An Operations Research Study of Financing and Organizational Problems of Community Health Projects in India

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Table of Contents

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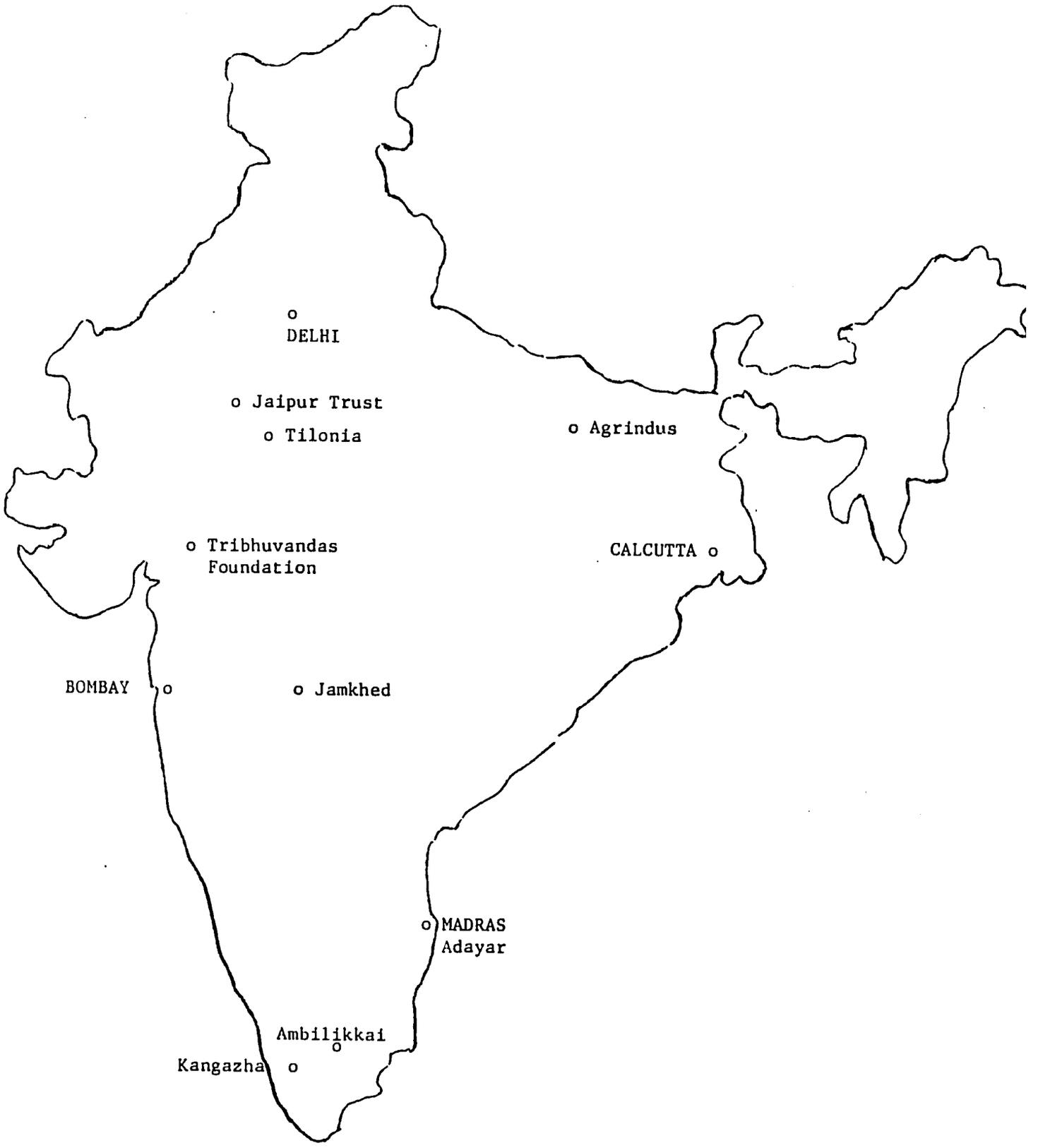
List of Tables

MAP OF PROJECT LOCATIONS



Chapter II. Background

The problem of inadequate primary health care is worldwide, but for the study of ways to improve primary health care, India offers several advantages:

First, India's democratic society offers freedom of initiative, both freedom to start and freedom to develop health programs within broad boundaries. Neither the central nor state governments have attempted to impose a rigid, monolithic pattern on these programs. Thus free from government restraint, India's community health programs have had the liberty to follow a variety of policies and practices.

Second, the Government of India actively encourages and cooperates with voluntary health programs. Through financial support, provision of supplies, joint training and service activities the Government and voluntary health programs have mutually collaborated and aided another. Though this collaboration, as we shall see, has not been without some friction, the policy of collaboration represents an enlightened attitude on the part of Government that voluntary health programs can be of assistance in meeting Government objectives.

