

UNITED STATES GOVERNMENT

Memorandum

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DATE: August 4, 1976

FROM : LA/DR, Maura Brackett

SUBJECT: Colombia Health Sector Loan Evaluation by PPC

Please review and send me your comments by COB
August 10.

L. Colborn

Preliminary Draft for Comment

July 1976

Ex Post Evaluation

COLOMBIA HEALTH SECTOR LOAN I (069)

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I. Summary

This project, the first AID sector loan in the health field, provided over \$18 million to the Colombian Government during the 1973-75 period to carry forward its comprehensive health development program. The overall goal of the project was to provide public health services to an increasingly large proportion of the Colombian population.

Specifically, the project supported the regionalization and delegation of functions within the Colombian health system. It provided support for the expansion of water and sewer services for rural communities, for improved administration of the health system, for the training of health workers, and for a variety of related health improvement activities.

¶ In evaluating the impact of the project, the following changes in the sector can be noted:

1. Health programs have expanded at the local level, with increased emphasis on preventive services.
2. The use of community health workers ^{has} increased.
3. Planning, administration, and coordination of health services have become better organized and more systematic.

II. Project Design

A. The Setting

Colombia, with 25 million people, is the fourth most populous country in Latin America. It has a population growth rate of 2.4% per year. This growth rate is declining. During the 1951-64 period, it was estimated at 3.2% and in 1969 at 2.9%. The average life expectancy is 61 years. Fifty percent of Colombians live in rural areas and there is a continuing migration to urban areas. Literacy is 70%.

The economy has been growing at 7% per year. The average annual income per capita is \$500, however, 90% of the population receive less than \$200 per year. There is a 15% unemployment rate and an additional 15% underemployment. Inflation is a major problem with an increase in prices of about 20% per year.

Colombia has placed emphasis on social as well as economic growth. Education, housing, and health have all received priority attention. Eleven per cent of the national budget is invested in health. This represents 3.6% of the gross national product. Approximately 80% of the health expenditures go for curative services. About two thirds of the services are received by one third of the population. The current

government in office since 1974, has stressed the need to extend services to the rural population.

The National Health System which has been under development during the past few years places emphasis on the coordination of the work of the various agencies in the health field. The system is organized into three levels:

1. The national level, with the Ministry of Health as the central control unit responsible for ~~setting~~ setting standards for the whole system.
2. The sectional level, which corresponds to the basic political subdivisions or Departments of the country, each with a coordinating Sectional Health Service and a university or other major hospital center.
3. The regional level within each Department. The region is the basic operating level of the system with a hierarchy of services reaching down from the regional hospital to the local hospitals, health centers, and health posts. Each of these sub-regional levels are responsible for both curative and preventive services extending to the local communities and individual homes.

The Ministry of Health as the superior administrative organization for the overall system is responsible for six sub-systems: planning, information, investment, personnel, supply, and research. Through these subsystems, the Ministry sets common standards and guides the work of the several agencies working in the field. The Colombian Institute of Social Security (ICSS) ^{which provides} ~~and its~~ health services to covered workers and their families resists the Ministry's efforts to create a unified health system. About 10% of the population is covered by the Social Security system.

In 1972, the National Planning Department of the Colombian Government prepared a basic planning document setting forth national health goals of seeking broader coverage of the population through the regionalized, integrated approach. During the same year, the U.S. A.I.D. Mission prepared its Health Sector Analysis and Strategy which recommended U.S. ~~xxxx~~ assistance to the Colombian health effort. In September 1972, a project design team began the definition of the project which was approved by AID in Washington in February 1973. The Health Sector Loan I (069), incorporating the U.S. assistance strategy, was subsequently negotiated with the Colombian Government and signed on February 28, 1973.

B. Project Purpose

The loan agreement spelled out the following purposes for the project:

1. Regionalization and integration of the health delivery system.
2. Human resources training.
3. Research
4. Construction
5. Intra- and intersectoral coordination.

The first purpose, regionalization and integration, was seen as a principal means to broaden the coverage of the health delivery system by expanding the system downward and increasing its productivity. Regionalization would unify the direction of both preventive and curative services. It would extend the use of paramedical personnel and increase the referral of patients up and down the system for treatment at the most appropriate facility. It would increase the guidance, assistance, and evaluation from higher to lower levels and would rationalize the location, use and staffing of health institutions within each region.

The second purpose, human resources training, would increase the quantity and quality of professional and auxiliary personnel available to the health system. Training would emphasize the need for and means of delegating more functions to paramedical personnel.

In the third purpose, emphasis was given to operational research to which would assist health planners develop and support programs for effectively and efficiently broadening the impact of the health system.

The fourth purpose, construction, supported the regionalized delivery system through the construction or rehabilitation of hospitals and health posts. This activity was to be carried out under the supervision of a strengthened National Hospital Fund.

The last purpose, coordination, was focused on intra and intersectoral coordination in programs related to nutrition, maternal, and child care, health education, urban development and rural sanitation.

In a subsequently prepared logical framework for the project, these purposes were restated as follows:

1. Creation of a regionalized, integrated health delivery system in Colombia, including:
 - a. Provision of infrastructure to support the system.
 - b. Development of intra and intersectoral mechanisms of coordination.
 - c. Efforts to lower costs of the system by cost effectiveness analysis.
2. Emphasis on certain identified priority health problems.
3. Functioning health sector information system.

