. TRAINING

1. Problem Assessment

Adopting Health Promoters subsystem as one of the main PHC policy structural points certainly is not a neat, easy process to be undertaken, since the selection process followed in every one of the communities where the health promoters are working, as well as the training and monitoring processes were chosen regardless of the particular or regional characteristics determining the peasant communities, and, especially, regardless of the historical process which has led to the implementation of a series of adequations by the peasant world. These changes are the ones that permitted the survival or re-elaboration of a series of values which have presently become the cultural and social codes conforming the internal structures of the peasant communities. For instance, the existence of a non-formal health system is one of the peasant characteristics which, despite of certain particular ethnic features, is part of a symbolic ordering which may be understood as a cognoscitive exercise of the world, responding to an internal organization and to the relationship that every group or ethnics have developed around their own natural environment. Such system is comprised by every community member having, even though basic or elementary, knowledge about health and diseases, leading to the sorcerers or "shamanes", who manage contradictory though complementary principles about good and evil, life and death. Said sorcerers constitute a universe which is not relevant in this research, due to its complexity of social relationships, peasant cosmovision, and inter-relations of responsabilities and hierarchies laying behind all these characters, which alltogether make them impossible to be considered in this instance.

The non-formal system is characterized by:

a. The resources used and conforming the system belong to the community, therefore, it is available to the community members and is less expensive.

b. Phytoterapeuthical practices are ritual, and surpass the barrier of the individual treatment, to be considered as an area of social reproduction of the group.

c. The ritual curative practices respond to a conception of the world which integrates man as part of nature.

Because of the unknowledge of this system and of the impositive attitude from the Government, a "breaking point" is created, fed by the conditions of peasant survival, usage of the resources from the particular cultural codes, which is very usual. However, in the case of the health promoters, the values of the formal system are communicated to the community, and the fact they are or not adopted depends on the importance found by the community regarding their vital and primary needs felt. Consequently, the health promoter is, to the community's view, a representative of the formal Governmental system, and to the Government's view, he is a member of a community and system which must be modified.

For training purposes, the only possible way of dealing with this conflict is trying to obtain understanding from the community itself, on their actual needs, the perception the community develops on the promoter and the importance given to him, apart from the way a relationship among two different cultural systems is given. Only by considering all these, valuable development alternatives might be created efficiently using State's resources.

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In order to obtain an overall understanding of the characteristics present in the relationship State-Promoter-Community, it is needed to note that it is a dynamic inter relation and that "community" is not a homogenous or terminated unit, but, on the contrary, it is a constantly changing and moving structure of adeanation, creation and evolution of fact: determining its existence. Therefore, the importance of mentioning every traditional or recently adopted (underlaying in the communities) manifestations must be noted, since they comprise systemswhich, though opposite to the formal ones, summarize the central problem of every development program.

One of the statements most likely to be discussed is the fact that the promoter, being part of his community represents the State, as an impositive and prevailing Entity, since, although the need of community participation is regularly accepted under PHC Programs, such paticipation may not be real due to the fact that:

a. The requirements for a member of thecommunity to become promoter do not consider community's opinion of that particular matter, but the need of a formal system, leaving aside people who, having the possibility of exercising more ascendence on the community, do not fulfill the program requirements.

b. A formal organization system is needed, regardless of the traditional or natural organizations systems inherent to the community.

c. Community participation is limited to executing specific tasks such as collaborating in building sanitary infrastructure, and not participating in the programs themselves.

Therefore, the promoter has a non defined and even contradictory role, as he transfers the values and concepts of a program which has been established within the unknowledgment of the informal systems of community organization. This generates a "formal thought" of change among peasants, since it refers to the need of adopting behaviours "traditionally absent" in the community such as the usage of latrines, water purification, etc., and which, considering groups such as the highlandean indigeneus races, which follow a social system (cabildo, majors, sorcerers or shamanes) with a time and space distribution which is directly related to the production cycles, and with a net of family relationships structuring the whole internal hierarchies, makes them maintain a cultural cohesion and an ethnic identity which filters and re-elaborates the State's actions for the internal consumption as well as for the projection given to the external environment.

The case of the oriental indigeneus groups is not very different considering cultural compactness and ethnic identity, but it is different regarding social and productive organization; since they, more than being farmers are hunters and harvesters and their social organization does not present the complexity of highlandeans . Having developed their adaptation capability to such a difficult environment as it is the oriental or jungle has produced cultures integrating man and nature. Said cultures have been remarkably kept away from national society because the jungle protected it with a natural shield. Their integrating behaviours are recent, and, though their living conditions have been highly modified, their ancestral traditions, transmitted from generation to generation consolidate a cultural and ethnic identity which constraints State's action.

The Manabí Case

In Manabí the peasant characteristics highly differ from the indigenous ethnies. There is not a social organization which represents a group or community identity; they have been quite integrated to the national society regarding their production activities, and they do not have apparent cultural features defined. However, even though their living conditions and their social reproduction systems are more alike to the State's perception of development, they have seen the need to create alternative responses to their own needs which have not been served by the State, and which have an enormous importance in their daily life. This is the case of the non-formal health system, which influences in the perception the community has about the health promoter. These, together with other issues such as unadequated distribution of resources, land erossion, and the presence of climatic phenomena such as drought, which have generated a complete migratory process, are highly determinant in the relationship promoter-community, since the health promoters trained in 1983 belong to UPCCAM, 2nd. level organization, which has grouped them around a health committee in charge of providing them with supplies, supervising and eventually training them.

But, the fact that they stay in the community only temporarily limits promoters's work since improving living conditions does not represent a prioritary interest, and most of them are not aware of what is or must be the promoter's task. Under this context, the lack of services linked to the agricultural and commercial activity are mostly prevalent in importance: for instance, lack of roads to commercialize their production. Therefore, formal organization matters, latrines building, etc, remain in a second stage and the role of the health promoter barely

overpasses health restrictions and becomes a mechanism of consolidation of a community leader, promoting development and negotiating (with UPOCAM and the State) development programs and projects.

This is the stage of reality where the breaking point among the policies and regulations stated by the State begin to face the actual operation of said regulations and policies.

Under this set of relationships and activities which conform promoter's actions, the importance given to training is highlighted. Such training refers to the preparation of said agents, since action depends in a large part of the knowledge acquired in the courses taught by the MOH.

According to data collected, training might be disclosed in three aspects:

a. Methodology

b. Contents

c. Practice

METHODOLOGY:

Promoters training methodology presents the following difficulties: it is developed during two consecutive months in MOH centers, using the personnel of the MOH available at the moment and in Spanish.

This means that the health promoters must leave their communities and, consecuently, their productive activities during two consecutive months, affecting the agricultural production, and therefore, the promoter's economy. The lack of specialized personnel, met by nurses or physicians who do not manage non-formal training techniques leads to the establishment of a relationship framed in a vertical, magistral type, presenting almost no dynamics. Additionally, the courses are taught in Spanish, and if the promoters are indigenous, the linguistic constraints are enormous.

CONTENTS:

It is one of the greatest limitations, since the modules prepared by the MOH and the courses themselves refer very slightly to the present peasant situation. They don't consider either issues such as traditional nutrition, personal hygiene, environmental sanitation, or traditional concepts about health and disease. This involves estimulating promoter's dependency on the formal system and stopping initiatives of using the resources of the community itself.

PRACTICE:

a. Training concepts are not totally ressembled, on the contrary, the awareness of the meaning of being a health promoter is quite partial.

b. When applying knowledge, promoters do not know in a sufficient way medicine dosage to be administered, they do not practice antiseptic behaviours when curing a simple wound, and only seldom refer to the manuals elaborated by the MOH. Health education lectures only repeat the scarce contents remembered after a period of training.

c. Some other external factors also limit the task of health promoters such as materials for latrine construction, infrastructure for water, chlorine provission, etc. and, constantly rejecting the use of resources which are proper of the community for preventive actions.

RESEARCH TECHNIQUES:

Accepting or rejecting the system in the rural areas might not be understood unless the dinamics promoter-State-community is taken into account.

This is the justification for working with community samples, where variables pertaining to economical, social and cultural aspects are involved.

VARIABLES USED:

The cultural variables assumed, even though do not express all the contents of the non-formal health system, facilitate an approach to the contacting or opposite point of said system before the formal system. Therefore, one part of the interview to family heads tried to:

Establish the frequency of presentation of diseases of "magic origin".

Follow the pathologies and the use of the resources proper of the community in servicing and curing them, regardless of their magic or medic origin.

Detect the levels of rapport or acceptance of the different human resources conforming every one of the systems.

Determine the common concepts of disease and health, and of causality and prevention.

A. FINDINGS OF THE INTERVIEW TO PROMOTERS

GENERAL CHARACTERISTICS

The average age of the promoters surveyed is 31,9 years old. 50% of them are male, and the rest female; 73% are married and 26% are single.

In general, an adequated school level is observed, since 50% of them finished elementary school, 40% of them did not finish fifth grade, and only one of them learned through literacy programs. Finally, the average school years showed by promoters is 5.

56% of the promoters live mainly from their farming activities, 20% of them are artisans, 10% work only as health promoters, and the rest, 14% of them move among house work, literacy activities and employments. A remarkable fact to be notes is that almost half of the promoters do not live, as main activity, from farming, which evidences the degree of disaggregation of the peasant community, which can be attributed mainly to the unequal distribution of land. This leads to a percentage of cases (10%) where the role as health promoters is taken as another employement and an alternative source of income.

Consistently, 13 3% are employed as farmers. 63,3% are owners of small farms (working on their own,) and 10% of them are working for their families' enterprises with no personal income.

A large part of the promoters state that they receive institutional support from Integrated Rural Development (IRD) Units, followed by the support given by the MOH, the next place is for the sectoral governments. and, finally, some of them indicate they have been supported by PVOs.

Regarding the support given by the community to the health promoters, 53.3% only receive "some help", 36,6% state they receive "plenty support", and the rest, 10% express they do not receive "any support". This means that several actions must be undertaken and mechanisms developed in order to link promoters to their communities. Some actions regarding promotor's training, and mechanisms eliciting community participation will be useful to change this trend.

Among the group of promoters receiving support from their communities, we find 36% of the cases where the promoters receive economical support, 16% feel backed by human resources, and only 10% receive materials as support to their work.

PREVENTIVE ACTIONS

43,3% of the promoters interviewed have been able to build latrines in their communities, showing an average number of latrines built of 13,4 per community. Different number of latrines built are found in every community (13 communities considered): one community has 100 latrines, another one 67, the next 3ones show 50, three others between 19 and 30, and 4 shows less than 5.

As promoters indicated, the latrines are not significatively increased in number because: lack of economic resources, followed by the little opportunity and lack of institutional support.

Only one community had a peasant hygienic service built, however it was found difficult to maintain due to the activity required of carrying water and to the high cost. The latrine of double bottom was not found in any community.

The facts stated before express the constant and persistent risk of environmental pollution due to the inadequated disposal of excreta, finding its causes in the general depressed economical situation of the area.

Regarding baggage disposal, the most frequent practice is burning it, promoters seldom teach how to build devices to obtain compost, however, in some cases people consider throwing trash away.

14 communities obtain water from sources, 12 from wells, 5 from the river, and 4 from other sources. According to promoters, 25 communities purify the water, usually by boiling it, but several communities (14) combine boiling with chloring. Only 2 families out of 210 state they filter the water.

11 promoters indicated the cause of water contamination is dust, 9 of them mentioned bacterias and 8 contact with animals.

Regarding the activities performed in relation to prevention of diseases, we found that: Only 40% held community meetings with the purpose of educating in health practices, while 23 of the promoters carry out this action through home visits.

And, referring to immunization within the communities, only 3 promoters perform this activity and recognize it as a strategy of prevention.

Eight promoters mention more than one preventative action, only 6 mention up to 4 types of preventative actions, and 2 of them could not think of any preventative action.

Regarding food protection, 26 think it is necessary to wash it, 15 consider it must be protected against insects, and 8 say one must wash his hands before handling it.

Regarding the causes of food contamination, 26% think insects are responsible, and only 16% of them find the cause in the non-protective behaviours towards food.

Among a number of causes for food contamination, 73% indicated up to 2 causes, and 27% found 3 causes.

Regarding the causes for insect reproduction, it was determined that: 63% indicated inadequate disposal of excreta, 93% indicated trash, 27% mentioned the swamps, and 30% relate them to filthiness.

About living conditions permitting healthy practices, it is observed that: 26% mention overcrowding as facilitators of diseases, 75% think that neatness is necessary in the houses, 46% state that it is necessary to avoid having animals in the homes, and 70% indicate that the latrines are necessary, 64% express that obtaining pure water is not a basic conditions for healthy conditions, 91% consider electricity is not important either, and 64% consider ventilation does not have to do with sanitary conditions.

Pregnancy control is considered as follows: 62% suggest visits to the physicians, 48% insist in an adequate diet, 26% mention hygine, and 45% suggest rest.

The promoters were asked about reasons of complicated conditions of pregnancies, which would justify - visiting the doctor. The results were: 72% do not mention vaginal bleeding, 69% do not consider reference 97% do not consider pain on the abdomen, 51% do not mention headaches, 79% consider that women must not be referred due to nausea nd dizziness, 79% do not mention seizures, and 96% do not consider lack of fetal movement, either.