Third, because of the freedom of initiative in India, because of encouragement of Government, and because of India's vast size and complexity, India probably has more different primary health care programs and has them in more variegated cultural, social and geographic settings than any other country. Where can one find a larger laboratory with more diverse experiments in primary health care than in India?

Population and Health Status

In 1986, India has a population of 758 million (Verma 1984) [Government of India, medium projection of 758 million as of March 1, 1986 from the 1981 Census]. The birth rate is 33 per thousand (Hindustan Times Overseas Edition January 11 1986) and death rate is 12.5 per thousand (National Institute of Public Cooperation and Child Development 1984). The infant mortality rate is estimated at 114 per 1,000 (Sharma 1985).

With a sustained growth rate at the current level of 2 percent, India will double its population in 35 years. Family planning is therefore, a very high priority. 32 percent of eligible couples currently practice family planning, and the goal is to reach 42 percent practicing couples by 1990 (Hindustan Times Overseas Edition, January 11,1986).

Literacy has increased rapidly in the last 35 years. From 16.6 percent in 1951, literacy increased to 36.2 percent in 1981. There is still a sharp difference between males and females, however. Only 24.9 percent of women were literate in 1981 versus 46.7 percent of men (Ezekial 1984, p.3).

India is becoming more urban and presumeably more accessible to health care. In 1951, 83 percent of the population lived in rural areas. By 1981, the percentage of rural residents had falled to 76.3. There remained, however, 525,000 villages (Ezekial 1984, p.3).

In terms of mortality and morbidity, there has been steady progress since independence as evidenced in the increasing average life span. Expectation of

life at birth has risen from 32 years in 1951 to 55 years in 1985-6 (Ezekial 1984, p. 3; Government of India, Planning Commission 1985, p. 270).

The leading causes of death among children under five years of age are respiratory infections, diarrheal disease, and malnutrition. Diseases preventable by immunisation, namely, tetanus, whooping cough, diphtheria, polio, and measles are still common.

Malaria according to official records of the National Malaria Eradication Programme (NMEP) has dropped from 6.5 million cases in 1976 to 2.2 million in 1982. But studies by the Malaria Research Centre (MRC) of the Indian Council of Medical Research show that the number of malaria cases officially reported by NMEP is only a minute fraction of the actual incidence (Centre for Science and Environment 1985, p. 254-5). For example, in Kharkoda primary health centre of Haryana, the MRC in 1981-82 found 7117 cases compared to 183 by NMEP in the same period. In Kichha in Nainital, the difference was 1,784 versus 63. The incidence of P. falciparum infections or cerebral malaria is also increasing. In 1982 in Delhi slums, the MRC calculated an Annual Parasite Index (API). (The API= the number of positive cases per 1,000 population.) of 496.6 per thousand. In other words, there was one case of malaria for every two slum dwellers. Other mosquito-borne infections such as Japanese encephalitis, dengue, and filariasis have become problematic (Centre for Science and Environment 1985, pp.254-264). The Seventh Five Year Plan calls for in-depth review of the 1976 plan and for intensifying malaria control in urban areas (Government of India 1985, p. 275).

There is a large backlog of health problems which will require curative and rehabilatative efforts, e.g. tuberculosis (nearly 10 million cases), leprosy (3.2 million), and handicapped persons (about 12 million) (Sharma 1985).

Government of India Health System

Confronted with the major health problems cited above, the Government of India has increased per capita expenditure in health from Rs. 1.50 to in 1955-56 to P.s. 27.86 in 1981-82 (Government of India, Planning Commission 1985, p. 270). The government's major emphasis is on primary health care, individual self-reliance, and community participation.

The Ministry of Health and Family Welfare has evolved a draft National Health Policy keeping in view the national commitment to attain the goal of 'Health for All,by the year 2000 A.D.' The Policy lays stress on the preventive, promotive, public health and rehabilitative aspects of health care and points to the need of establishing comprehensive, primary health care services to reach the population in the remotest areas of the country, the need to view healthand huyman development as a vital component of overall, integrated national socio-economic development, decentralised system of health care delivery with the maximum community and individual self-reliance and participation (Government of India, Ministry of Health and Human Welfare 1982, p. 12).

To cover a population of 100,000 or one community development block, the government plan calls for a Community Health Centre (CHC), staffed by four doctors. As of 1985, there were 646 CHCs. The Seventh Five Year Plan calls for 1,553 additional CHCs to reach 40.65 percent of the target (Government of India, Planning Commission p. 271). The next level is the Primary Health Center, staffed by two doctors, for a population of 30,000 (20,000 in tribal or hilly areas). There were 11,000 PHCs in 1985, and the goal for 1990 under the Seventh Five Year plan is to add 12,000 PHCs. To cover a population of 5,000 (3,000 in tribal and hilly areas) is the subcentre, staffed by two multipurpose workers, one male and one female. In addition to the 83,000 subcentres existing in 1985, the governmnet plans 54,000 additional subcentres by 1990. (Government of India, Planning Commission 1985, p. 401). At the village level, a Health Guide and a dai are to be trained for every village or every population of 1,000. In each village, a Village Health Committee is to supervise the Health Guide and dai (Government India, Ministry of Health and Family Welfare 1982, p. 19).