III. Project Implementation

The loan was authorized for \$19.4 million in February 1973. This was allocated among the various implementing agencies as follows:

- Ministry of Health: \$4,280,000 for training, improvement^{of} planning and for carrying out selected studies related to the better administration of the sector.
- Malaria Eradication Service (SEM):
\$2,422,000 for campaigns to control malaria, yaws, and yellow fever, for immunization, vaccination and venereal disease control.
- National Health Institute (formerly INPES, now INAS): \$7,523,000 for ^rural water and sewer system in communities of less than 2,500 people and for laboratory research and special investigations.
- National Hospital Fund (FNH): \$3,400,000 for the construction and rehabilitation of hospitals, health centers, and health posts.
- Family Welfare Institute (ICBF): \$775,000 for family assistance and nutrition programs.

In addition, \$1,000,000 was allocated for the purchase of 198 vehicles for the use of the various health services in the system.

During the ~~28~~ 20 month period from March 1973 until October 1975, \$18,810,632 was disbursed under the loan. Of this amount a carry over of \$2,847,000 was provided to the follow-on Health Sector Loan II (075) for program purposes. The balance of the 069 loan was deobligated in March 1976. During the implementation of the loan, eight implementation letters were sent to the Colombian Government accepting various conditions and providing for routine implementation actions. Two major changes were made in the project through these implementation letters.

In July 1974, \$935,000 of funds allocated to the Ministry of Health were designated to an expanded maternal and child health program and to an experimental investigation in health delivery systems called PRIMOPS. In October of 1974, the disbursement ratios of the loan were changed to reduce the funds to be contributed to the project by the Ministry of Health, the Malaria Service ~~and~~ and the Health Institute by 15%. This latter change reflected a continuing problem in project implementation: lagging disbursements.

The project was implemented during a period of financial crisis for the Colombian Government. Although they were committed on a policy level to the expansion of expenditures in the health sector, they found themselves unable to meet their expected contributions to the project. They were further ~~restrained~~ restrained by the control of expenditures undertaken by the new Lopez Government in 1974 as part of its inflation control program.

Another problem in project implementation related to hospital construction. From the first reviews of the proposed project the AID office in Washington expressed ~~its~~ its desire to reduce the construction elements of the ~~project~~ project. This was particularly directed against the construction of facilities in the larger cities. The issue was eventually resolved by giving emphasis to the completion of ~~renovation~~ hospitals already under construction, to the renovation of existing facilities, and in limiting new construction to health posts serving small communities.

Project implementation was significantly facilitated by the continuity on the AID side of the same project manager throughout the design, implementation and follow up activities of the project. On the Colombian side, there was a discontinuity of some key personnel in both the National Planning Department, the Ministry of Health and in the other implementing agencies as a result of the change of government in 1974. In a project,

such as this, with a short implementation span, these changes were acutely felt. One key Colombian shifted from the National Planning Department to the Secretary General position in the Ministry of Health and provided particularly valuable continuity in the transition period.

The loan funded 420 foreign training programs for personnel of the Ministry of Health. These training programs in a wide range of health specialties and in administration has enabled the Ministry to strengthen the technical capabilities of its field installations. The trainees all enter into contracts with the Ministry to serve for a stipulated period after their return for training. The Ministry has used this authority as the basis for an expanded manpower development program, defining its skill needs for the whole system and relating the selection of trainees to those needs and ~~to~~ ~~the~~ assigning returned trainees to field installations in order to gain a better distribution of skills in relation to program needs.

The U.S.A.I.D. Mission in Colombia evaluated the project at two key stages: during implementation and after termination of the project. The interim evaluation is included in the 1974 Colombian Health Sector Analysis of May 1974. This evaluation concluded that:

1. Substantial increases have been made in investment in the health sector as a result of the 069 loan.

2. The Colombian Government has found the sector loan useful in helping to coordinate and support a comprehensive health sector program.

~~xxxx~~

3. Significant organizational and program improvements in the health sector have been supported by the loan: These include:

- a. Reorganization of the National Hospital Fund
- b. Comprehensive redesign of the health sector
- c. Increased delegation of health functions to ~~xxxx~~ auxiliary personnel
- d. Improved training programs
- e. Regionalization of services
- f. Design of a new information and planning system
- g. Development of a multi-sectoral nutrition policy

4. Any change in health status as a result of the loan cannot be evaluated.

5. Physical targets appear to have been met. The Colombian contribution to the project during 1973 was 86% of that which had been programmed. This interim evaluation recommends that a follow-on Health Sector Loan II be funded to consolidate the investment patterns and program improvement begun with the 069 loan.

The project termination report is included in a Mission memorandum dated June 2, 1976 on the subject: Loan Completion Review and Report 514 - L - 069, Health Sector Loan I. This report concluded that the loan had contributed to:

1. Further definition of the regionalized health system and increased attention to the delegation of functions through the expansion of the paramedical (promotora) system.
2. Significant attention to the training of auxiliaries in many health fields.
3. Important improvements in sector planning and administration in cooperation with the work of the Pan American Health Organization.
4. Expansion of the malaria, yellow fever and yaws control program.