Regarding the immunization of pregnant women, 65% insist they must be given shots, while 72% know such preventative action must be carried out during the sixth - seventh month.

On the other hand, 72% of the promoters have not assisted births, however, among those who have, only 17% know that they must wash their hands and clean the tools.

Regarding vaccines and preventive medicines to be administered to new borns, 79% know about the BCG, and only 44% mention the need of applying ophtalmic terramycine.

About signs of post-labor infection, 20% recognizes fever, 17% bad odor in the cochia, and 3% unwillingness.

Promoters were asked about the signs used to recognize tetanus in the new borns, obtaining the following results:

Remarkable flexion in the arms:	3,4%
Rigidity of the body:	13,8%
Neck pulled backwards:	10,3%

About the age when the child must have his first shot, the promoters indicate: 79% know when the list must begin, 72 and 76% know about the age when immunization must begin, .e., 72% know about DPT and 76% about anti-poliomyelitis vaccines.

Regarding diarrhea prevention, 46% know that pure water and clean food can prevent it, and 34% of them value personal hygiene as preventative action. Additionally, 72% of the promoters know about the way of preparing O.R.S. and serum at home.

Considering nutrition, 82% of the promoters indicate that children must have the first priority, and, on the contrary, 51% think that pregnant and nursing women must receive the best food. Only 24% state that adults must be fed best

And, 55% do not recognize tuberculosis signs.

THE CURATIVE ACTIONS OF THE PROMOTERS

The research involved certain elements useful to learn about promoters' knowledge on curative behaviours. The following is the result: 50% know about the steps to be followed when trying to pull out an insect laying in the ear. 93% identify the most common poisons found in their enters, but only 24% of them know what to do to attack poisoning. 95% know about the causes of hydrophobia in people. As well as for recognizing the state of shock, 24% look for weak pulse, 27%for dilatation of pupils and 13 for unsufficient breathing. Promoters, in general, hardly recognize adequate treatment for burning episodes, meanwhile they show good knowledge of dental health performance, using tooth brushes (only 55% know about fluorine use).

Regarding materials used for best serving the community, 62% indicate that regular supply of medicine and materials is first priority, and 70% mention said items as among the first three priorities.

As for the Institutions in charge of training promoters, most of them recognize the MOH at central levels, very few (only 16%) refer to local levels, and 20% indicate they receive training from the peasant organizations (in the case of Manabí).

The research process included a test of the promoters' knowledge and skills. The results were as follow:

Vital signs:

- Only 16% take pulse correctly
- 50% took temperature correctly.

Intra-muscular shots:

- 50% forgot about inhaling
- In the other procedures, 70% showed right.
- 96% were able to introduce the syringes correctly.

Curing a wound:

- 64% and 47% performed aceptic and anticeptic behaviours correctly respectively.

6. FINDINGS OF THE INTERVIEWED FAMILIES

GENERAL CHARACTERISTICS

60% of the family heads are farmers. This indicates that there are many people in the countryside who do not live from farming any more.. On the other side, 45% of the surveyed work independently, 31% are working for their families receiving no salary, category which includes house work performed by women. 17% are employees.

The research detected 26% of illiteracy among the family heads surveyed, and only 1% have gone to high school . 20% have finished grade school, and 52% have gone to high school.

The members of the communities were asked about their most important needs, finding the following result: 61% consider the roads are the most important needs within the community, (see chart)

PRIORITY NR.	NEED IDENTIFIED	NR.
1	Roads	130
2	Pure Water	120
3	Electricity	104
4	Medical Service	99
5	Education	74

As seen above, almost all needs are associated to under development. Most of the people surveyed (69%) know where the nearest health subcenter is located, while 31% do not know that it exists.

The members of the communities surveyed were asked about the characteristics necessary for a health promoter. 10% consider that the health promoter must write and read, and live in the community. As for the civil status, most consider that the health promoter must be married (73%) and have children, which, at community levels means being a person worth

rapport and prestige. Alike, 92% consider that the promoter must know the elements of conventional medicine, but, equally, 55% consider that he must know about the popular practices of medicine, and 44 and 41 % respectively consider that the promoter can also be a quack or a herb doctor.

The fact expressed before clearly indicates a basic finding consisting in the articulation of the health systems, i.e., of the unit of actions corresponding to the cultural behaviours of the communities, called traditional medicine, and the forms of conventional medicine.

This evidences the mixture actually presented by health performances, corresponding to the cultural richness and diversity of the multinational conditions of our society.

This is much more relievant under the context of actions and policy design regarding training in the PHC strategy.

The aim here is to stimulate State levels with decision taking power to lead their intervention towards the legalization of health practices accepted under the real process of the rural communities. The risk at not accepting this, is to stop the development of of PHC programs due to the distance to reality. Undoubtely, the concrete expressions of the systematic integration of the formal and non-formal health logics will not be merely a a regulting practice, but a matter of policies of health and of finding a methodology capable to involve popular participation in the overall action of the strategy, through decision taking within a process of reflection and action regarding the appropriateness of performances in a particular area.

Among other criteria to select promoters, as age, the community expects they prefer the interval 21-30 years old, (50%), followed by the interval 31-40 years old (30%).

PREVENTIVE ACTIVITIES

About half of the families surveyed (47%) obtain water from wells, which, differing from the natural reservoirs, consist in elementary constructions collecting the water that naturally runs from a source. The source of water provisioning following wells is the source of water, followed by the river. With respect to this we can indicate that the natural sources are the ones which present less risk, since the other two present a higher degree of pollution.

On the other hand, it must be noted that only 47% purifies water before consumption (*). The most usual technique is boiling water (15%), determining chlorification and filtering as unknown practices. Nevertheless, the community indicates that the conditions are given as to undertake actions regarding water purification. This indicates the uncompleteness of promoter's efficiency regarding health education, confirmed by the low frequency of home visits. Promoters' educational tasks are greatly constrained by the lack of systematic feedback, given the non-present supervisons, and the lack of material resources to make health education an efficient task.

(*) 66% of the cases which expressed taht they purified water were checked for verification.

Regarding the final garbage disposal, 63% of the surveyed families throw it to the , while 24% deposit it in the rivers and streams nearby. Only 2% burn it or bury it.

This leads to the conclusion of the fact that there is a high degree of pollution existing among the communities, and that promoter's intervention does not produce a remarkable level of sanitation, due, in part, to the lack of educational materials to support his preventive activity.

The research tended to make respondants identify, as agents in charge of transmitting diseases, certain animals such as insects, and anthropodes, rodents, domestic animals and crawlers. They were also asked to identify up to three types of these agents.

Out of a total of 210 surveyed, only 3% were able to indicate up to three types of animals who transmit diseases, finding insects and anthropodes with the highest frequency; 35% identifies up to two animals, and 79% identified only one animal.

In general, people identified in first place insects and anthropodes, the second place was given to rodents, the third place to domestic animals (farm animals), and a fourth place to the other kind of domestic animals (dogs, cats) as those likely to carry and transmit diseases.

The direct observation confirms what has been stated here, since 82% have domestic animals at home, although most of them (93 people) recognized domestic animals can transmit diseases.

In general, almost every one of the people surveyed own a small plot next to the house, used to plant crops for their own consumption. Nevertheless, the traditional typical family vegetable garden is practically unexisting. Said garden, which would produce carrots, lettuce, raddish and cabbage is considered as out of place or unknown, situation given by the lack of technical knowledge, of seeds, and, specially, the fact that people are not used to eating them. To this extent, would be much more convenient to potentialize and develop the crops proper of every community, since they are part of their own culture and tradition, or maybe to combine the traditional with the new crops.

39% of the families surveyed have a latrine at home, however, out of said percentage, only 9% do not use it because they are not used to it, or because they are damaged.

There is a general low degree of latrine implementation among the communities, due to the lack of economical resources, and to the fact that several technical regulations of construction are not adequated for certain type of soils. This happens especially at the Orinoco. But, a key element limiting the use of latrines is the lack of education regarding the adaptation of sanitary behaviours, which can, on its turn, be attributed to the lack of technical didactic resources given to the promoter and to the local health system.

Out of a total of 186 answers, 61.5% of parents check their children's teeth. Out of 172 answers, 62% brush their teeth, only 1.2% take fluorine rinsings and 35% do not practice dental care. On the other hand, when verifying information given to this regard, it was found that only 14% evidence dental sanitary practices.

71.3% of the families show behaviours tending to protect food; most of them put the lids over the pots, nevertheless the general poverty among the communities makes impossible the construction of certain infra-estructure necessary for this purpose, this is why the food is available to animals which transmit diseases.

Out of a total of 130 answers, 22% associate vaccines with the corresponding specific diseases; 22% associate themwith illnesses in general, 25% know about the disease, but do not associate them to the vaccines as preventative aid, and 29% do not know what they are useful for.

Out of 200 answers, 50% indicated that the promoter talked about vaccines, however, there is an evident need for carrying out greater education and promotion events haveing not only the promoter as responsible, but also the health area.

In general, the communities have knowledge of an adequated diet, but the actual fact is that people do not have enough economic resources as to assume adequate behaviours with respect to this. To this extent, it will not be necessary to only indicate about the basic food necessary, but to discuss about actions which can be taken in order to solve the problem among a set of evident constrains.

Out of a set of answers about the nutritional aspect, 67% indicate that the promoter never talked to them about the subject, which could be due to a community consciousness of the useless discussion on a subject which finds unavoidable causes. This calls for the design and joint elaboration with the local and regional organization of a didactic module about the basic subject of nutrition.

MORBIDITY:

Regarding control of diahrreas, we find that: only 32% know about a way to stop diahrrea, and out of them, 73% use O.R.S., while the other 9% usually prepare serum with their own elements at home. Also, 50% of them stated that the promoter had talked to them about it.

MOST FREQUENT CAUSES OF MORTALITY AND MORBIDITY (During last month)

Headache	10 Answers
Flue	99
Diahrrea	31
Fever (unknown origin)	16
Colic	9
Measles	5
Attacks	4
Bleeding	5

As it is seen, the group of diahrreic and respiratory diseases are the most frequent illnesses, followed in importance by fever. It must be noted that this coincides with national data, but it should also be noted that these are preventable diseases, subject to actions of economical development within a regional environment.

There was not one person among the surveyed people who provided more than three answers to this question. Only 24% were not sick during the last month.

During this same month, 75% of the people surveyed (100% = 210) had one person sick in the family; 33% hd two people sick, and, finally, 7% had up to 3 people sick in the family.

This clearly indicates the dramatic sanitary situation existing in the communities in the rural areas, which calls for a systematic action which must be undertaken by the set of elements of the health area, and

the overall support which must be provided to the promoter within training. This supposes a greater insistence, regarding resources enlargening, about the modules of environmental sanitation and less complex morbidity.

TRADITIONAL DISEASES:

These diseases correspond to the cultural approach of the community, which, in a more specific way, relate magic, religious, and philosophic issues which lead to the existence of a certain nationality. This is expressed through ritual actions which concretely testify on its existence and permit its social reproduction, developing notions of identity, cohesion and self-identification.

It was not the purpose of this research to learn about said nationality, since the effort in such trend would have to be different; what this research tried to prove empirically, was the social impact of the existence of it, trying to make some inferences relevant to the assumption of the informal health system by the communities and the PHC, tending to complement and practically exercise health by part of the beneficiaries themselves, among the so-called community participation in PHC.

The families surveyed were asked if they had suffered during the last month, from three types of diseases previously defined such as: "Scare", "Bad eye", and "Bad Air".

The criteria for this definition were discriminatorious, since these illnesses are socially recognized, exceptuating other pathologies which stand in more specific cultural and ecologic environments.

The research found that 43% state "bad eyed" exists as real pathological and empirical process, 37% consider "scare" in the same way, and 25% of "Bad Air".

Regarding the first aid treatment for the first illness the first place is given to self medication, (37%) followed by the visit to the doctor (22%), and, in lasiplace, the health promoter (14%).

Regarding scare, 37% decided on self-medication, 27% on medical assistance, and 14% on the drugstore.

As for bad air, most of them, (37%) decided on self-medication, 14 % decided to go in first place to the promoter looking for a treatment.

The next question was trying to find out who finally cured said illnesses; encountering very impressive answers: for the first illness, 62% were cured by the quack, and 25% stated they were cured by members of their families; as for the second illness, 12 % indicated they were cured by the quack, and 31% by the family members; and, regarding the third illness, 41% stated they were cured by the family members, and 23% by the quack.

This undoubtedly highlights the real existence of [illegible] which [illegible] ser, and finds responses in the frame of other cultural settings.

When asked about the reason of going to the quack, the most frequent answer was: "Because there was more confidence and respect", followed by "Because there are not any other medical services".

When talking about traditional diseases, evil eye and susto were the main causes which made people go to the quack, this involves the existence of a standing health system which expresses a set of practices, representations, and perceptions responding to a social system presently under change.

To support the last statement, 67,6% said that physicians must know about quacks' knowledge.

Trying to balance promoter's action regarding preventive and curative activities, 55% of the people surveyed stated the promoter helped him in curing, 5% received indications referring to environmental sanitation, and 44% said they did not help in anything.

Family heads were asked about the process of selecting the promoter, 60% of them did not know how such selection was done.

In general, the communities indicate how preventable respiratory and enteric diseases show prevalent high frequencies. Additionally, they show wide knowledge of the causes or factors which permit the presence of such pathologies.