In regard to staffing of the PHCs, Mrs. Mohsina Kidwai, Minister of Health and Family Welfare, stated in Parliament that some 10 percent of the existing PHCs do not have physicians. In order to attract doctors, the government is offering 30 percnet more income than similar functionaries in urban areas and is trying to provide reasonable accomodations (Indian Express, 28 February 1986).

Table 2.1
Number of Hospitals and Patients Treated by Year

Items	Unit	1950	1960	1965	1973	1977	1978	1979
No. of Hospitals .	Nos.	2717	4011	3900	4027	5445	5815	6625
No. of Dispensaries.....	Nos.	6891	9874	9486	10804	12656	14828	15599
No. of beds[a].....	000	112	200	295	406	494	523	554
No. of patients treated:								
in house.....	000	3199	12177	6849	8944*	1019*	5915*	---
ambulatory	000	82605	178566	141127	53096*	44723*	33040*	---

* Partial information as received from the states
(a) Includes all types of beds in hospitals, dispensaries, PHCS and voluntary organisations etc.
Source: Ezekial, ed. Economic Times Statistical Survey of the Indian Economy 1984, Table 172 p. 209

Table 2.2
Registered Health Personnel by Year

Type	1950	1960	1965	1973	1977	1978	1979
Registered Medical Practitioners....	59338	75959	99779	172355	223387	235641	24117
Nurses.....	16938	32733	51746	93603	120412	127420	13932
Midwives.....	17746	38528	57567	95093	118533	125132	13477
Health Visitors...	596	1481	2832	5130	7618	8331	897
Auxiliary nurse midwives.....	---	2264	11412	35728	55656	60085	6615
Total.....	94618	150965	223336	401909	525606	556609	59041

Source: Ezekial ed. Economic Times Statistical Survey of the Indian Economy 1984, Tables 172, 175. pp. 209,210

The increase in the number of institutions offering training for nurses and other personnel has clearly had a positive effect in regard to the ratio of nurses to doctors and of all non-doctor health personnel to doctors. In 1950 there was only one nurse for every 3.5 doctors compared with one nurse for every 1.7 doctors in 1979. Similarly, in 1950, physicians outnumbered the total of all other health personnel by nearly 70 percent. By 1979, there were more non-physicians than physicians among health personnel (See Table 2.x). The ratio of registered health personnel to the population also improved. In 1950 there was one registered health worker to 3,769 persons. By 1979 there was one health worker for every 1,105 people in the country.

Table 2.3
Institutions for Training of
Ancillary Health Personnel by Year

Items	1950	1960	1965	1973	1977	1978	197
B.Sc. Degree in nursing (a).....	2	2	8	8	8	8	
General nursing	67	196	240	262	273	277	27
Male Nurses (a).....	72	41	71	41	22	24	2
Midwifery.....	156	203	204	237	261	263	26
Auxiliary nursing mid-wifery.....	---	201	299	343	333	329	32
Health visitors.....	8	21	19	20	25	21	2
Total.....295		664	841	911	922	922	92

(a) Excluding Post Certificate B.Sc Degree in nursing.
Source: Ezekial, ed. Economic Times Statistical Survey of the Indian Economy 1984, Tables 174 p. 210

Table 2.4
Family Welfare Program Statistics by Year
Numbers in thousands

Item	1970-71	1973-74	1976-77	1978-79	1980-
Couples protected by sterilization.....	1330	942	8261	1483*	1994
Percentage of couples protected by sterilization	35.3	21.8	25.9	26.9	31.
Conventional contraceptive users.....	1962	3010	3962	3469*	374
Percentage of couples protected by conv. contr...	52.1	69.6	29.5	63.1	59.
IUD insertions.....	476	372	581	552*	60
Percentage of couples protected by IUDs.....12.6		8.6	4.6	10.0	9.
Total acceptors.....3768		4324	12534	5504	633
Percentage.....100.0		100.0	100.0	100.0	100

* Provisional
Source: Ezekial, H. ed. Economic Times Statistical Survey of the Indian Economy 1984, Table 173 p. 209

Chapter III. Study Purpose

A. Basic Purpose

This project proposed to study the financing and organizational problems of eight health cooperatives in India by focusing on problems identified by leaders of these cooperatives and by analyzing alternative solutions to these problems. Although some of the problems had been identified through the literature and preliminary discussions, a broader range of the cooperatives' problems and their relative priority were elicited from discussions with cooperative leaders prior to the beginning of data collection. The study had a practical aim -- to identify solutions that existing and emerging health cooperatives can apply to overcome their financial and organizational problems.

1. Financing Problems

Financial viability is a key issue for health cooperatives. Inadequate financing is both the major obstacle for initially organizing health cooperatives and the most outstanding problem for their continuing operation.