IV. Accomplishments and Impact of the Project

The present evaluation team considers that the project has had a significant impact in five major areas: sector investment, regionalization and integration of services, use of health auxiliaries, rural sanitation and disease control, and sector management. Each of these will be discussed in separate sections below.

A. Sector Investment

The objectives of the loan ^{included} ~~had previously been described as~~

(a) regionalization and integration of the health delivery system
 (b) human resource training (c) research (d) construction (e) intra and inter sectoral coordination. For all these objectives, the Ministry of Health needed expanded health resources, and AID provided in the 069 loan about 17 million, plus \$1 million for foreign vehicle purchase. There is evidence to show that indeed the Ministry's budget supported by AID increased in current pesos as shown here:

TABLE I

Ministry of Health budget (as financed by Ministry of Finance)
 for given years in millions of pesos.

1971	780
1972	1100
1973	1300
1974	2500
1975	2900
1976	5070
1977	6600

This substantial increase in resources was partly the result of an earmarked liquor tax, and partly because of the requirement of counterpart funds for AID loan.

Since the specific apportionment of taxes to the health sector was ~~already~~ in effect in the loan implementation years, there is no question that additional resources were put in the Ministry of Health.

But was there an increase in benefit? That, of course, depends in whether indeed the increase caught up with inflation and also on whether the health services expanded. On the first point, whether the budget increased in constant prices, there is sufficient evidence that it did not increase substantially as evidenced in the following:

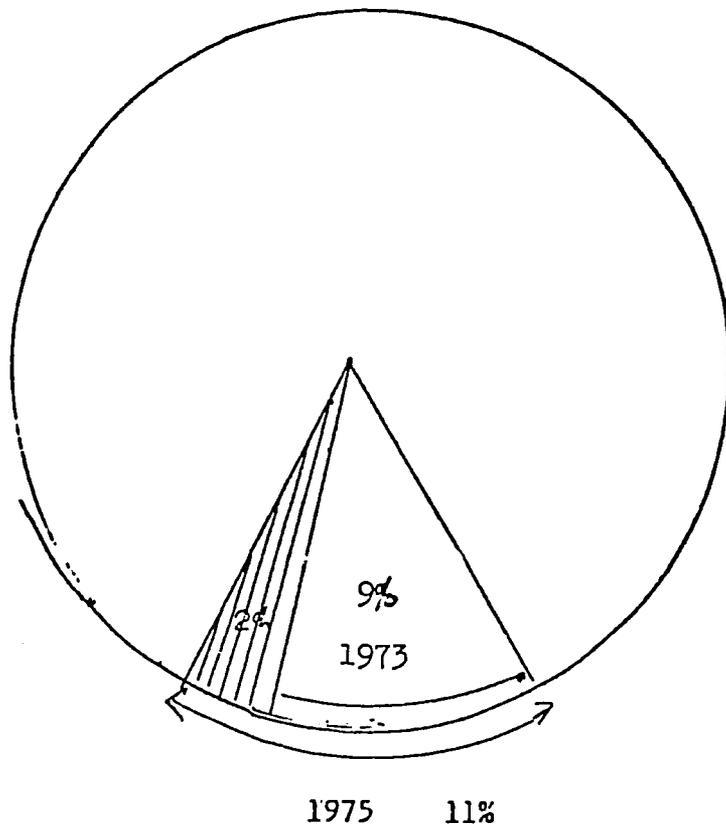
TABLE 2

Ministry of Health Budgets in 1971 pesos (constant pesos) as financed by Ministry of Finance 1971 - 1976

1971	780
1972	1000
1973	1200
1974	1300
1975	1350
1976	1200
1977	1800

Thus, inspite of additional resources, the purchasing ^{power} of the Ministry of Health in effect went down in 1976 due to inflation. It is agreed, however, that the decline was for less in the Ministry of Health's budgets in constant pesos than in other Ministries and therefore Health suffered less. It is demonstrated by the fact that the Ministry of Health budget as a share of national budget went up from 9% in 1973 to 11.5% in 1975. A graphical representation is as follows:

Ministry of Health
Budget as a Percent
of National Budget



The second point of impact of course on the organization of the Ministry and its component parts: SEM, FNH, INAS, INSFOPAL and ICBF. The AID Loan required a strengthened health planning organization. There are units for evaluation, program development, and contracts in the Ministry which did not exist prior to the loan. A new Division of Finance has also been established in the Ministry. A study of the financial resource of the health sector is underway in the Ministry and in the Health Institute. The Ministry's planning office had 8 professionals in 1972 and now has 80 professionals. Similar planning units are functioning in other agencies of the Ministry.

Thus, if the requirements of loan accomplished one thing, it is the infrastructure in planning. Whether the Ministry would have organized these units on their own initiative is hard to say, but the presumption is that the loan conditions did strengthen basic institutional changes. For example, the requirement of the loan that construction money be spent on local hospitals only did help the local poor. Without a planning structure, it would have been easier to build a big hospital in a big city than a local hospital as it did. The Mission requirements helped ~~develop~~ ^{strengthen} the "promotora" health worker concept and provided for other organizational changes.