On the other hand, there is additional knowledge of the useful conventional ways of curing such pathology, however there is a frequent application and prevalence of popular responses ; also, there is consciousness of the limitations of popular therapeutics for more complex pathologies, which will find a solution among conventional techniques, but they are also conscious of the impossibility of solving some specific pathologies usually cured in the popular environment when referred to the physician.

Peasants express: "the diseases which physician can not cure are: scare, witchcraft, and badeyed, this last "badeyed" shows exhaustive reflection, to the point that it has been classified. there is "an unwillingly bad eyed" and "a unwillingly bad eyed" (because of hate or revenge). In any case, the presence of vomit and diahrrea are the signs of these diseases. If the person is not rapidly cured he will surely die

Once the illness is diagnosed, the patient's family questions about useful information to determine the type of "bad-eye" applied to him. Many cases of unwillingly bad eyed are solved by the same person who caused the problem, but often the quack is the person in charge of solving the problem.

Therapeutics applied in these cases consist of rubbing several plants damped with liquor on the body, as well as rubbing an egg, blowing some liquor on the patient while some prayers are recited. This brings about the presence of symbolic and religious elements which translate the peasant life.

According to the opinion of almost all the people interviewed, the bad-eye is produced by the"electricity" present in people's sight (present to different extents in every person).

The fact that it is the quack or the person who caused the illness, the ones able tosolve the problem show that the balance must be found by social entities of the same kind or even through socialization among family or community levels. Actually, these two items used by the quack are the ones who must give back the natural functioning of the body.

On the other hand said aches are not seen as a malfunctioning of the digenstic apparatus, independently from culture and of characteristics of class. A conventional "western" theory of science considers the individual as a universe, therefore it is a universe limited to the obstruction of the specific organ or apparatus, therefore, it is a present and common questioning to asess certain pharmacological products which aimed at helping certain pathologies produce new, and often more complex ones.

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this popular practice may consist of a social reflection modified through the ritual and symbolic issues, which indicate that the socialization and analysis might be a therapeutic alternative means which we must re-take and asess.

C. THE TRAINING MODULES FOR THE HEALTH PROMOTERS OF THE MOH.

Analysis of Existing Training

INTRODUCTION: Since the training modules are a means to express and condense the contents of training to promoters, and which constitute basic tools to be used in the training period, we have considered them, together with the permanent reference materials available at the work sites for the promoters, important to be analized following several criteria:

1. Regarding its contents: The analysis was made in relationship to the level of correspondence with community needs, considering the common aspects, as well as the degree of response to specific characteristics and needs in a specific area. The question which could well summarize the statement before is: ¿ To what degree was the promoter trained to face community problems within his own environment, taking into account the social, economic, cultural, and environmental condition he belongs to?

The modules were analized at two levels:

- General level within the modules.
- REgarding the levels which have to do with the community. This we believe that the modules concentrate the level of comprehension on the media the promoter will interact, central issue when considering that the basis of the problem is community participation in solving health problems; this 2 level tries to stablish the constraints to the contents and comprehension of the health problem of the communities by the MOH, making a contrast with the way the communities themselves understand it.

It must be noted that with this purpose we referred to interviews made to qualified informers from the indigenous communities and to specialized papers.

2. Regarding the Educative - Technical Aspects. We started from the way such contents are expressed and the techniques used, in order to find the conception used by the MOH on training. This implies a previous analyisis on the degree of correspondence of the training techniques with the training strategies usually applied by the communities. methods

3. Analysis of Contents.

- General Level. The modules relate to the ocupational profile of the promoter, classifi ng it in: contents

a. Activities addressed to the community's organization: Modules 1 and 2. Community and Health Education.

b. Activities addressed to individuals: Mother-child, (module Nr. 4), simple morbidity, (module 5), First Aid (Module 6) Dental Health (Module 7).

c. Addressed to the environmental activities and sanitation. (Module 3).

We can note there is lack of aspects regarding traditional medicine in the promotors' training curricula. On the other hand the modules deal with the problems regarding health, which can be found in the rural communities, as well as with the degree to be reached and the activities to be performed by the promoter to solve said problems.

This overall treatment does not imply a summary of the health problemacy related to other aspects of the social life as the

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diversity of situations presented by the rural communities relating health. The modules present a general overview of the problems and of the alternatives to face them regardless of the existence of varied situations in our country produced by two facts:

1. Ecologics
2. Technical - Cultural Considerations.

Ecologics presents a variety in spite of the very short distances to be considered. However, the areas can be divided into two contrasting regions: The Highlandean Andes and the Low Lands or Tropical forests.

The technical-cultural considerations comprise the existence of a set of ethnic groups which still conserve a culture and cosmovision remarkably differential to the rest of the country, and also among themselves.

To this statement we can respond that the technical directions existing in the modules were subject to generalizations, since every one of the health problems finds a technical way of being encountered. This is undoubtably accepted, however, it does not make our remark void.

The environment and weather define the existence of specific diseases. The modules contain elemnts common to all areas and defining specific elements However, this must go along with certain training aspects emphasizing the health problems to be faced by the promoter in the area. This is valid not only regarding the diseases,

but also the environmental sanitation, i.e., humidity in relationship to latrines implementation, construction materials in relationship to soils. Other important elements to be considered in this regard are cultural traditions and costumes.

Indigenous communities have developed along the centuries a certain philosophy they use to face health problems, in the specific case of the Quichuas, they conceive the world as a binarious unit comprised by contradictory and complementary halves. This cosmovision developed by said communities outstands in the daily life of the communities.

They conceive the human body as a unit, which when balanced represents health and when unbalanced represents sickness. According to this " ... preserving health must be oriented to keep the natural organic balance on the basis of carefully developed practices..... This type of practices would, in general, be part of health promotion and when broken, disease would be present" (Fuentealba, 1984. P. 21).

Binary conditions are expressed through the characterization of certain elements as high and low, hot and cold. Therefore, when the mentioned balance is broken two conditions might be present: Cold diseases (Chiry Un Guy) and hot diseases (Rupfay Un Guy). The first ones are provoked be elements with cold characteristics and produce coldness in a certain part of the organism. Therefore, the indigenous consider diahrreas and fevers both as cold and hot illnesses according to the elements causing them.

Consequently, therapeutics must be oriented to re-stablish the natural organic balance by applying and selecting elemnts which combine the properties contrapossed to those which provoked the disease. (Fuentealba, 1984 P. 2).

This report is not trying to make a profound analysis of the problemacy, however it is important to note that this conception goes along with a complete health system which uses its own agents to treat specific problems. Said system has been kept within the communities but the recent second and third level organizations are trying to rescue it to potentialize the use of said knowledge to respond to present health needs, without disregard for the modern medicine.

The MOH training modules lack consideration of this problemacy. This provokes encounters of this two different rationalities since there is not one element which rationally interacts. One experience is that the health promotor can eventually become the representative of the different health system which competes with the traditional agents, becoming a controvery point . The indigenous organizations try to give solution to this by proposing the inclusion of traditonal medicine in the training plans for the health promoters and the process of reflection to find the point of mixture of the two systems.

2. Modules on Community aspects

Since the promotors program within the Estrategy considers community participation as "basic element, not only in identifying needs, but also in solving them, , the aspects regarding community within training are of basic importance, just as the MOH has understood it. However, certain punctual observations about this must be made:

1; A differentiation between legal and traditional organizations must be made. The legal organizations comune, cooperative, association, canton, has specific objectives considered under laws and regulations. The traditional organization, commonly known as indigenous community,

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has a corresponding land posession on which certain ethnic- cultural elements lay which are useful for its identification. Within one community, the members can have access to two different forms of legal organization. The multi-cultural and multi-ethnic characteristics of the country ask for the determination of the specificity of each group regarding the functioning of the traditional organizations (i.e. Quichuas - highlandean, western, or North-south highlandean or Quichuas South-Shuaras, ...).

By differentiating them it is possible to:

a. Avoid the limitation of formal aspects of comprehension on community participation, but on the contrary, obtain the traditional and "new" mechanisms (derived from the legal forms of organizations) existing in the community, and, which, in order to stimulate them, are taken into account.

b. Stablish the difference between the formal and the traditional leaders.

c. Consider promoter's activities as related and integrated to the community level. Therefore, in the case of the health committee, it must follow the levels of organization established in the community, not constituting paralel organizations or highlighting promoter's role, but integrating this role to the activities and committee formed.

d. To rescue mehcanisms from thecommunity useful for the solution of problems and community participation. Therefore it is necessary to forget certain rules to be taught tothe promoter such as how to be dressed to talk, to write in certain ways, and make him develop a reflexive capability to look for appropriate mechanisms.

2. This last reflection must be given within another training concept, which implies the contents of the ethnocentric position (the only valid knowledge is ours, communities are unable to develop their own models, they must follow us). This can provoke in the promoter and in the communities a sense of being inferior and lack of confidence on their capabilities and practices. It can also provoke rejection by part of the community towards the promoter or the program.

The communication mechanisms proper of the communities must better be modified or adapted, making them more operational,, using popular games or dynamics . This will add to the re-creation of their own cultural aspects, costumes, clemnts. This, not by denying their own culture, but by enrichening it, and answering to present problemacy.

Equally, the health problem cannot be understood as an isolated aspect, proper of the condixions and reproduction mechnaisms of the indigenous population, the problem of surviving , of land, commerce, services, which are aspects closely related to health, in front of which the promoter has to act and respond to organizational demands arosen in the community.

Technical-Educational Aspects.

methods

To determine the importance of the training modules, and the role they must have, this training must be designed considering that the trainees are used to learn by experience more than by documentation. Anything having to do with reading and writing or anything new for them will be difficult to understand.

In response, the training methodology must agree with the characteristics

of the trainees. This implies a reconsideration of the training design. In the first place, training must be consdiered as a flexible process, easily adjustable to the local needs and environment, it must also be active, based on experience. It must also integrate participants and community base and second degree organizations in the design and development of the plan.

The methodology to be followed can not take place in places away from the promoters' environment, and they cannot be kept in a classroom, but, they must practice and visit their future working places and reference sites.

Therefore, the modules must be re-designed, since they will not only be consultation manual to be used by the promoters during the training process, but they will be used in the daily tasks. The way they are presently designed does not present a correct usefulness of the modules. materials

The guides or manuals are essential for the promoters, since they need to consult it when they face situations they cannot remember easily regarding the training received.

d The Teaching Process

The application of the guidelines specified in the Alma Ata conference supposes the incorporation of PHC activities in the national planning of countries within the Health components. PHC was included in Ecuador's Constitution since 1988. Nevertheless, the implementation of promoters' work within PHC strategy began in 1985 and expressed the promoter's Occupational Profile by assuming Alma Ata's guidelines and according to the characteristics of morbi-mortality of our population.

PHC as strategy also implies considering community situation within a determined set of needs. This in turn implies the design of appropriate techniques and methodology according to the degree of comprehension of the health problem in an overall view. The aim here is to find a balance among the local community needs and the standard actions at national level.

This information was obtained from qualified informants such as teachers, students, community leaders and officials of the Government at central levels. The tools used in the investigation were basically participative observation, interviews, investigation techniques and use of indicators. The elements collected were then related according to the objectives of the teaching plan according to the interrelationship among the descriptive variables.

FORMAL AND NON-FORMAL CHARACTERISTICS OF THE TRAINING METHODOLOGY

The training methodology used was mainly formal, the non-formal methodology was practically unknown and when present, are exisiting in different degree according to every trainer, according to his relationship and practice among peasant communities. Formal means of training are not officially considered, studied or systematized.

The didactic tools available are:

- Audio-visuals: Film projector 16 mm, and films dealing with sanitation
- Didactic material: Tools used to pretend birth processes, mainly labor, health micropost, posters indicating activities to be performed and programs to be implemented.
- Material for practice: tools to be used by the promoters daily: syringes, towels, soap and other consumable materials.
- Office supplies: necessary for taking notes.
- Training Modules: Guiding manuals helpful to comprehend the message given by the trainer, and reinforce learned contents. There are seven of them.
- Motivation techniques. Use ful to elicit students' participation along the training process.

Professional Skills of Trainers

There is a varied professional skills level presented by the trainers. At the beginning, the permanent team was comprised by nurses (2) supported by a physician. Afterwards the technical team support was reduced to the nurses accomplishing their rural periods, supported by a physician or health educator for the central plant.

The system initially incorporated periodic evaluation of the tasks proposed, however, this was not definietely incorporated. Additional training reinforcements are not offered to trainers either.*

We might therefore conclude that the level of skills presented are not ideal. They might present efficiency, even effectiveness, but their role as trainers were assesed by their students, finding deficiencies even in the lack of participation of the members of the community in the training processes regarding planning and other aspects of preparation. It must be noted that the level of training preparation of trainers must be adjusted to the sutdents' actual situation and considering the situation of the population to be served. It is therefore necessary to carry out actions to guarantee a corresponding technical level which would mean, the knowledge of anthropologic, sociologic, health communication and participatory categories.

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* It is important to note that the person presently in charge of training is a nurse who has received no didactic preparation along her university studies. Her experience is limited to short assitencial practices performed at urban hospitals, with eventual preventative experince developed in rural areas. This kind of personnel is trained by the community development department of the MOH, and is supported by a physician and /or nurse in the training process.