1.1 Problem: How to raise initial capital

Alternatives: a. Generate from health cooperative members only
b. Cooperative members and local donors
c. Other cooperatives, labor unions
d. Private external donors
e. Government
f. Other

Objective: To identify the best ways of raising sufficient seed capital without creating long-term dependence

Those most in need of health care are not likely to have sufficient assets, even collectively, to initiate a health cooperative with elaborate services, but even poor members can provide significant contributions in kind and labor. As Cohen points out, "the major economic premise behind the use of cooperatives is that they are a means of collectively financing the demand for health services." (Cohen, p. 4) Alternative sources include more affluent community members, existing cooperatives or labor unions, private industry or foundations, and government.

1.2 Problem: How to meet recurrent expenses

A second aspect of the financial problem is how to meet recurrent health cooperative expenses, including depreciation of capital equipment. More specifically, the problem is how to obtain sufficient recurrent income to support both preventive and curative services for a large percentage of the target population. Sources for continuing support from within and outside the community include:

Alternatives: a) member prepayments
b) member fees or co-payments for service

c) non-member fees for service
d) drug sales
e) production-based prepayment
f) income generation
g) community and individual labor
h) donations from private sources, and
i) government support, in the form of supplies, drugs, equipment, funds or training.

1.3 Problem: How to incorporate and serve the poor as health cooperative members

Alternatives: a) Uniform fees for all members, no outside subsidy
b) Uniform fees subsidized
c) Sliding fees based on ability to pay
d) Other

Objective: To identify the best ways of incorporating and serving the poor as health cooperative members

A particular aspect of meeting recurrent expenses is how to serve the poor who have difficulty paying their proportionate share.

1.4 Problem: How to plan for and adjust to seasonal and cyclical variation in income

Alternatives: a) Endowment, savings
b) Paring of services
c) Other

Objective: To identify the best ways of planning for an adjusting to seasonal and cyclical variation in income

Another particular financial problem is how to plan for and adjust to variation in income, both seasonal cycles and longer periods of one or more years. Cooperatives that meet recurrent expenses in normal years may have problems in times of financial adversity. For example the cooperative of the Christian Fellowship Community Health Centre in Ambilikai, Tamil Nadu had severe financial difficulties when drought affected the ability of members to make prepayments (Jacob Cherian, personal communication, August, 1983).

1.5 Problem: How to collect member prepayments

Alternatives: a) Monthly deduction from production payment, wage
b) Monthly collection at household
c) Quarterly assessment
d) Annual assessment at time of harvest or production bonus
e) Other

Objective: To identify the best ways of assessing cooperative member prepayments

Cooperatives have different periodicity for assessing member prepayments, e.g. monthly, quarterly, or annually, and different timing within given periods for collecting such payments. For example, the Tribhuvandas Foundation, which is closely associated with milk co-operatives, assesses prepayments at the time of the year milk co-operative members receive their annual bonus.

2. Organizational Problems

Though financial problems color all other problems, organizational and managerial problems merit individual attention.

2.1 Problem: How to obtain adequate human resources to initiate a health cooperative and also achieve community control and participation

Alternatives: (sources)
a) Other cooperatives
b) Labor unions
c) Production units
d) Private voluntary agencies
e) Government personnel
f) Other

Objective: To identify the best ways to involve persons sufficiently competent and motivated to initiate a health cooperative characterized by community control and participation.

A basic organizational problem is where to derive the initiative for establishing a health cooperative. Some of the sources of initiative are already existing groups such as other cooperatives, labor unions, production units, and private voluntary agencies. If the source of initiative is outside the community, the initiating group or individual may have difficulty sharing control with community members, and community members may not sense that the cooperative is their own.

2.2 Problem: How to recruit cooperative members

Alternatives:
a) Community meetings
b) House-to-house visitation
c) Promotion by panchayat
d) Other

Objective: To find the best ways to recruit health cooperative members

Even cooperatives that derive from existing groups must wrestle with the problem of how to recruit members. Alternative recruiting methods include community meetings, house-to-house visition, promotion by the panchayat (village leadership council), etc. and their different combinations.

2.3 Problem: How to reconcile differences between professional

staff and cooperative membership, specifically regarding choice of health services

Alternatives:
a) Services are chosen and provided according to the felt needs of the community as expressed by the majority of the membership
b) The professional staff is delegated the responsibility to determine the kinds of health services that are in the best interests of the community
c) While the professional staff makes its recommendations, the community makes the final decisions

Objective: To identify the best methods of reconciling staff and membership differences

The professional staff has technical knowledge that the community as a body usually does not have, but the cooperative members may have felt needs that differ from the assessment of the professional staff. Hence it is essential to reconcile these differences if the cooperative is to function effectively. To permit both parties to have a say, the Kerala Cooperative Rural Dispensaries established two classes of membership, A-class for staff members and B-class for community residents (M.V. George, p. 134). The study will identify conflicts that exist in this area, describe alternative solutions that have been tried, and analyze these solutions to recommend the best alternatives.