A similarity to the Ministry of Health's budget can be seen in other health agencies such as the Health Institute (INAS). The budgets of INAS show that AID loan helped them develop the programs as evident in the following:

TABLE 3

INAS Budget in Millions of pesos

	Contributions by the Government Communities & Others	AID	Total
1971	100		100
1972	121		121
1973	76	76	152
1974	122	33	155
1975	109	67	176

INAS also developed a planning unit that prepares plans for rural sanitation. It also has a division which measures the prevalence and incidence of disease.

Overall government budgets present a still better picture for health. In 1973 total investment in the Colombian Government dropped 15% but ^{investment in} health increased 5% in 1974. The investment budget in the health section, as a percent of the total investment budget increased as follows: 1972-10.2%; 1973-12%; 1974-12.9%; 1975-16%.

In short, AID conditions of the loan brought a planning infrastructure and organization to the Ministry of Health and also helped the Ministry receive counterpart funds from Ministry of Finance for the expansion of activities. ~~Two specific conclusions can be made on this point for future reference:~~

- ~~1. Conditions to the loan and counterpart fund requirements do help the receiving nation. They bring in money, continuity, organization, supervision and evaluation which the receiving nation ^{might} not otherwise ^{provide} do by itself.~~
- ~~2. At the same time the conditions have to be implemented with both fairness and lack of rigidity. For example, INAS floated bonds to get counterpart funds but could not sell the series completely. Therefore, AID funds had to be deobligated because of lack of counterpart funds. But who was the loser in the end? The rural poor, who did not receive water systems as a result.~~

B. Regionalization and Integration of Services

The GOC has engaged in serious discussions concerning regionalized health services since 1966 but real changes in the system did not occur until 1974. The situation which existed ^{before} ~~in~~ the 1970's can be characterized as follows:

1. Several levels of health services (university, regional and local hospitals, health centers and health posts) but little coordination between them. Sources of funds varied from one level to the next and public and private facilities often overlapped in function. The regional hospitals exhibited little responsibility for lower level services. Emphasis was on curative services - limited attention to preventative medicine.
2. The distribution of health facilities varied considerably from one section of the country to another. Urbanized and highly commercialized rural areas obviously received the best services but many variations in distribution could be traced to the vagaries of local conditions. For example, if a local community desired a health center they might put their request to ^{the} sectional administration or directly to the National Hospital Fund. Depending on the political skills or connections of the community, the request might or might not be granted. Alternatively, a highly organized community might be able to use self-help methods to obtain a new health facility. The locational pattern which emerged from this type of decision making was highly irregular, both in terms of actual structures and the health personnel who staffed them.

When AID negotiated the \$69 loan in 1973, one of the major points to be emphasized was the need for a reorganization of the Ministry of Health to include the development of a regionalized system that would allow for

both the flow of information and services up and down the hierarchy (from local center to university hospital) and for the expansion of the lower end of the health spectrum so as to better serve the dispersed rural population. The medical establishment naturally continued to push for high-level training and the expansion of specialized facilities. Yet, many physicians, suspicious as they were as to the ability of para-professionals to deal with health problems, were won over by the fact that much of the dispersed rural population (34% by government calculations) were not being reached by the health system. The MOH, in explaining the problems of implementing a regionalized, expanded approach to health services, complained of pervasive "conservatism" but undoubtedly more significant were economic factors (limited resources to be distributed) and political factors (the more developed parts of the country had greater political influence and could demand more services).

The influence of AID in prodding the MOH to implement their stated policy on regionalized services has been substantial. The original loan paper made reference to this theme and it has been the focus of subsequent correspondance.^e 1 When the Government of Colombia did not provide matching funds for certain aspects of rural health, AID funds were not made available either. There is no doubt that both subtle (through correspondance^e and discussion) and overt (withholding funds) pressures encouraged the Ministry of Health to finally come to grips with this issue. AID funds brought forth government investment that would otherwise have been used for other purposes (probably curative and specialized services).

Individual Aspects of the Regionalized System -- I

One of the accomplishments of the MOH has been to create a system whereby the different levels in the health system hierarchy are integrated. Previously, private and public facilities often coexisted and duplicated each other, larger hospitals were overwhelmed by patients who could have been treated at local facilities, and financing was a bureaucratic ^omarass. A structure now exists whereby one regional hospital functions as a coordinating and planning center for its designated area of 200,000 persons or less. Assistance is provided from regional hospital to local hospital to health center to health station and, when possible, to paraprofessionals in the field while referrals proceed upward through the hierarchy. In some regions the system is functioning smoothly while in others there are administrative bottlenecks or gaps at some level. For example, the local hospitals have often proved to be inadequate and are presently receiving an infusion of supplies and personnel.

One of the real needs for implementing this approach is for trained nurses (both regular and auxiliary) and doctors. According to the director of training (~~Dr. Ferman Jimenez R.~~) specialists are required at the regional hospitals to prevent excessive pressure on the University centers. However, using the AID perspective of health care for the rural poor, the need is for lower level practitioners who will reach the health posts and centers and beyond. ~~Dr. Jimenez did admit that~~ the curriculum for nurses ^{has} ~~had~~ changed to emphasize community medicine, and the attempts ^{are} ~~were~~ being made to expand, upgrade, and standardize the training for auxil*i*ary nurses. Medical students are sent to work in the rural areas and all doctors (as of 1976, all nurses as well) must serve out of the major cities for one year.