Training Places

Another element which determines students' motivation and capability to learn is the place where training is effectuated.. Training presently takes place in the "Centro de Capacitación of the MOH", located in Baños, at 160 km from the capital . Baños is placed in the eastern range on a small valley which connects the highlandean and the amazonean regions. The weather is mild-hot along the entire year.

Said training center is comprised by a small patio, a two-storage house used for administration, trainers' dorms, dining room and kitchen in the first floor. In the second floor there are the general dorms for sutdents, a small kitchen and a large classroom, with enough illumination and ventilation.. It is 12 m x 8, having the possibility of containing 30 desks, and presenting enough room for the teacher in the front. The blackboard is large, and the position of the desks and teacher's desk are seldom moved. This classroom is useful for formal classes, and there is not any other classroom.

Praactical observations are carried out in Baños' Hospital. However, the conditions presented favour only the fortunate students who get to be located near the place of the experience. T e initiative to renting places at the sites of work found difficulties regarding lack of isolation, boarding, recreation difficulties, etc. A suggestion would be to try use community places in order to carry out training in the palces where promoters will work. This was suggested by Leda Carmen Andrade and by the saragura's indigenous membe r, Mr. Abel Minga, who programmed nurse auxiliaries training.

Class Size according to the number of Trainers.

The usual number of promoters in a training group is 20-25. This group is directed by two trainers, eventually supported by a physician or official from the central level. The proportion might seem adequate, however, there is a significant lack of an interdisciplinary training team.

Study of Traditional medicine.

Although most of the people who were interviewed consider most important studying traditional medici in the courses, said area is not formally considered under training. The Community Development Division handed out a sheet to fill in with information regarding plants used as medicine and the kind of diseases they would cure. The promoters were not able to provide reliable information with this respect. The two main causes which have limited the knowledge of traditional medicine are :

1. Health policies are just now considering value of alternative technology.
2. Traditional medicine is still a tool used regarding cultural resistence of the different indigenous groups.

Time dedicated to every training module.

MODULE	NR. OF DAYS	HOURS	PERCENTAGE
I. Health education	5	40	12,5
II. Community	7	56	17,5
III. Environmental sanitation	5	40	12,5
IV. Mother-child	9	72	22,5
V. Simple morbidity	3	24	7,5
VI. First - aid	9	72	22,5
VII. Dental Care	2	16	5,0
TOTAL	40	320	100,0

Source: Record of courses given by Community Development Department , MOH.
Elaboration: PRICOR-FEE Team.

The time distribution shows an adequated balance between modules regarding the central areas to be studied. However, the pedagogic suggestions might consider to begin training by the curative modules, since they respond to the needs felt by the students; also because these aspects have to do with the preventive aspects of medicine, establishing a natural and consecuent bridge towards the preventive aspects.*

The following chart shows the amount of time dedicated to theory and the ti dedicated to practicing.:

* Werner, D. and Bill Bower, Learning to promote health. Page 81, The Hesperian Foundation, Palo Alto Ca. USA.

TIME DEDICATED TO THEORY VS. TIME DEDICATED TO PRACTICE

TYPE OF ACTIVITY	HOURS	%
Theory	122	39
Practice	127	41
Others	63	20
TOTAL	312	100

Source: Records, community development, MOH.

ELLABORATION: PRICOR-Fee Team.

The proportion for theory and practice are practically even. This might show to be negative or at least non-didactic, since the promoters are peasants and are not trained to assume written or oral messages, therefore their training must begin by sensitive practice, which means learning by doing it. On the other hand, theory-practice relationship supposes a process of close linkage of aspects of motivational kind (what is useful, what is nice, what is necessary to know*)

A more disclosed modality of observing practical activities is observed as follows:

* OP. CIT. IDEM

TIME DISTRIBUTION FOR PRACTICAL ACTIVITIES

Practice-oriented activities	Hours	%
In Lab	73	57
Demonstrations	30	24
Field activities	24	19
TOTAL	127	100

SOURCE: RECORDS COMMUNITY DEVELOPMENT MOH

ELABORATION: PRICOR-FEE TEAM.

The chart above shows the small proportion dedicated to observation and contacting tasks. This will not produce optimum benefit from training.

NUMBER OF OBJECTIVES ACCOMPLISHED OR SKILLS LEARNED AT THE END OF THE COURSE

Although all the objectives set are accomplished, we consider that effectiveness is being disregarded and unprecisely dealt with. This is due to the fact that evaluations usually consist of written exams, focussing theoretical aspects. The other part of evaluation consists of exchange of opinions among trainers and trainees. The trainees generally express acknowledgments and favourable opinions.

However, the step from theory to practice, from the abstract to the concrete aspects, from the learning of the techniques to the application of them are not known.

Field Research. Time dedicated to preventive Vs. Time dedicated to curative actions.

The field research, understood as the practice to be performed by the promoters during the training courses, as a resource useful to reinforce knowledge is constrained almost absolutely to the curative-assistential practice: they attend the hospital unit and observe the first-aid practices performed there, they also observe the eventual handling of tools as syringes, etc.

Additional practice in shots, temperature taking, pulse, etc, is also given, i.e., regarding curative aspects.

In the preventive aspects, trainers try to motivate their students to make use of didactic dinamic strategies, dialogues, proceedures, and institutional practices. Initially, the promoter was taught during four weeks to perform preventive activities, however, such practice was stopped due to high costs.

Cost per each promoter trained.

According to records and information from qualified informers, the total cost per course is 450.000 for a class of 25 promoters, which means S . 18.000 per promoter.

Number of promoters trained vs. number of promoters which should be trained:

The number of health promoters trained so far is 492. Out of them, 360 are presently working. This means that 360 communities of less than 500 hbs. are being served. The statistical data points out a total of 14.800 communities of less than 500 hbs. which are potential

working sites. Only 1.000 present all conditions necessary to imp lement a health service program.

Lenght of training

The time taken daily for training is 8 hours, during 40 days, allowing two days after every 5 days. This means 8 weeks, 56 days.

The general opinion is that training must be unlimited in time. They express the need for a reinforcement of knowledge, attitudes and practice. This is being accomplished by the new experience.

F. Aspects which Impact the Adoption of Preventive Behaviours

This section reports on a specific research carried out regarding training. It was carried out jointly by the Pricon-Fee Team and MAP International (Ecuador).

The purpose of the research was to find out the impact of PHC program on the adoption of preventive behaviours. It is essential to work with a primary health care program functioning efficiently and effectively. At the same time, it is demonstrated that the fact of counting with a system of primary health care services does not mean that the population of the town enjoy good health. Primary health care services : requires of mutual relationships between effective health interventions and the positive community response in the uniform adoption of behaviours leading to good health status. Providing services and infra-structure does not mean that health status will be improved, unless the available services and infrastructre are used.

OBJECTIVE:

The general objective of the research was to identify the aspects which favour or constraint the adoption of preventive behaviours. The research contributes to a better understanding of the relationship among the aspects pertaining to traditional communities and their participation in the program of PHC.

The benefit of the research consisted in arising knowledge on the toughts and opinions of the community members regarding the adoption of preventive behaviours, which will be useful for the design of a program of health education within the program of PHC.

METHODOLOGY

The methodology consisted in an inductive process of facilitating genuine and free expression of participants. The technique used was the nominal groups. In this technique, 5 to 10 people answered interviews giving their perspective and experience regarding the practice of a preventive behaviour. Every one of the answers were noted down and facilitated the data to determine the aspects which have to do with the adoption of preventive behaviours.

The research was carried out in 6 communities of Chimborazo, 4 of Cotopaxi, and 5 of Manabí. After projecting a film and having people together, the group was divided insmall groups of 5 to 10 people. They were asked 5 questions regarding one preventive behaviour commonly adopted in the community. The behaviours reported were: washing their hands, cleaning the house, and boiling the water. The five questions asked regarding one of the behaviours noted before were:

1. Why have you decided to .....
2. Why?
3. What have the leaders done to elicit people to .....
4. What specific traditions motivate you to .....
4. What constraints have you found which stop you from.....

DATA PROCESSING

The answers given by each participant were written in cards. Then the answers were summarized in cards. Similar answers were put together and the frequencies were considered. The next step was to make a qualitative analysis and a statistic analysis X^2. All the information was useful to make a series of curricular suggestions.

FINDINGS OF THE RESEARCH:

The definition of the aspects which will be mentioned later presents a perspective contrasting with the methodology commonly used in health education. Said methodology consist of attending a community meeting and giving a conference on health problems. The promoter only transfers the information he received during training. The promoters assign less importance to contacts such as home visits and personal exchange. Nevertheless, the community members identified personal exchanges as a favourable aspect - 71 against 32 - . The usual contact _conferences_ does not agree with the inherent aspect of influence of personal exchange.

INHERENT ASPECTS FOUND IN THE RESEARCH:

The listing of aspects identified presents a basis to design an educational strategy. The aspects identified enlarge the view of an educative strategy. Commonly, the basis for educative strategies are:

- To simply inform
- To create fears (contaminated water is poisonous)
- Benefits (to pay bonus for accepting family planning)
- Personal preferences
- Participation

The aspects identified constitue a empiric basis to select, or adapt a specific strategy in the PHC program. Certainly, the list of factors which follows requires enlargening the strategy implemented by the health promoters.

The list of aspects is divided in two: coastal and highlandean. The communities of both areas share most of the aspects. The biggest difference

consists in the lack of identification of some aspects in the highland.

CHART IF INHERENT ASPECTS WHICH IMPACT THE ADOPTION OF PREVENTIVE BEHAVIOURS

COASTAL AREA	HIGHLANDEAN COMMUNITIES
Preservation	Preservation
Enjoy healthy conditions	Enjoy healthy conditions
REgarding innate Leaders	REgarding innate Leaders
Value personnel relationships	Value personal relationships
	Organization
Fammily traditions	Family traditions
Personal bonification	Personal bonification
Lack of personal discipline	Lack of personal discipline
External aspects	External aspects
At lower levels:	
Phisical conditions	
Not valuing behaviours	

More statistic data may be found in annex Nr. .

The aspects identified in the research present concrete impressions of facts felt and known by the community members, in front of PHC interventions. They are inherent aspects, not things which can be taught. For example, community organ. might be taught, but the fact of working together is out of promters or authorities control. In the highlands there is the commonly known minga, but it is not present in the coastal areas.

A simple list of aspects is not valuable by itself. The importance of knowing which are the inherent aspects lays in applying the knowledge to the formulation of suggestions for an educational strategy. This is the purpose of the following part of this report.

OBSERVATIONS AND SUGGESTIONS:

The analytic task is to compare the educative actions of the promoters with the aspects inherent which impact on the behaviours taken by the community members. Once the aspects are known, the empiric basis for the evaluation of the things presently done is given. It is also useful to recognize the methodologies adopted to the reality of the traditional communities. The methodology must be, not only attractive and dynamic, but it must respond to the need of provoking changes of behaviours and be linked to the reality of the trainees.

The purpose of creating a system which effectively manages an educational program is to be able to handle the inherent aspects. The question is: ¿How can an educational program be adopted to these inherent aspects? the following is a sereies of implications and suggestions useful to answer the question:

OBSERVATIONS:

1. There is a great variety of inherent aspects which impact on the adoptionof behaviours of preventive types. The community members are not empty bowls, ready to receive information. They have values, desires, ways of responding and interests. The strategy commonly used does not respond to the richness of inherent aspects exisiting.

2. There is a strong desire of living well, preserving health, and enjoy a plenty healthful life. (83% at the coast and 84% at the highlands). This aspect presents a concience of self-reflection using a concience that already exists.

3. The community members pay little attention to behaviours indicated. According to the data processed the phrase: "you have to do ...." does not have much impact on their behaviours.

4. In the highland, an additional important aspect is the popularity and impression on the neighbors. This aspect might be used in this area.

5. There is special attention to innate leaders, in contrast to the attention given to foreign leaders (doctors, supervisors, teachers, etc.). At the coast, 65% identified community leaders as influencers in contrast to 6% who identified foreign leaders. At the highlands, 43% identified community leaders and 5% identified foreign leaders. There must be a realistic perspective of identifying foreign leaders.

6. The innate leaders included politic and religious leaders. Regarding the health aspects not only the promoters are heard, also others are important to this regard.

7. There is a larger opening to personal exchanges than to didactic expositions. Preference is given to home visits rather than to coferences or classes. The house is the community member own place, therefore the promoter has to pay respect to this fact and cannot control the situation, in a community house the leader heads the meeting which gives disadvantage to the community members.

8. Organization is important in the highlandean communities, this leads to the possibility of working together. 30% mentioned organization as an important aspect in the highland, while 2% did so at the coast.

9. There is not a community tradition which influences in great part the adoption of at least the behaviours such as boiling the ater, washing their hands and cleaning the house.

10. The adoption of most of the preventive behaviours indicated by the MOH are in an initial stage, seeking the establishment of a tradition. Therefore it can be expected that such behaviours will present fluctuating performances.

11. The most important constraint is the lack of personnel discipline (forgetting, laziness, hurriness. etc.)

12. The lack of external resources (lack of tubed water, brooms, money, materials, etc.) was mentioned.

It is interesting to note that in spite of the fact that material resources are important, most of the population surveyed at the coast and highlands recognized their own responsability in the practice of of preventive behaviours . There is deep concience of their responsabilities.