2.4 Problem: How to achieve the transition to genuine community control of externally initiated primary health care programs

Alternatives:
a) Initiators follow a systematic plan of gradually transfering planning and implemention functions to the membership of the program
b) The membership gradually develops local management capacity and access to sources of income of both internal and external origin and by reducing reliance on the external initiator(s) assumes greater control
c) The membership through the process of community action for health promotion become "conscientized" and demand gradual transfer of power from the initiators.

In a country such as India where a majority of rural populations live close to the subsistence level, the financial and organizaional resources needed to start health cooperatives are scarce. The typical situation is for an external agent such as a philanthropic organization or a government agency to start a primary health care service and try to involve the local population in its operation at a pace and to a degree deemed appropriate for the initiators. By definition the eight cooperatives in the study sample have achieved a degree of

consumer control. This study will analyze the degree of internal control achieved and the means by which they achieved it.

3. Management Problems

3.1 Problem: How to change the existing community perception of the village health worker as a poor substitute for the doctor to one who brings effective medical service to the community at low cost.

Alternatives: a) Explain the experience of other villages through the health education program
b) Ignore early opposition while advertising in the community beneficial results as they materialize
c) Other

Objective: Identify the most effective ways to obtain popular acceptance of the village health worker

While the well-qualified modern doctors' services are not universally available even in the developed countries, the huge disparities in family incomes in developing countries often limit those services to a minority of their populations. People who cannot afford to purchase those services, nevertheless, wish that they could, and in self-pity look upon locally available health workers as poor substitutes. The matching of the degree of severity of an ailment with the sophistication of the training of the healing agent, which is evident in the primary health care system with its referral mechanism, is not properly understood. They have contempt for the "barefoot doctor" because quality is universally associated with the purchase price. Shantaben Raysangbhai, a female health worker at Ambav village in the Tribhuvandas Foundation project says,

> When I started this work and was to go around the village to explain the advantages of the programme to the people, they poked fun at me, and said, look, the doctor is coming ... Now the situation is such that people have left the doctor and come for my advice only, because they have realized that this is the real thing, and they get real service...
> (Tribhuvandas Foundation, 1983, p.1 underlining supplied)

In the Comprehensive Rural Health Project in Jamkhed, Maharashtra, the image of the health worker as someone who would be doing menial work was so low that initially the village leadership chose for training women from the Harijan and prostitute castes or from criminal tribes, but on the basis of their performance, "the VHW have now become prominent citizens and are occasionally tempted to stand for political office" (Sadgopal, n.d., p. 3)

3.2 Problem: How to educate cooperative members in basic primary health care

Alternatives: a) Regularly scheduled monthly meetings

b) House-to-house visitation by health workers
c) Children-to-children presentations
d) Other

Objective: To identify the best ways of educating cooperative members in the basic principles of primary health care

Basic primary health care is a novel idea in most places, and for that reason education of members of the community will be a slow process. The knowledge that accumulates through actual experience, needs, however, to be supplemented by communication of ideas and concepts through diverse methods such as those mentioned above. The study will attempt to establish correlations between the relative efficacy of particular methods and community characteristics as well as identify other channels of effective communication not listed here.

3.3 Problem: How to resolve class and caste conflict in health worker selection

Alternatives: a) Wait to select health workers until people are convinced that Harijans can be viable candidates
b) Have outsiders rather than community select health workers
c) Let community initially select several health workers from different castes who work on a trial basis. Final selection is based on trial performance.
d) Other

Objective: To identify the best ways of resolving class and caste conflict in health worker selection

Caste and class are still all too pervasive distinctions in many Indian villages. In numerous situations despite reservations of the community leaders, Harijans have proved to be superb health workers. The experience in the village of Limbali, Gujarat, illustrates the problems of caste in selecting health workers. The community leaders selected for village health worker a high caste woman far less qualified than the young Harijan widow recommended by the field workers of the Tribhuvandas Foundation. The compromise was to have two village health workers, each of whom received half the meagre salary of Rs. 75. The arrangement worked well for a while. Then the higher caste woman gradually lost interest and failed to perform her duties properly. On the other hand, the Harijan woman did her job so well that she won the acceptance of the entire village including those who had objected to her seletion. An entirely different problem, however, intervened to vitiate the happy outcome. She formed an amorous alliance with a young man in the village and eloped wih him (Tribhuvandas Foundation, 1983, p. 15). Nevertheless, the story of overcoming caste prejudice on the basis of persistence and performance have been repeated in other health cooperatives in India so much so that the study will explore the various manifestations of the problem and the manner in which solutions have been found.