The most concrete sign of GOC commitment to the new regionalization policies are the MACs -- beginning with Mac I which represents local health system with local hospital -- health post and/or health center and, most important, an

expanded system of health aides, or promotoras who actually make house visits and so bring the scattered rural families into the health system. The target is for 1850 MACs to be implemented by 1982 which will cover the needs of the entire country (including estimated new growth). It will include 3,700 auxiliary nurses and 11,000 promotoras (the ideal ratio is 1:6 or one auxiliary nurse to 5 or 6 health aides, but this ratio will only be reached in a few places. At the present time there are many more nurses than promotoras).

The health aides will not only provide increased coverage through home visits but they will also encourage reluctant families to make use of health centers. The aide will provide an intensive coverage of a designated area -- making a map of the location of all families and making at least 6 home-visits per family per year. Since the aide comes out of the community (selected by a community council or local leaders), it is expected that receptivity will be high. They have worked well in the past when their activities were mainly related to maternal/child care and they should be able to make use of their two-and-one-half months training to expand the number of health areas in which they are able to function.

It is the health aide system -- as part of a well organized regional health structure that has the most replicability in other LDC's. AID has certainly contributed to the initiation of this system, including money in the new loan to cover the cost of vehicles to serve the MACs. There are, of course problems with this approach: the promotoras are often young women who, as poorly paid paraprofessionals are likely to have a high turnover rate. Furthermore, the whole regional structure requires a high level of organization so as to coordinate personnel, equipment, drugs, etc. To test the efficacy of the MACs it would be necessary to observe health care at a center to see if necessary inputs and information are reaching the patient. It may emerge that some centers are short on vaccine for several months while others have no appropriate medication.

To set up the system without insuring the flow of information and materials from one level to the next would be very costly. The GOC seems to be aware of the bottleneck problem and will probably slow down the pace of implementation if there are operational difficulties. There is already a reluctance to build new structures until the buildings already in existence, but functioning poorly, are upgraded. Finally, the MACs must operate not just to cure patients but, much more importantly, to prevent all the diseases that are caused by viruses and parasites. The health aides must work closely with sanitary aides, malaria sprayers, etc. Only if the MACs can be used to ensure wider vaccination and to change sanitary and eating habits, rates of population growth and methods of child care will they justify the investment made. Funds have become short as costs have risen and it is important that the impact value of these services be maximized.

Before the 1960's no clear cut approach was developed to assess specific needs for services per unit of the population. Since that time goals have been forth to include the 200,000 persons per region mentioned earlier and three beds per 1000 persons (now alledged by some in the Ministry to be at a level of 1.86 beds per thousand).

Among the norms in the process of being established are those relating to service distribution. There is certainly a strong concept of point to area services, but few absolutes as to the ideal frequency of such points. One attempt which was made to deal with this problem produced a linear programming model for the location of health facilities. Unfortunately, the model was statistically complex and made assumptions that didn't hold up and the results were not utilized.

When the MAC system was proposed it became necessary to establish locational criteria. It was felt that the MACs should be initially concentrated in areas with the following characteristics:

LEVELS OF COMPLEXITY OF CARE (REGIONALIZATION)

CHART 4

LEVELS OF COMPLEXITY OF CARE		Max distance between a citizen & level serv.	Estimated Referral of Illness	SUPPLY		State of D. of the Plant
				HUMAN RESOURCES	SERVICES	
LOCAL LEVEL CENTERS AND HEALTH POSTS	PROMOTORA	2 HOURS	Care for at this level=40% Refer=50%	Local health auxiliary elected by the community following selection criteria One (1) for every 1,000 pop. (200 houses) maximum	Simplified medicine nutritional education & complementary feeding Vaccinations, water supply, human waste & trash disposal.	
	AUXILIARY NURSE	6 HOURS	Care for at this level=10% Refer=50%	Auxiliary or nurse helper adequately trained for this level (MAC-1) One(1) for every six Promotoras	Monitoring and control technical support, and other functions delegated by the MD Simplified medicine Environment Control	S H A S E
	MD	8 HOURS	Care for at this level=30% Refer=20%	Rural MD located in the Health Center or in the nearest hospital Will visit the posts within his MAC's	Medical Consultation Monitoring & Control Supply Ambulance Radio	I
LOCAL HOSPITALS	TYPE A & TYPE B	12 HOURS	Care for at this level=15% Refer=5%	Hospital auxiliaries and assistants, lab., sanitation promotor, administrative personnel.	Medical consultation Hospital Small surgery Laboratory Dentist Environmental San. Monitoring & Control	
REGIONAL LEVEL			Care for 4.5% Refer = .5%			P H A
UNIVERSITARY LEVEL			Care for at this level=.5%			S E II

- 21 -

MAC-

MAC

MAC

C. Use of Health Auxiliaries

The Colombian use of community health promotion agents or "promotoras" dates from 1967. These promotoras are typically young girls of about 18 years of age who have completed primary schools. They are selected from the community in which they will work and are trained according to standards set by the Ministry of Health in the areas of health promotion, protection and recovery.