Curricular Suggestions

1. The rich variety of aspects inherent implies that an appropriate combination of media will be more effective than depending on six isolated aspects.

2. Teaching through conferences is not important regarding common realities. Resources and efforts are invested with little result. Communication must use other means.

3. The strategy of communication, even when using dynamic means mus consider the important link to community reality. The most important linkage consists of the desire of maintaining a concience of preservations (avoiding diseases) and wanting to live completely healthy. Conciensness is not imposed. Sel-reflection must be encouraged.

4. Although there is a sense of responsability for health care, the educational responsability lies on the promoter. This responsability must be shared, for instance, wiht housewives using their collective feeling of responsability.

5. There is a strong desire of plentifully enjoy life, however, there is inconsistence in the daily practice. An educative resource linked to this phenomenon is the analyisis of the positive and negative aspects implicit in adopting preventive behaviours.

6. There is knowledge and concience of health problems, but there is not a standard practice. Something useful would be to relate technical aspects to practical experiences lived.

by anticipating the need to go back to educational aspects once more and once more promoters are encouraged to consider alternatives in teaching techniques.

8. The inclusion of several innate leaders creates the oportunity of training them as educational facilitators and not center all training and preparation in the promoter.

9. Community members are much more aware of dinamics regarding personal exchange than conferences and classes. Promoters should be trained in personal relationships: how to listen, how to ask, how to be positive, etc.

10' Ther is lack of consideration and regard to traditional aspects. There is also lack of personal discipline. An educational program might fulfill these lagoons by using traditional aspects realted to health aspects. The variety of contexts and popular media help to establish a tradition and useful as remembering keys.

11. Community events and feasts might be used to integrate prevention and promotion aspects. Having a calendar on hand, the promoters can plan to include activi t ies in special community days.

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2. DEVELOPMENT OF ALTERNATIVES

a. Aspects that limit and decision variables

Among the elemnts that limit a better training process the following are the most important:

- The different expressions of echologic varieties present in our country. They ask for the adequation of the pedagogic and material resources to these specific environmental-pathological realities.

- The ethnic variety of our country expresses a multinational character which gives place to different rationalities used in the comprehension of the health phenomenon

- The popular means of participation, which are also limitations to the process since they can not be previously defined or designed in manuals or guides. To this regard it is important to note the relevance of negotiantions between teh state and the second and third level organizations.

Apart form the limitations noted before, we find exogenous aspects acting with a restrictive considerable degree. To this regard we must consider the lack of economic resources a nd the realtive low socio-economic development present in the rural communities.

The decision variables, on the other hand, present:

- A refinning of the selection process of the promoters
- A refinning of the linking process

- A ratification of the occupational profile of the promoter which supposes a definition of the curriculum relating it to the restrictions present.

- A characterization of the properties of the trainers.

- A definition of didactic techniques appropriate to the local and regional restrictions.

- An adequate provision of material resources
- A reforming of the interactive community means.
- A redefinition of training time
- Flexibility regarding the training place
- A definition of the time dedicated to every module.
- A definition of class size.

b. Profile of Solution

INPUT

1. Selection: It is a combination of requirements and interests, regarding community and the interest of the community, and of the MOH.

Basic requirements: Literacy: Reading-writting
Basic knoledge of arithmetics
Community resident
Elected in community meeting
(to avoid internal conflicts)

2. Curriculum: content

a. To fulfill the present curriculum:
Comprehension of the multi-ethnic and multi-cultural reality of the country.
The community is not isolated. It is part of a reality which comprises ethnic identities. The purpose is to reach a reflection on traditional medicine and its relationship to western medicine.

b. The curriculum chosen must be flexible enough as to be adapted to specific conditions o an area, given by the ecologic diversity of a country., combined with the specific ethnic-cultural aspects.

c. The final part of the curriculum must consist in initial plannification of the activites of the promoter, establishment of the system of the health promoters regarding supervision, to which he will be closely related, This, linked to the relationship to supplies, to health levels for references and community participation..

2. Trainers

The complexity of the reality to be dealt with imposses the need of involving a multidisciplinary team. Said team will be divided in three areas:

a. Health area: professionals in the health area with knowledge and experience in popular education.

b. Social area: Personnel with experience and knowledge of the dynamics of the indigenous population. The combination that might be given here is the presence of a specialist and a leader of a second degree organization.

c. Technical - educative area: Personnel trained in popular communication techniques. They must be in charge of giving collaboration so that all the training process can be developed under techniques permitting an effective learning.

Process;

PREMISES:

- The ethno-cultural and echologic diversity of the country give regional specifity to the health problem,

- The ways of accessing knowledge basicaly lay on a practical process.

- It is necessary to determine training in field, the way every promoter works, paying attention to the concrete reality of the community (planification - relationship to health levels for : supervision, supplies, references, community participation)

This requeires a modification of the present trainig system. It would have to be divided in two stages:

First Stage:

a. Objective: Provide the promoter with knowledge about the program, general aspects of every one of the components emphasizing those which refer to techniques and skills in the curative and preventive actions. PHC Strategy. Introduction of managerial aspects. (Levels of health status, relationships to guidelines, community participation).

b. Curative-preventive relationship: This stage would emphasize curative actions. Since this aspect depends on community demand, plannification can hardly be considered regarding goals, and time dedicated. The promoter must knee about morbidity, skills, techniques, and the limits in his action, regarding curative actions and administration of medicine. Departing from reflection of of the causes of sickness, preventive actions might be induced.

c. Relationship between theory and practice: This implies that teaching every one of the tematic components must involve practical learning techniques, which must go along with a reflexive process (theoretical). This implies forgetting about a conception of separating theory and practice which reduces comprehension of the theory reducing it to strict memoristic elements. In this stage, the unit of theory-practice (reflexive process supported by practical learning process) would be given in a classroom and in places nearby.

d. Logistics:

Training place: Provincial hospitals and county hosptitals

Training time: 4 - 5 weeks

3. Materials:

- Manual
- Audiovisuals
- Simple materials to teach students to make (low costs, easily elaborated) didactic material, which would serve, on their own training and for training at the community.
- Others (notebooks, pencils)

4. Costs (to be determined)

Availability of trainers

The health area members will be responsible for the development of the program, including students in the plannification and evaluation processes.

SECOND STAGE

OBJECTIVE: TO reinforce the knowledge acquired in the first stage paying attention to specific aspects of the region. Emphasizing plannification of the work in relationship to concrete conditions of every community to which the promoters belong.

This stage will deal with aspects relating community, traditional medicine and prevention. Additionally, as an aoprational stage, it would be planned to relate training to supervision & supplies to the health levels the promoter will have to contact.

Relationship found between the preventive and the curative aspects:

Emphasis in preventive aspects based on a reflection on the health status of the respective communities, relating it to planification of activities and community participation, Support of the formation of the health committee and planning activities. Application of technical knowledge regarding health education. Relationship among traditional and modern medicine: a. relationship promoters- traditional agents. b. reflection about practices regarding prevention.

Relationship theory-practice.

Following the same considerations used for the paragraph above, the difference would lay on the training place and demonstration places such as the hospital or health center, while in the second stage, the classroom activities would be combined with with field work.

Another important difference is that the first stage would provide general knowledge to the promoters, while the second one is mainly operational.

Logistics

1. Training places: Local, corresponding with the supervision system.
2. Training Time: 3-4 weeks.
3. Materials: Manual
   Audiovisual material
   Simple materials (low coast, available)
   Others (necessary such as notebooks, pencils, etc.)

- Supervision forms.
- Materials obtained in the area useful to elaborate didactic materials.

4. Costs: (to be determined)

E. Trainers.

Health Area: Member central level - MOH Community Development. He would be in charge of directing the process of the second stage.

Auxiliaries: Provincial level or county level nurses in charge of supervision after the course. Nurse auxiliaries who would be direct supervisors. They would be assigned their respective promoters at this time.*

Social Area:

The main responsability will lay on the 2nd degree organization, Specialists may continue participating, although they are not necessary at the same extent, and eventual traditional agents may participate as well.

Technical-educative area: Provincial health educator
He may be supported by a consultant at a beginning.

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* Staff's integration is very important to be consdered since the beginning of the program.

OUTPUT

REGARDING THE OBJECTIVES:

The following objectives are to be accomplished along the training process:

1. Optimize the program of the contents of the course, trying to respond to local needs. The changes suggested to the curriculum are directly related to this objective. The specific local aspects such as ethnics, culture, ecologies must be considered. A second training stage must be incorporated to the course, which will be mainly local and operational, trying to incorporate the contents of the course to the needs of the local communities.

2. Maximize the training process, in order to help promoters to satisfac- fulfill the final execution of the objectives of the program.

By introducing a different criteria regarding the conception of the theretical-practical aspects of the teaching-learning process (by establishing a consistent unit in the reflexive process supported in practical educational techniques, of playing or field experiences). This will result in a training maximum advantage. This training contents is reinforced in the second stage, through plannification and by the first activities of the program.

3. Reducing excessive costs, by the mere fact of holding training in a community.

B. Regarding the "SUBSYTEMS" of the program:

Although training is a basic element of the program, supervision and supplies are elements within the program which contribute to the continuity and advance in the accomplishment of the objectives proposed.

An effective and efficient development of the program requieres the union of these elements or subsystems. The design of this proposal permits the integration of them. Said incorporation permits not only the definition of the supervision and supplies system, but also training and participation of the personnel in charge of these activities, as a sole guaranteee for the response of the specific needs.

C. Regarding the promoter and the community participation:

When presenting modifications regarding theselection criteria disregarding those elemnts determining secondary aspects (level of scholarity and demographic aspects - age, sex, civil status), trying to integrate in a coheren way community interest and MOH requirements, we can foresee that the pamoter, from the beginning of the selection agrees with the needs and expectancies of the community.

By incorporating community members (leaders of the second degree organizations and health agents) the guidelines of communi ty participation are directly followed.

By considering the conformation of the health commitee in the second stage of training nd the support in the functioning of an activity plan, mmunity participation is considered at this point too. This is reinforced by the fact that this process goes along with a view point corresponding to a reality lived by the promoters.

All the considerations above lead us to suppose that:

- The promoter will be regarded as a community agent, and not as an agent of the MOH.
- Training received by the promoter will make him pay better attention to community requirements.
- The development of promoter's activities will be supported by the community and by the MOH.

PART THREE

CONCLUSIONS AND SUGGESTIONS

VII.. CONCLUSIONS AND SUGGESTIONS

A. SUPERVISION

About the variables around supervision, it can be said that the solution chosen has showed validity since:

- The definition of community's closest level has been more effective for the development of supervision.
- The definition of the nurse auxiliary as the most convenient supervisor has showed to be valid since she/he has adequated technical knowledge of PHC, as long as she/he knows about community's problemacy and because she develops a more horizontal relationship with the community since she/he is located at a social level which is closer to the promoter's.
- The monthly supervision contact foreseen in the response proved to be adequated and possible, useful to feed an information system and consolidate the institutional link.
- The test found that the time of contacting used for supervision, which was initially estimated in four hours, tends to be reduced down to 2 hours, which means an optimum and convenient time.
- The number of promoters assigned to a supervisor has showed to be adequated and possible to be handled, and it has been proved that this responsability does not make the nurse auxiliary be disregardful of her/his other activities.

- The cost-effectiveness has showed to be optimum.
- The restriction variables have reduced their negative impact becoming variables possibly controlled, by the design of supervision routes.
- The response has evidenced the variables to be taken into account in order to accomplish the supervision process and the proceedures to be followed to discover the values of every one of them, so it can be implemented by the regional operational levels.

Regarding the elements which comprise supervision, we find that:

- The supervision process, referring the research, is carried out through the application of direct and indirect supervision forms which have proved to be useful in contributing to a data system and in verifying its confidence.
- The systematic contact with the promoter contribute to set the elements he showed to correctly manage within his knowledge and to correct his mistakes. This contributes to make supervision a continuous education strategy, as is shall be.
- The set of actions produced by the supervision contact are useful to value promoters' work regarding goal accomplishment in front of available resources and time.
- The indicators which produce the direct and indirect supervision tools, apart from evidencing the tendencies of Health among the communities , also permit the adequation of the goals within a frame of real possibility, and of resources within necessary conditions, which determines the capability of the response in supervision.

- As a result of the innovative aspects of the response, the experimental group has improved quantitatively and qualitatively their situation.

Within the field of the effects produced by this solution, the following can be mentioned:

- The results of the research have begun to be used by the specific decisory levels of the MOH and by Private Institutions related to health promoters.

- Regarding the MOH, the results of the research have been used at several levels:

  Politic-Decisory Level: Mechanisms have been designed, and compromises have been made to contribute with criteria and experience to facilitate decision taking in order to impulse the program of promoters among PHC Strategy in order to enlarge health coverage.

  Technical - Regulative Level: The results of this research have been used to make a revision and modification of the normative manuals and the supervision tools. This activity has been coordinately carried out among several officers of the MOH and the research team.

  Operational Executing Level: The Provincial and County Levels have learned about the usefulness of the response, and have, accordingly, requested for the implementation of the supervision system. At this level the particular institutions have also asked for technical cooperation, and, popular organizations have also set requests to know about the system designed, and then, develop concrete

forms of participation in the supervision process.

- The research accomplished the objective of improving the supervision system at acceptable costs, obtaining a feasible and satisfactory response.