3.4 Problem: How to maintain interest of health workers and avoid premature resignations

Alternatives:
a) In-service training programs that include attractive features such as trips to other cooperatives or health services
b) Opportunities for further training in health skills for use in the village
c) Special public recognition for service performed
d) Sharing of experiences among workers, with special accent on the testimony of those who see self-fulfillment in their service
e) Other

Objective: To identify the best ways of maintaining the interest and avoiding resignations of qualified health workers

The selection and training of village health workers constitutes one of the largest investments made by many primary health care programs. The early voluntary retirement of a single qualified health worker may imply a loss of the equivalent of hundreds of dollars simply for selecting and training a replacement, not to mention the cost to community residents in terms of the interruption of service. The large but relatively constant differences from one program to another in rates of termination for village health workers suggest that there may be administrative factors that can influence health workers to continue their work despite low financial compensation. In the rural Mexico New Strategies Project, for example, the cost of training a community health worker was only US$208, but 32 percent of these trainees had retired by 24 months (Elkins and Macias, 1983, p. 5). In contrast, the Indonesian Government has spent more than $700 to train each family planning field worker on the islands of Java and Bali. However, in 1981 less than 1.6 percent of these workers retired (Soejatni, 1983). Had the Indonesian field workers in Java and Bali discontinued at the same rate as the Mexican community health agents, the cost to the Indonesian government would have been more US$1,500,000 in retraining costs alone, about ten times the costs actually incurred. There are factors beyond the control of the program to explain the high continuation rates of Indonesian field workers, but the example illustrates the financial importance for cooperatives in identifying ways to retain community health workers.

Chapter IV. METHODOLOGY

A. Problem Analysis

1. From the literature and field experience, the senior research team (the Principal Investigator, the Consultant, the Project Coordinator, and Research Associate) developed a preliminary list of problems. Mr. Sharma, the Research Associate had been involved in the initial planning, design and implementation of the Tribhuvandas Foundation and developed extensive notes on the Tribhuvandas Foundation experience. Some of the ideas from the notes were incorporated in the preliminary list of problems.

2. In June and July, 1985, members of the team conducted an initial visit to each of the projects tentatively selected. With project directors, the team discussed the preliminary list of problems and elicited suggestions for refinements and additional problems, and asked the directors to rate the problems by priority. During the visit, the team also made plans for translation in the local language and subsequent data collection.

3. On the basis of the responses of the directors, the preliminary questionnaires were developed for Community Members, Community Leaders, Project Directors, and Project Staff and were pretested at the Tribhuvandas Foundation in August 1985.

B. Structured Interviews

1. The Village

The village schedule covered general characteristics of the village including population, facilities, etc.

Three villages for each project were selected according to the criteria of distance, duration of operation, and proximity of a subcentre. IRMA staff made the selection in consultation with the project directors. In other words, there was an effort to select at least one village far from the centre, one nearby, and one mid-distance. Similarly, in terms of duration of operation: the team tried to select one village where the project had operated for a long time, one with a short history of operation, and a third of medium longitude. In programs that had subcentres, the team tried to select one village where a subcentre was located, one far from a subcentre and one of medium distance from a subcentre.

2. Community Leaders and Health Practitioners

Two or one community leader(s) from each village were purposively selected among the influential people of the village. These influential people include panchayat president, panchayat member, any cooperative member, or any other prominent member of the village. The team attempted to interview one private practitioner from each selected village, but we found that private practitioners were not available in most of the villages.

3. Community Members and Program Beneficiaries

The team relied on one or more of the following sources for selecting the sample of community members and program beneficiaries:

1. The Panchayat list of the households in the village
2. The election list for the village
3. Any sample frame established for previous surveys

First, the team identified three or four wards or localities in case the village was too large or covered too many other hamlets to be sampled without clusters. To identify these three wards, the team consulted with village leaders and selected the wards purposively to represent a cross section of the village in terms of caste and economic status. Then a sample of 23 households was selected through a systematic random method (every nth household where the selection interval of n was determined by dividing the number of households in the ward by 23). In small and compact villages, the 23 households were selected from the list of households for the entire village.

4. Institutional Schedule

The Institutional Schedule was filled in each of the projects primarily to get data on sources of finances, activities, and achievements. The source for this information was generally the administrative section of the project. For multi-purpose projects, a major problem was the definition of what the health area covered and how to apportion joint costs.

5. Project Executive Director

The project head in each case was interviewed by one of the senior research team members. The schedule included questions on policy issues, the general nature of problems, and suggestions regarding his project as well as healt in general.

6. Project Staff

The staff size differed radically from project to project, for example, from 3 to 60 at the level of the main center. Where the number of staff was small, the team interviewed everyone. Otherwise, samples were drawn from strata defined by type of staff position and level of operation (main center, intermediate, village). However, all the village health fuctionaries in the selected villages were interviewed.

C. Pretesting

A full-scale pilot study was conducted with preliminary interview schedules at the Tribhuvandas Foundation. The pilot study included translation of questionnaires, training of interviewers, selection of samples, conducting of interviews for all schedules, coding, data entry, and tabulation. On the basis of this pretesting questions were revised, dropped, and added.