The functions of the promotoras, which is heavily oriented toward maternal and child health, include:

1. Making visits to pre-natal and post-partum women and their children.
2. Giving talks about health themes to groups of people living in the community.
3. Performing simple treatments in the community as needed.
4. Assisting in the vaccination programs of the local health center.
5. Giving first aid and encouraging the use of the local health center.
6. Improving the community sanitary resources.

Ten centers for the training of promotoras have been organized throughout the country. They give two month training programs for groups of 25 persons. Candidates are selected by their community. They must be natural leaders between the age of 18 and 40 who have finished the fifth year of primary school. Candidates must pass a general knowledge test and are interviewed by a graduate nurse before

being selected for the program. Two thousand promotoras per year are now being trained.

The first four weeks of the training is health theory. The last four weeks are theory review and practical experience in ~~clinics~~ and hospitals. The training includes maternal and child care, home and community sanitation, techniques for group talks and home visits, family planning, vaccinations and first aid. At the end of the training each ~~pp~~ promotora receives a simple health kit.

The auxiliary nurse in the health center nearest to the promotora's community is responsible for her supervision. Supervisors visit the promotora's community at least 4 times each yr. and promotoras attend monthly meetings at the health center. At these meetings, common problems are discussed and some health subject is reviewed. The promotora's receive a small payment at these meetings as salary and to reimburse her for transportation costs related to ~~her~~ ~~work~~ work.

The promotora program appears to be well accepted by medical personnel and by the rural population it serves. The use of community health centers has increased as a result of their work. Turnover is high among the ~~pp~~ promotora's in certain areas. Some move up to begin training as auxiliary nurses. Others move from their community or become married and leave their roles as promotoras. Their training however continues of value to their families and immediate ~~families~~ neighbors.

The training of auxiliary nurses has also received increasing attention by the Ministry in recent years. The auxiliary nurses provide care at the health centers and are a key link between the promotoras at the neighborhood level and the professional health workers at the major health centers and hospitals. The auxiliary nurses are

selected from students who have completed two years of high school. They then receive one and one half years of health training in preventive and curative health work. There are 25,000 auxiliary nurses at the present time and a major effort is underway to upgrade their skills through continuing education.

D. Rural Sanitation

The areas which are considered most productive in extending the length of life are the reduction of infectious and communicable waterborne diseases. There was a strong Colombia and AID orientation in these directions.

In order to understand the rural sanitation and diseases control program, we have to understand the arrangements under which the system operates. The Environmental Sanitation unit administers the norms and regulations for basic sanitation, water and land pollution and diseases related to animal feces or slaughter houses. It provides specifications for sewage and water programs. It operates air pollution programs in 17 major cities with 50 stations. It also is responsible for the national garbage program as well as maintaining cleanliness in slaughter houses.

The Municipal Development Institute (INSFOPAL) builds and helps maintain the water systems for communities over 2500 population while the Health Institute (INAS) builds and maintains them for the communities with less than 2500 persons. Neither Environmental Sanitation nor INSFOPAL received any money from 069 loan (INSFOPAL received a separate AID loan which is not part of this report) while INAS received about \$7 million from the 069 loan.

The INAS program has substantial achievements. Its budget has increased sharply in 1977. It has 500 employees in the rural sanitation Division and plans to build over 680 facilities this year.

INAS operates its program with substantial community support. A community board manages the water system in each community, forty-five percent of the cost of construction is given to the community as a grant, another 45% is loaned to the community repayable at a low interest rate, and 10%

of the cost is provided by the community in kind. At the end of 1975, INAS estimated there were four million persons in communities with less than 2500 population. INAS estimates 1.8 million people are already served while 2.2 million people are still in need of services. Thus, the loan 069 has helped INAS extend coverage to almost half of the target population. The INAS performance in water services is presented in Table 4:

TABLE 4
Water Service Program of INAS

	Number of water systems constructed	Number of additional persons served
1971	556	36,000
1972	424	34,000
1973	317	20,000
1974	250	20,000
1975	141	N. A.

When an analysis is performed on a department by department basis one gets the impression that certain departments receive a larger proportion of the funds than others. For example, Bolivar has 30 systems while Cundinamarca has 224 and Tolima 358. Thus, out of 3293 aqueducts existing almost two fifths are in the Department of Valle, Tolima, Santander, Narino, Boyaca and Cundiamarca. This inequity is demonstrated in another way: Quindio a small department has 81% coverage for its population, Putumayo 85%, while Bolivar has only 11%. ~~The reasons for this inequity are political interference, bureaucratic maneuvering and criteria~~

~~for selection which are: feasibility, felt need, capacity of the group, interest of the community and prior program performance. The Mission and the Institute should consider certain measures which would reduce this inequity.~~

The sewer service program has expanded too. The history of their accomplishments is related in Table 5.

TABLE 5
Sewer Service Program
of INAS

	Number of sewer systems terminated	Number of persons served
1971	57	18,000
1972	83	50,000
1973	72	35,000
1974	122	61,000
1975	32	N. A.

One of the problems INAS has related to us is that because of lack of counterpart funds and bureaucratic delays, substantial amounts of money are remaining from one fiscal budget and are transferred to the next fiscal year. AID in turn has deobligated the fund as required by loan agreement. This apparently accounts for fewer sewage systems being built than were planned.