B. SUPPLIES

1. The promoters were limited to the consumption of medicine likely for them to administer. The possibility of purchasing them in commercial houses was avoided.

2. The funds were designed to purchase medicine, and the consumable material was provided by the supervisor. This is free.

3. The promoters requested to continue functioning with the alternative model.

4. A system gnerated in the group regarding the "help" of sisters who supply, at low costs, medicine and materials to the promoters could not be avoided. These "models" have been respected, however, a list of the medicine which the promoters are allowed to administer was provided.

5. Nevertheless, the alternative model has not fulfilled all the expectancies of the community since the funds for medicine are still insufficient. Some of the community members do not want to pay for the medicine since they expect them to be free.

6. There is mithyfication of modern medicine. There is lack of a proper orientation and guidelines to this regard.

7. Certain alternative traditional medical proceedures were not possibly stimulated since they are being disregarded among the population.

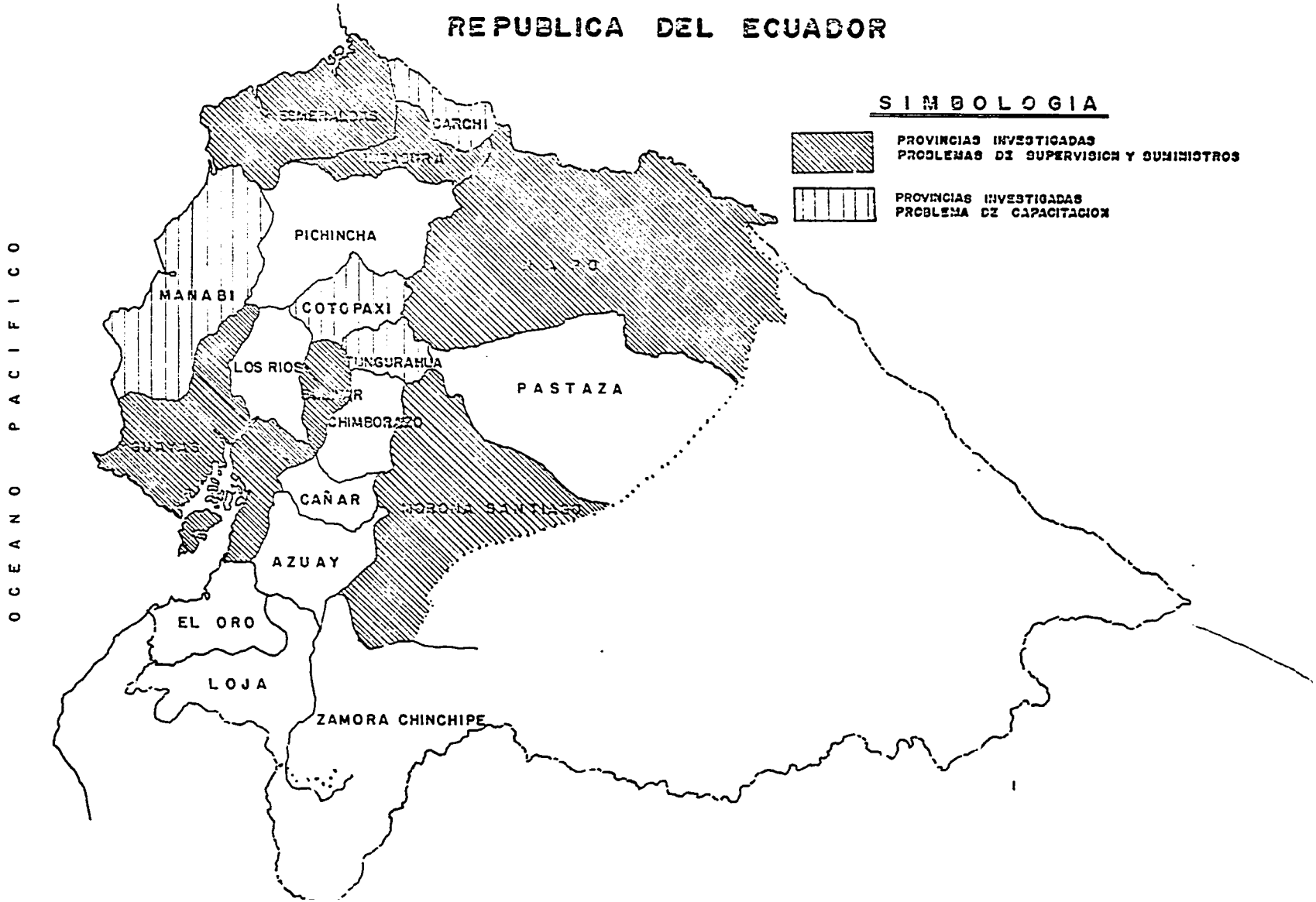
8. There is a significant difference between the alternative and the control group regarding improvement in supplies provision.

This implies a better use of the scarce economic resources, and not a more rapid delivery.

9. There is also significative difference between the two groups regarding medicine sufficiency: the control group expresses they have enough medicine and the experimental group says they don't. This would be explained because in the two provinces of control there are non-profit private organizations which help. Another reason would be that the experimental provinces have elevated the criteria of efficiency and effectiveness therefore their attitude corresponds to the accomplishment of the objectives, elicited by the supervisor.

10. And, last, it is important to highlight the lost of training contents suffered by the promoters after two years. This has affected every one of the components, supplies among them.

REPUBLICA DEL ECUADOR



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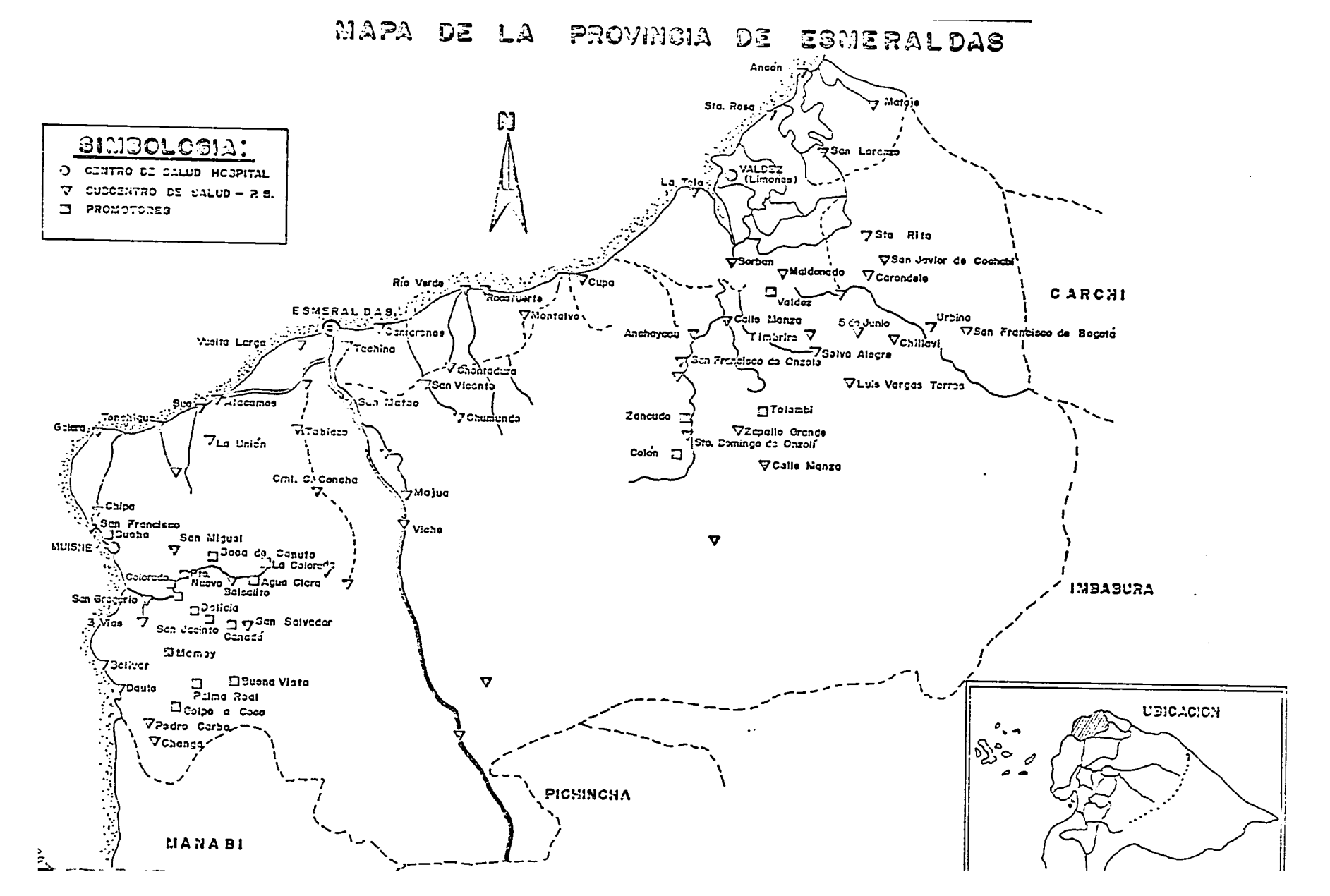

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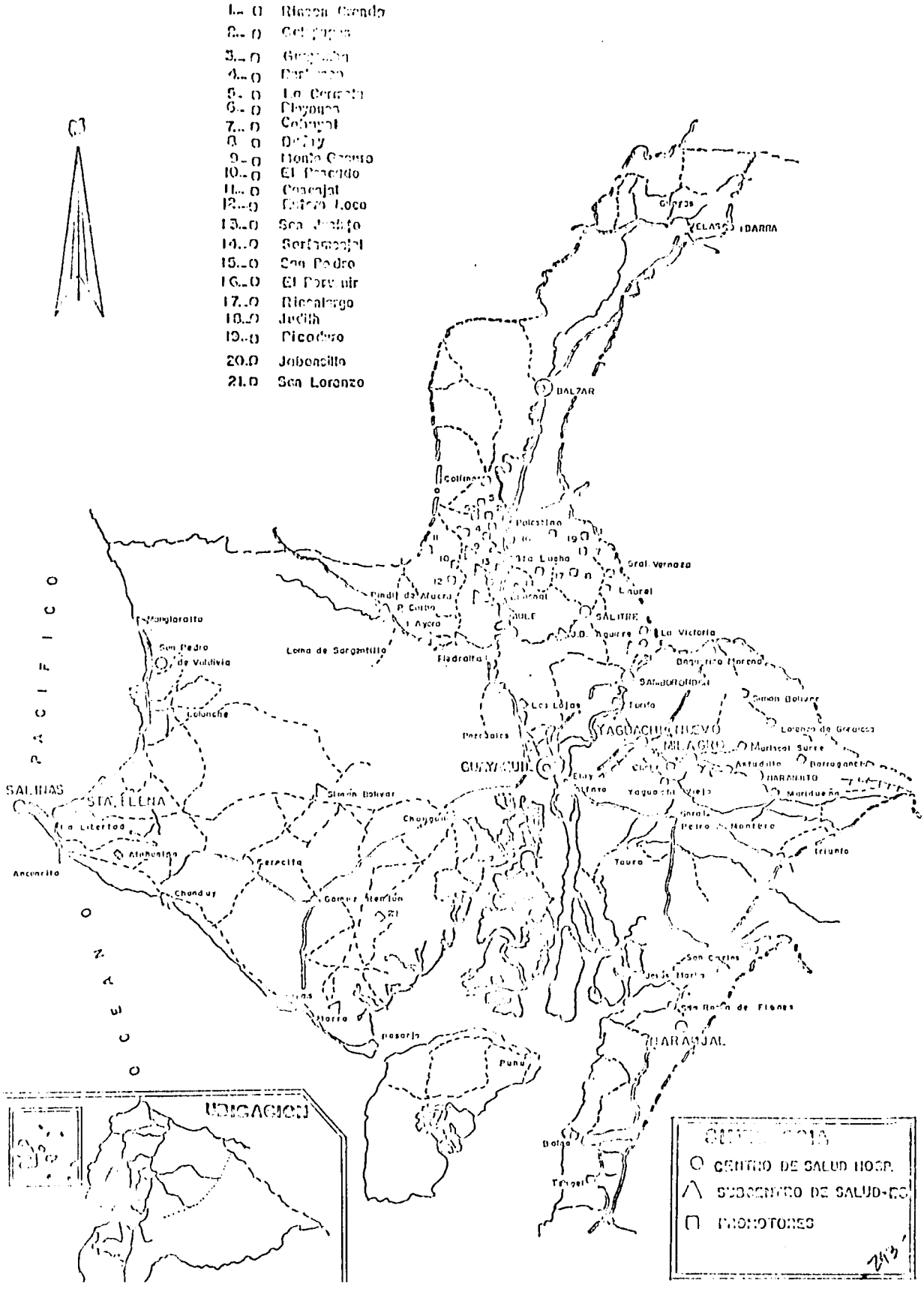