D. Translation of questionnaires

For each of the five different languages (Gujarati, Marathi, Tamil, Malayalam, and Hindi) local personnel translated the original English schedules. The team checked these translations for accuracy by having the translation read by team members and other bilingual persons knowledgeable in community health.

E. Field Work Procedures

On the average, training of interviewers and data collection requiured 10 to 12 days for each of the eight projects.

Days	
1	Discussion with project directors regarding the requirements for the study Identification of interviewers and supervisor
2	Selection and briefing of interviewers
3	Training of interviewers and practice interviewing in a nearby village
4	Data collection for the first village
5	Review and checking of data for the first village with the interviewers and supervisor
6-7	Data collection for the second and third village and focus group discussion in the evening in one or two of the villages
8	Review and checking of data
9-10	Project staff, director's schedule, institutional schedule, collection of relevant literature regarding the project, focus group discussion with project staff

F. Data Entry and Editing

During the period of data collection, the field work team made periodic trips to Anand to deposit questionnaires. There the data were entered via the Survey Mate software package in microcomputer. The data were validated for range and for some logical consistencies among data fields. When the last data arrived in Anand on December 4, all previously collected data had been entered. The last data from Agrindus were entered on December 7.

G. Tabulation

The data were recoded and tabulated by microcomputer with the Survey Mate software package. After the first frequencies or marginals were tabulated, a series of preplanned crosstabulations were run. These tabulations in turn stimulated further tabulations. Village level data were incorporated as part of the community members' questionnaires so that the village variables could be considered in analysis of variables at the level of the community members.

H. Focus Group Discussions

The focus group discussions were conducted at the village level and at the project staff level. At the village level, one of the reserach team members or a member of the local community, previoiusly briefed with an outline of the

topics to cover, conducted the discussions in the local language. A member of the research team took notes and recorded the session on audio tape. An average of two village focus groups per project were conducted with from 10 to 35 participants in each group. The usefulness of these discussions varied. Some villagers were not vocal. Focus was also a problem. Many of the participants had assembled to hear what benefits the project had to offer. On the other hand, the focus groups did exhibit a high degree of awareness of health problems and of the community health programs. The participants voiced strong support for the village health workers. The staff groups proved to be both more focused, more vocal and therefore more useful. Generally a research team member or in two cases, one of the experienced staff members served as moderator.

I. Workshop

In February 1986, two representatives of each project, representatives of government, and other agencies met with the research team for a three-day workshop in Anand to discuss the priority problems and alternative solutions on the basis of the preliminary report. The participants worked met in small groups and plenary sessions to analyze the data and forge recommendations.

J. Analysis, Tabulation, and Report Writing

From February through October 1986 members of the research team, with assistance from the PRICOR staff, made further tabulations, analysed and wrote the report.

K. Timetable

Development of Preliminary Questions: September 1983 - July 1985

Preliminary Questionnaire Development: April 1985 - July 1985

Pretesting of Questionnaires: August 1985

Data collection: August through November 1985

Data entry: September through November 1985

Preliminary analysis and preparation of preliminary report: December 1985 through January 1986

Workshop with representatives of Health projects and others: February 1986

Continuing data tabulation and analysis: February - October 1986

Matrix for case studies

Topic	Tribhuvandas Foundation	Jamkhed	Adayar	Ambilikkai
Initiator Charac. of Ind. or team	Mr. Tribhuvandas Patel with National Dairy Development Board in 1980	Dr. and Mrs. R. S. and Mabelle Arole in 1971	Dr. K.S. Sanjivi Dr. K.V. Rao	Dr. Jacob Cherian Dr. (Mrs) Mary Cherian
When	1980	1971	1971 Community Health 1964 Hospital	1976
Objectives	To promote the health of the rural population, starting with infants and mothers and to promote community development	To enable the surrounding rural community to meet their basic health needs through the development of promotive, curative, and preventive health services	To provide comprehensive continuous medical care with community participation in rural areas	To improve the health and socio-economic status of the people especially the rural poor of the area
Sources and nature of orig. resources Funds	The Tribhuvandas Foundation initial grant of Rs.6.5 lakhs donated by Mr. T. Patel, who received it from milk farmers UNICEF in-kind gift of Rs 2.25 and a DC gift of Rs.1.97 also important	Fees for curative service 125,000; CMAI and govt. 5,000 United Church Board for World Ministries, U.S.A. 125,000	State govt. 30,000 State govt. 90,000 Local 9,592 129,592 ? OXFAM for 3 years	E.Z.E. 1,800,000 Local 60,000 1,860,000
Lands		7 acres from local businessman		
Bldgs				
Other				
Pop. served now	427,500	250,000	20,462	124,000
Villages served	171	175	22	280
No. staff: Central Inter. Local	298 Total 42 central 88 intermed 168 local	283 Total 35 Central 40 inter. 208 local	34 Total 2 Central 10 Inter. 22 Local	125 Total 3 Central 2 Inter. 120 Local
Services by Local Personnel	Symptomatic treatment of ailments, referral supplementary feeding growth monitoring ORT Record-keeping	Treatment of minor ailments pre and post natal care ORT, fam. planning services preventive advice record-keeping	First aid and referral services as agent of Mini-Health-Centre, health education, motivation for immunization	First aid and health education as agent of Mini-Health-Centre, motivation for immunization