The Malaria Service (SEM) is the agency responsible for control and eradication of malaria. Due to the counterpart funds problem, SEM received for the malaria program small amounts in 1973 and 1974 and larger amounts

in 1975 from the AID loan. With the receipt of funds their performance substantially increased as presented in Table 6.

TABLE 6
Malaria Program of SEM

	Number of institutions covered	Number of houses sprayed
1972	5,627	130,177
1973	4,191	107,574
1974	4,043	100,680
1975	N.A.	375,000

In the area of disease control, it was expected that measles, whooping cough and tetanus mortality would reduce to 1.0, 1.0, and 0.5 respectively per 100,000 inhabitants. Similarly the morbidity rates for diphtheria, and poliomyelites were to be reduced to 1.0 and 0.1 respectively per 100,000 inhabitants. In the absence of any data it is not known whether this has been accomplished. However, a Mission document states that "due to cost increases and budget reduction, the programmed activities in vaccination and immunization achieved approximately one-third of the planned level of coverage," so it can be assumed that the planned targets were not achieved.

E. Sector Management

Planning and administration in the health sector were definitely favorably influenced as a consequence of Loan 069. AID support to five entities conducting health activities were combined under this loan, and the activities thus supported were in turn coordinated. This is the "regionalization and integration" referred to in the loan paper. The Mission administration of the loan, its quarterly reporting requirement and the detailed response which the Mission prepared for each quarterly report reveal the detail to which the Government of Colombia] of necessity adhered to the AID intent for improving the cost-effectiveness in this sector.

Evaluation was comprehensive and detailed, and was undertaken with relative ease on the part of USAID mainly because the advisors responsible for the evaluation were thoroughly familiar with the program on a continuous, day to day, basis. The need for greater participation in evaluation by the Colombian counterparts was recognized in negotiating and setting the conditions of the subsequent health sector loan, 075.

The achievement in the area of information was not as noteworthy. The experience under this requirement suggests several factors which might^t have adversely affected the successful implementation of the loan program.

Annex I to the Loan agreement contained a commitment that by April 1973 the Colombian Government prepare and provide a "basic design and implementation plan for a quantitative analysis" of the health sector. Failure to do so resulted in the obligation of \$216,000 in June 1973

for technical assistance to enable the Colombians to meet the requirement, although at a later date. A second Project Agreement, for \$250,000, signed the following year, provided additional resources so that the analysis could be extended to incorporate cost-benefit studies of alternative methods of attacking Colombia's health problems.

The larger share of these amounts, still remain available for expenditure or perhaps deobligation. The AID Mission has not reached a judgment as to whether the failure of the GOC to lend its full support to meeting this condition was owing to lack of technical ability on the Colombian side, insufficient or inadequate U.S. expertise, or to lack of interest on the part of the GOC. The latter possibility could be related to lack of technical understanding of the requirement or to a determination that the kind of analysis envisioned was of relatively low priority.

V. Lessons of Experience

A. Experience with Sector Lending Approach

Based on the experience with the Health Sector Loan 069 in Colombia, the following appear to be the key factors in determining the desirability of a sector loan or the likelihood of its being effective:

1. The degree of U.S. involvement in the recipient country's total Development.

In the case of Colombia, the U.S. had already indicated a high level of commitment to the country's economic growth, as evidenced by the large amounts of program lending in earlier years which was tied to the adoption and implementation of U.S. endorsed fiscal and development^{al} policies.

A further indication of U.S. involvement was the continuation of Loan 069 in a second loan, 075, which in turn was followed by a nutrition loan and a proposal for a rural health loan. The latter proposal foundered on the decision to phase out the AID program.

2. Prior experience with sector lending. In the case of Colombia, prior sector lending does not appear to have had the programmatic significance that Loans 069 and 075 had. The agriculture and education sector loans were considered primarily to be a means of resource transfer-- to be smaller, and more focussed, program loans. While these seemed to have set a precedent, it is uncertain that the Government of Colombia realized the extent to which Loan 069 might result in pressure on Colombian budgetary and reporting actions.

3. Quantity of AID resources available for implementation and evaluation of GOC performance under the loan. It is evident that monitoring this loan, reviewing GOC reports, and conducting the very well documented annual

evaluation required a heavy input of AID resources (personnel), including AID/W as well as contract and local Mission staff. Under loan 075, the GOC role in evaluation has been considerably expanded.

4. Quality of AID resources available. It is clear that for the degree of success which has been reported for this loan, Mission staff was required to exercise a particularly competent judgement of which requirements should be adhered to rigidly and which relaxed. This judgement had two aspects: (1) technical--not requiring more of the Colombians than they could be expected to understand or ~~perform~~ perform; and (2) political -- not requiring more than the Colombians saw as relevant to their own objectives in the sector. This may help to explain the difficulties in carrying out the mathematical health sector analysis called for under the loan, for which AID had obligated \$800,000 in technical assistance funds.
5. Degree of basic agreement between the two governments. Agreement as to the importance of the health sector was critical not only in determining the size of the loan, but the distribution of funds to various health entities within the loan and the importance of meeting commitments. For example, the lower level of GOC funding as a consequence of the Counter-inflationary policy permitted an adjustment by USAID of the ratio of U.S. to Colombian inputs to the various budgets. This can be interpreted as acceptance on our part of the relative importance of health expenditure versus countering inflation.