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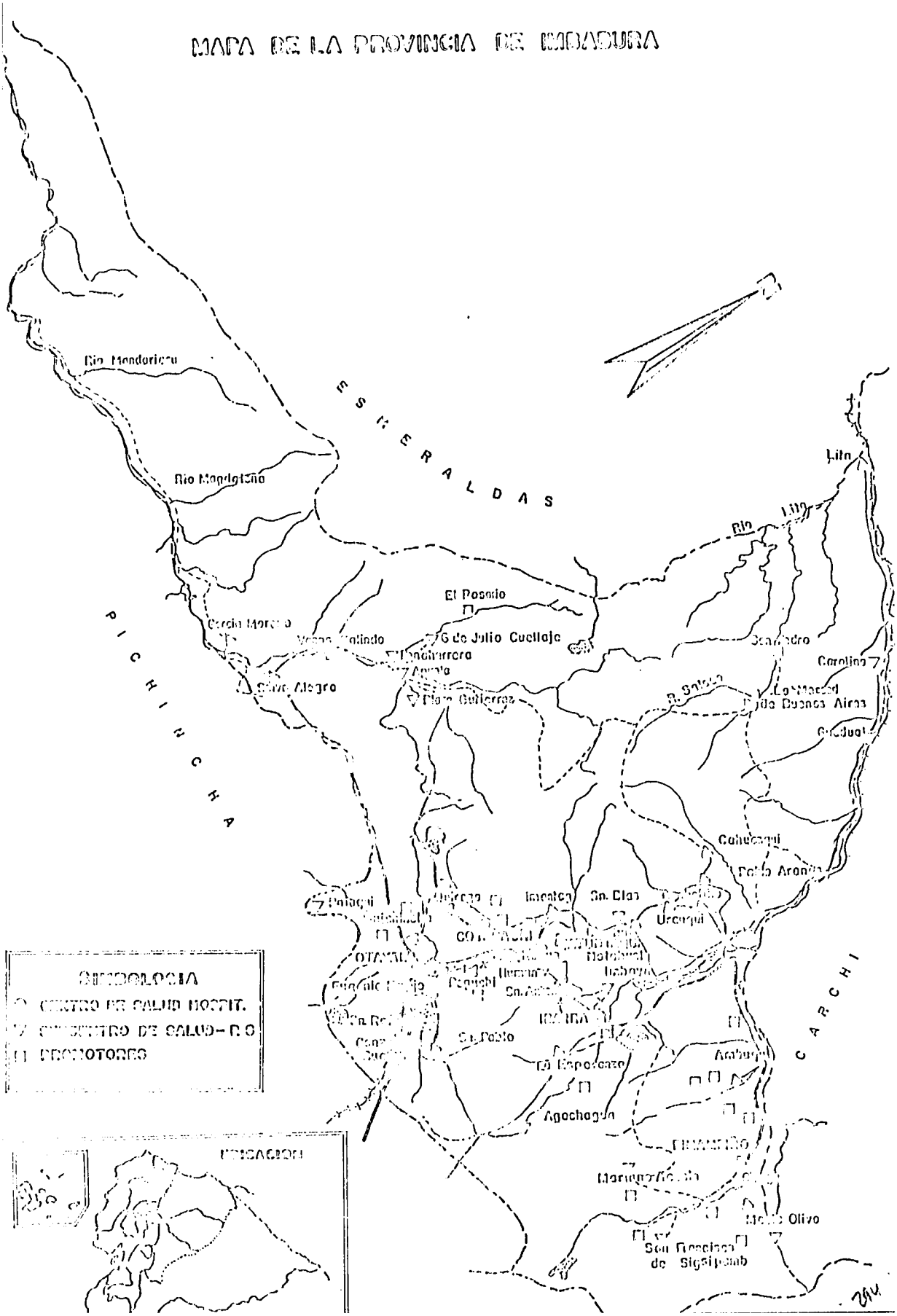

MAPA DE LA PROVINCIA DE ESMERALDAS

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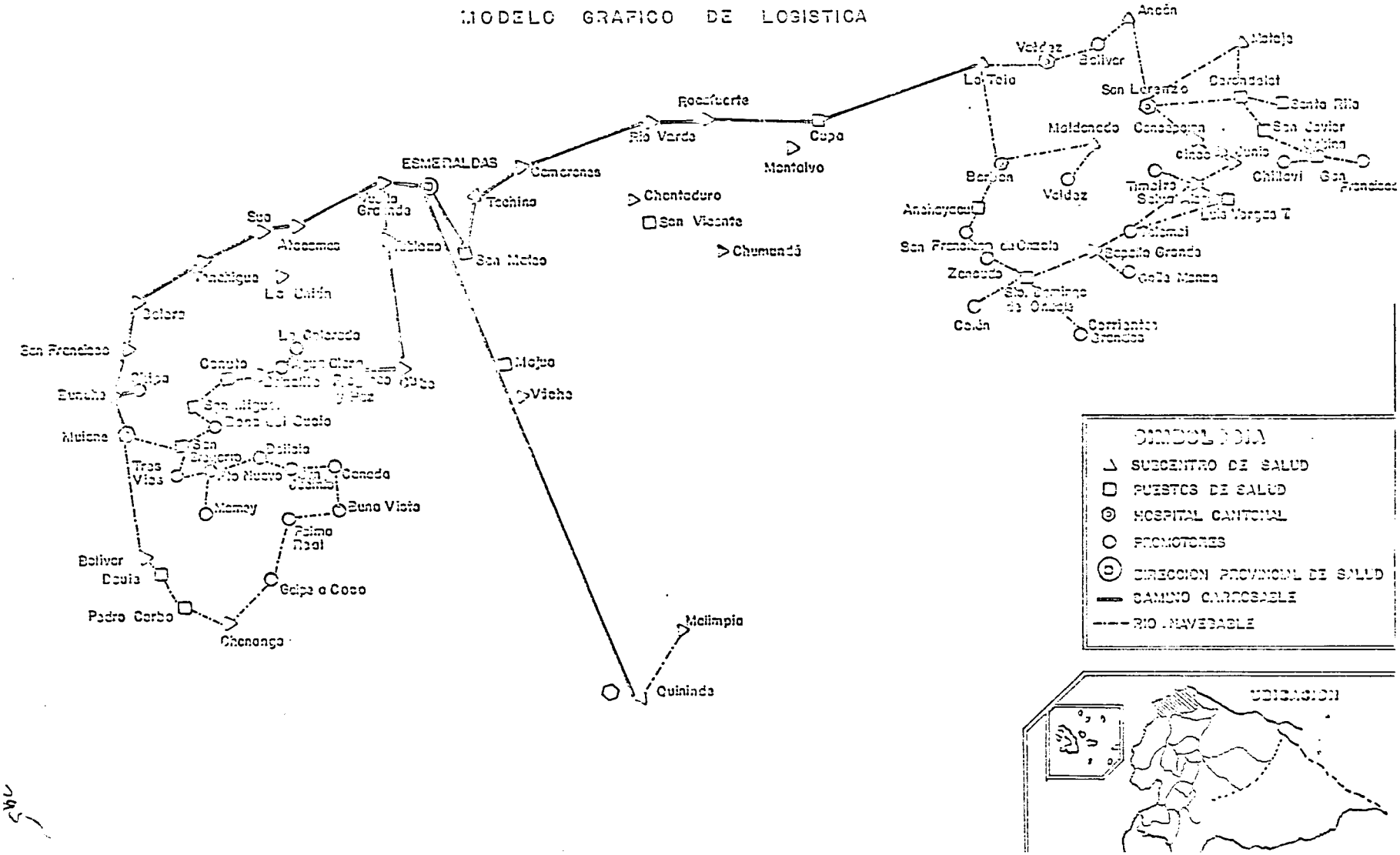

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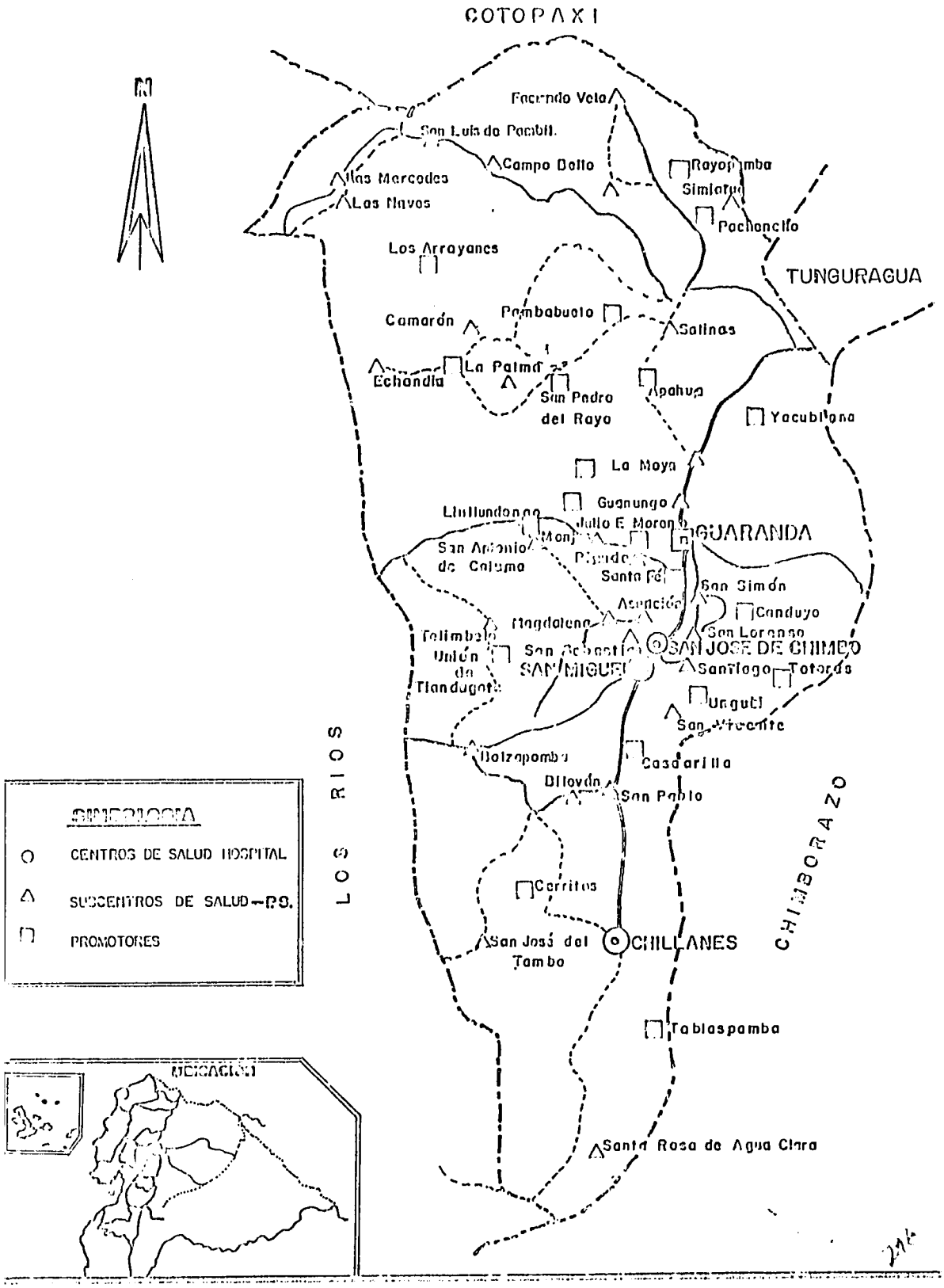

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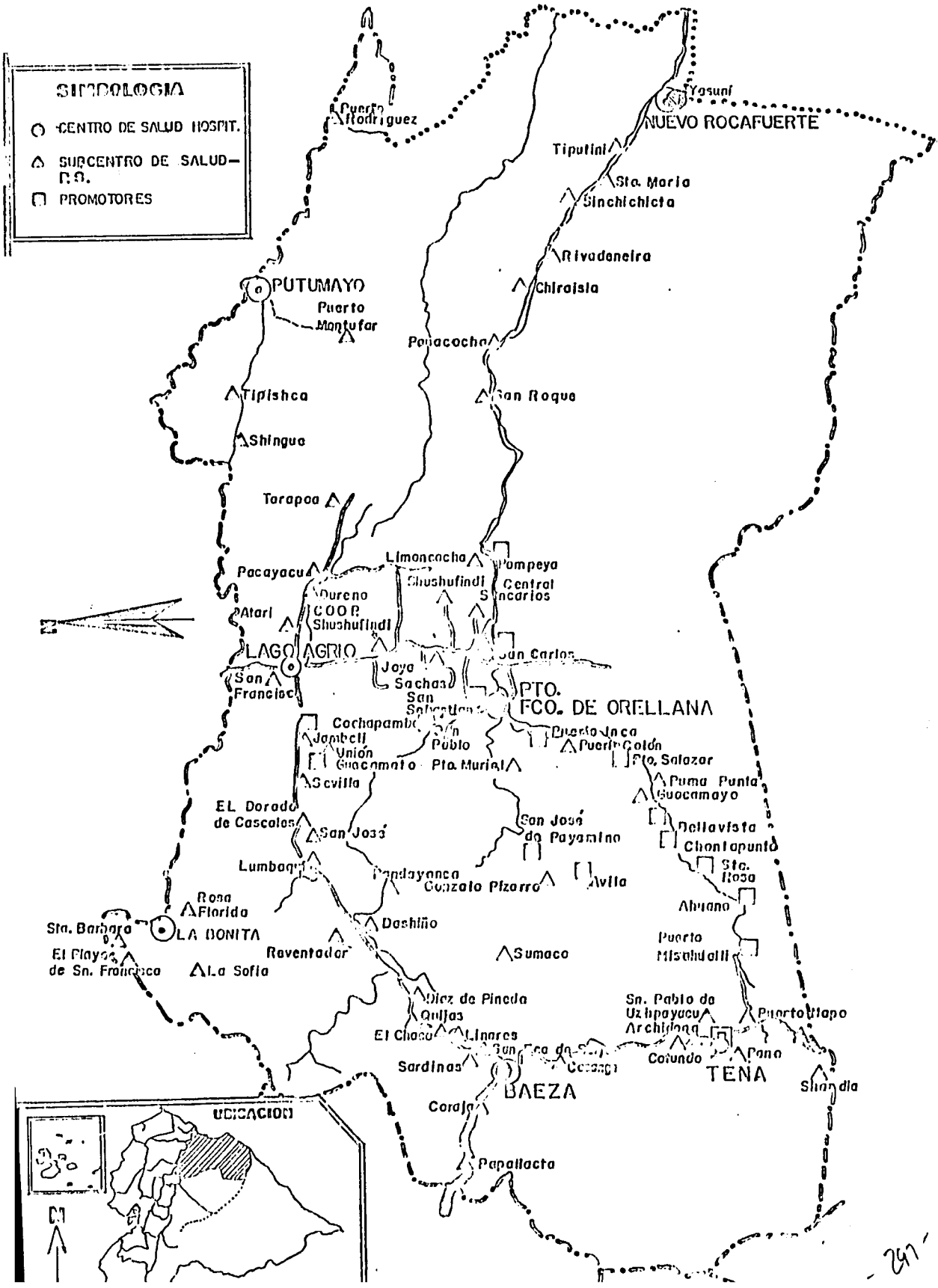

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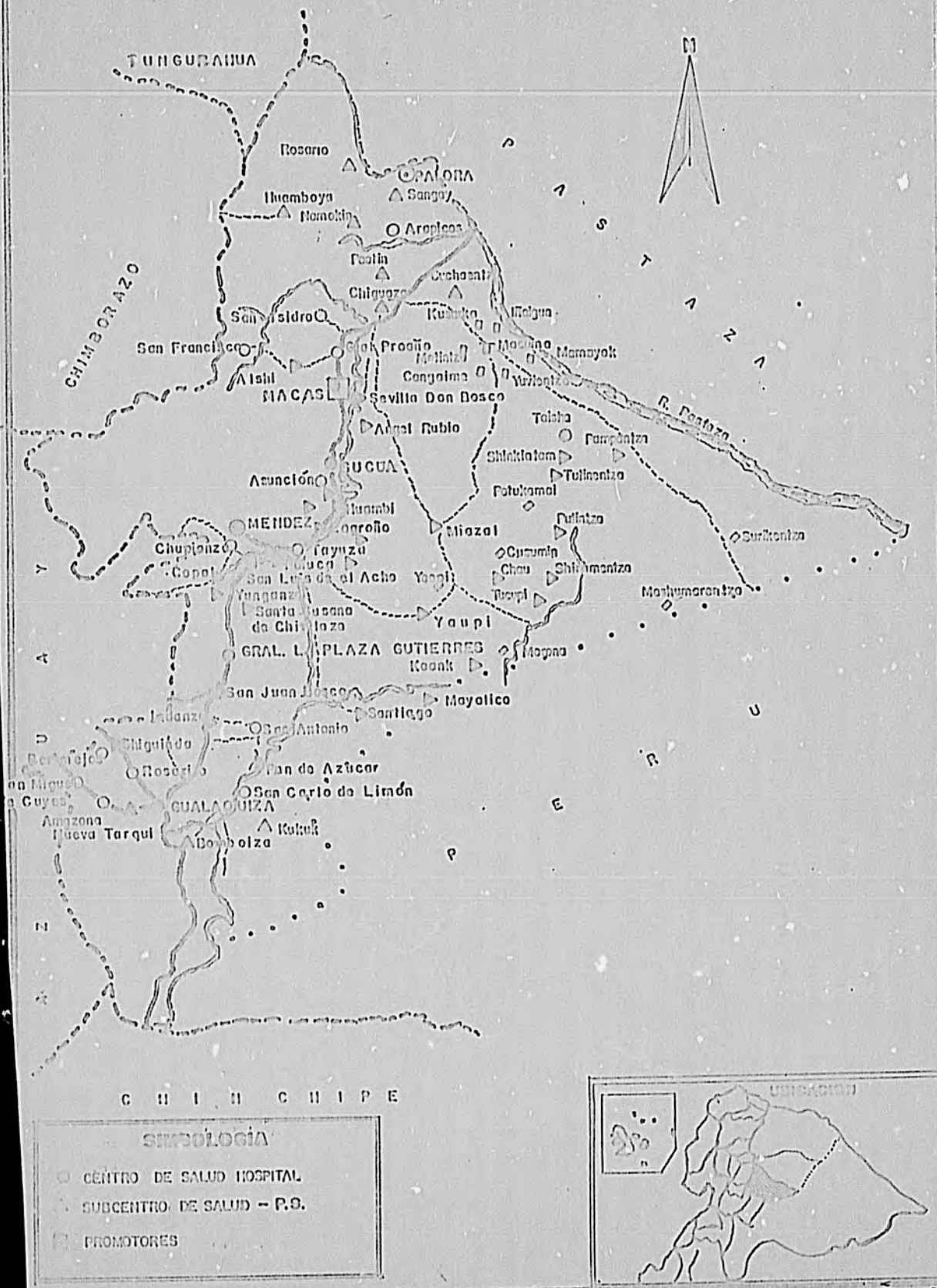

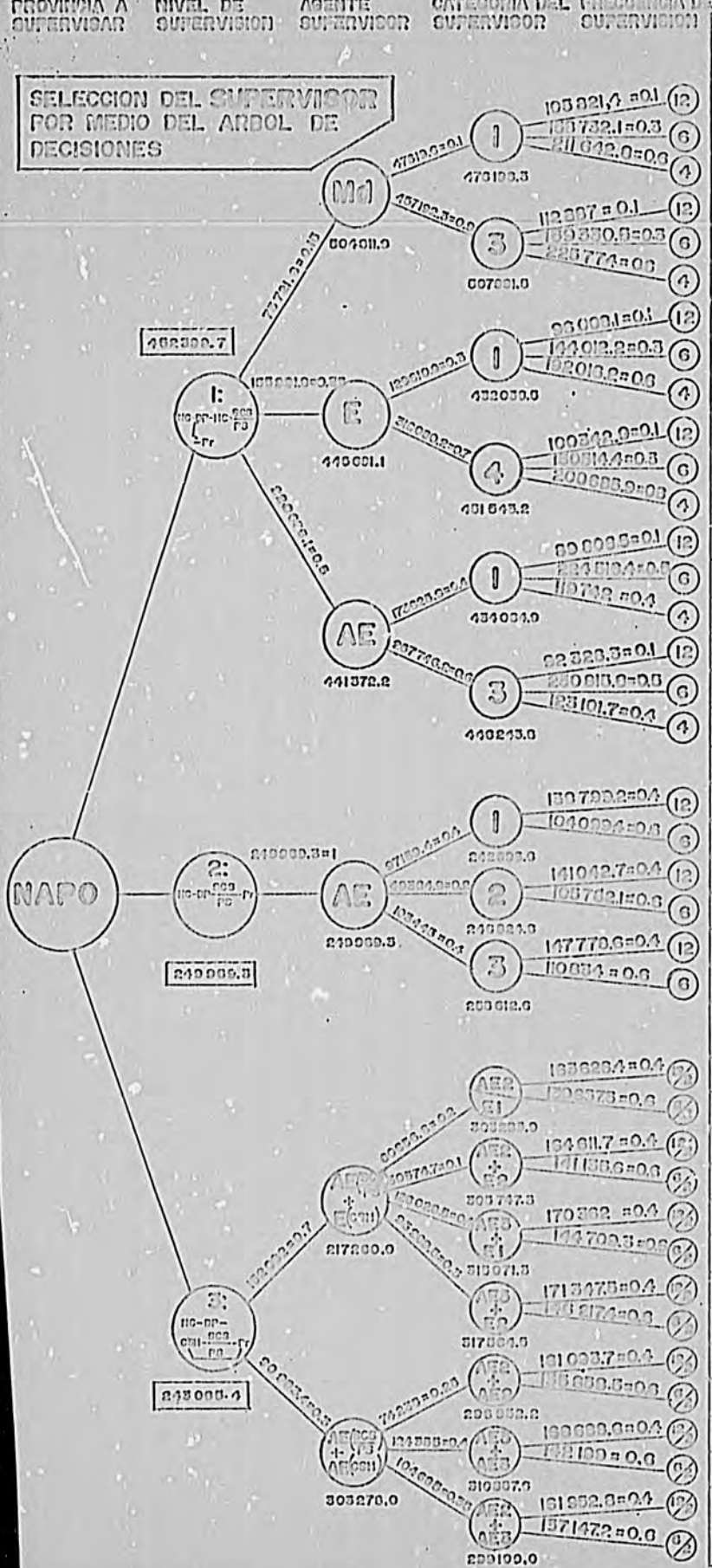
PROVINCIA A SUPERVISAR
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AGENTE SUPERVISOR
CATEGORIA DEL SUPERVISOR
FRECUENCIA DE GASTO POR SUPERVISION
SELECCION DEL SUPERVISOR POR MEDIO DEL ARBOL DE DECISIONES
NAPO
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AE
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2:
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MAPA DE LA PROVINCIA DE IMBABURA

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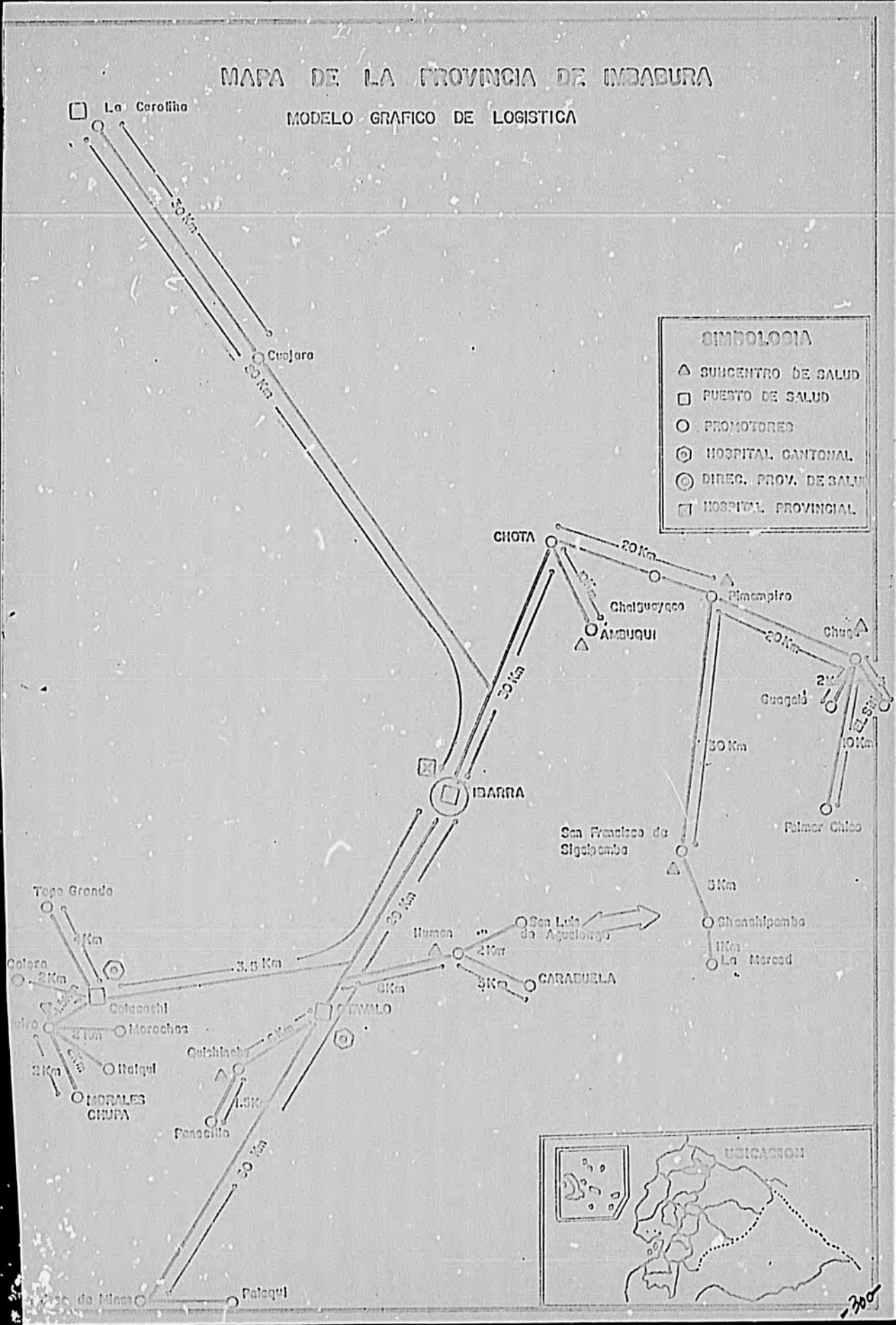

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