Agreement is equally important on allocating resources geographically within the country. On this point, several factors will bear heavily on the ability of the U.S. to intervene on a technical or economic grounds. Foremost among these is the need for information as to

health conditions in several parts of the country, which may not be forthcoming until after the loan is disbursed. Secondly, other host country aims may interfere with the decisions to be made on the basis of health needs. For example, the Integrated Rural Development program in Colombia is virtually dictating where rural water supply program under INPES will be expanded. Thirdly, it is foreseeable that the allocation of services among and within geographic regions will be an increasingly political process as the several health, sanitation, and nutrition programs generate more popular awareness and as more information is developed as to their impact on the health of the population.

Despite the apparent degree of mutual agreement and understanding between the two governments, it is worth noting that the goal and purposes set forth in the logical framework for this loan (which itself was developed after the loan was being implemented) were not mutually agreed on, but were AID paraphrases of stated Colombian objectives.

B. Regionalization and Integration of Services

The Colombian experience indicates the importance of establishing a hierarchy of services from the rural health post to the large city hospital. These services then must be staffed with adequate personnel to carry out the preventive and curative programs appropriate to each level. The delegation of functions to lower levels in the system depend upon there being capable people at lower levels. Difficult cases and special problems will always be referred up in the system. But the key note of the Colombian model is that problems should be handled at the lowest possible level in the system.

The second aspect of the system is the reciprocal and interwoven nature of preventive and curative services. The same delivery system should provide both types of service. The young mother, for example, should be reached with both adequate health care for child plus nutritional and family planning/ assistance from the same local service. Information about sound health practices, help on sanitation systems, and community health needs are functions of the local system just as much as the curative aspects of treating sick people.

G. Use of Auxiliary Personnel

The Colombian experience suggests the value of using young women from local communities as promoters of good health in their own communities after a short training program. These promoters can successfully give health and sanitation information, can give simple first aid treatment and can encourage sick people to get ~~pragp~~ proper treatment at an early stage of their illness when treatment may be more effective.

This use of paramedical promoters can provide at a relatively low cost the outreach for the whole health system which will enable it to link successfully to poor households in remote communities. Although turnover in such a program is inevitable, the training is not lost as the promotor becomes a mother herself or a community influence in some other position. And the selection and training of replacement promoters is not a high cost activity.

The parrallel training of auxiliary nurses and health care personnel is important if adequate service is to be provided at community health centers. In Colombia, the training of high school level students to meet this low level technical staff requirements appears to be a viable approach.

VI. Evaluation Team

The team was made up of the following members:

1. David Jickling, Development Studies Program, AID, team leader
2. Donn Block, PPC Evaluation Office, AID
3. Paul Ahmed, Office of International Health, HEW
4. Marilyn Silberfein, Development Studies Program, AID .

Project documents were reviewed in Washington and interviews conducted with U.S. personnel familiar with the project before the team travelled to Colombia. These informants included:

1. Dr. Joe David, Office of Health, ~~XX~~ AID
- 2/ Dr. Jose Salazar, Pan American Health Organization
3. Maura Brackett, Latin American Development Resources, AID
4. Margaret Kranz, Colombian Desk Officer, AID
5. Prof. Gordon Brown, Penn. State University
6. John Daly, Office of International Health, HEW

The team visited Colombia during the July 12-24 period. Interviews in the USAID Mission were held with the following people:

1. James Magellas, Mission Director
2. Philip Schwab, Deputy Director
3. William Bair, Project Manager
4. Thomas Hyslop, Contract Advisor
5. Fernando Gomez, former Project Assistant
6. Alvaro Monroy, Project Assistant

The following project-related Colombians were interviewed by the team:

1. Abel Duenas, Secretary General, Ministry of Health (MOH)
2. Armando Porras, Director of Planning, MOH
3. Luis Carlos Gomez, Director of Information, MOH
4. Andres Huertas, Data Systems Analyst, MOH
5. Julio Cesar Alegria, Director of Supply, MOH
6. Guillermo Mejia, Director of Medical Attention, MOH
7. German Jiminez, Director of Human Resources, MOH
8. Margarita de Sarria, Health Planner, National Planning Department
9. Rafael Rinion, Director of Finances, MOH
10. Hernando Groot, Director of National Institute of Health (INAS)
11. Jaime Mora, Director of Rural Sanitation, INAS
12. Antonio Ordonez Plaja, Director of Family Welfare Institute (ICBF)
13. Hector Collazos, Director of Environmental Health, MOH
14. Carlos Tobon, Director of Rural Health Planning, MOH
15. Carlos Ferro, Director of Health Campaigns, Malaria Service
16. Orlando Bossa, National Hospital Fund

In addition the team visited the Sectional Health Service at Tunja in Boyaca, the Regional Health Center at Sogamoso ~~(S)~~ and the local health center in Mongui. Mr. Ahmed visited rural sanitation facilities in Caldal and met with health officials in Manazales and Praiera.