Topic	Tribhuvandas Foundation	Jamkhed	Adayar	Ambilikkai
Services by int. level personnel	Training VHWs Health Ed. with vill.leaders Immunization services Curative services Report preparation Supervision Collection of funds	Mobile teams visit each village to support VHW and run 4 sub-centres, nurse coordinator runs antenatal clinic and gives immunizations including TT for preg. women, follows up TB, leprosy patients	Ante-natal and post-natal care, child health, family planning advice, folic acid & iron tablets curative care, treatment of minor ailments, referral service	Advice on health and hygiene, nutrition, preventive diseases, assist doctors in weekly clinics, treatment of minor ailments, immunization programs, health ed.
Services by main centre personnel	Treatment of referrals Management of mobile teams Center for Undernourished Report preparation Biogas, smokeless chullahs (cooking stoves)	30 bed hospital serves major medical and surgical needs referred from the intermed. level. Centre conducts quarterly seminars for village organizations such as mahila mandal, young farmers clubs	Large hospital base provides all services of curative and diagnostic nature	Large hospital base with curative facilities and special wards for leprosy, TB, and cancer
Community development activities e.g. dams, roads, literacy	Community biogas Inland fisheries	Afforestation by 24 villages and by indiv. farmers (973,000 trees planted in 1984).	None	Check dams, percolation tanks, cottage industries, housing for poor, road construction
Income generating activities e.g. handicfts	Patchwork for about 1,000 women of very poor Inland fisheries	Goat raising, seeds, poultry, fertilizers, loans for small businesses and agriculture 622 farmers received Rs. 9 lakhs	None	Cottage industries like weaving cloth and mats
Community Involvement Early support	Full support from milk villages; village committees elsewhere	Community kitchens and gardens in early famine Community nutrition program	Provision of buildings and furniture for Mini-Health Centres	Provision of buildings and furniture for Mini-Health Centres
Nature of Opposing Forces	None reported	A local indiginous medical practitioner prevented dialogue between project and people Panchayats	None reported	Higher caste opposition initially

Topic	Tribhuvandas Foundation	Jamkhed	Adayar	Ambilikkai
Local Organizations like Panchayat, Mahila Ma. Far.Clubs Milk Coops Other Specify existing or created	Village training and development centres formerly known as Young Farmers' Centres do crop demonstrations on waste lands, get loans from IRDP for eligible famillies. Management committees of milk coops act as local supporting organization	79 Mahila Mandels 83 Young Farmers Clubs	Local action committee consisting of local leaders, panchayat members, officals, and other residents 22 Mahila Mandels, one in each village served	Panchayat -- community leaders (bldg.provided by community) No formal local org. for the project but ladies' and youth groups for multiple purposes
Meetings held for Education Decision Making	Milk cooperative management committee decides many issues including payment to VHW, but most operational decisions made by Tribhuvandas Found.	VHW, Mahila Mandals, and Young Farmers Clubs organize meetings, nutrition camps, food for work camps and seminars. Health education is an important aspect of all these gatherings	Few meetings	VHW has main responsibil- for education, VHW is more communicator than curatuve agent
How health ed. carried out	Field staff visits village 4 times a week to conduct film shows and for a.v. presentations, with emphasis preventive and promotive health	Camps and seminars are the frequent method for Mahila Mandals, Young Farmers Clubs. Field demonstrations, flip charts, and other educ. materials are prepared by the workers themselves. Income generating activities serve as educational medium.	Periodic meetings, film shows, and demonstrations, through the campaign for health insurance scheme	Films shown in meetings (audio-visual equip. stored at main centre) H. Ed. in schools
Relations with Govt. Training both ways	None	Training govt. personnel including medical officers, ANMs, VHGs. Close coord. in fam. planning, immunization, leprosy camps,	Training of paramedics of government and non-government agencies	Training of government and non-government paramedics
Govt. Supplies	Govt. vaccines TB medicines, medicines for pregnant women and children, fam. planning supplies	Vaccines TB medicines (though only 1% of requirements) family planning supplies	Vaccines TB, leprosy medicines	(Immunizations carried out by govt. auxiliary nurse midwife, project does not itself receive vaccines) medines for TB, leprosy, iron and vitamin pills
Govt. Services	Monthly TB camp at centre in collab with govt. TB hospital in Nadiad Weekly FP camps at centre for 150-200 laparoscopic sterilizations, gives trps.	None	None	None

Topic	Tribhuvandas Foundation	Jamkhed	Adayar	Ambilikkai
Referral of patients to govt. and govt referral to proj.	No	Referral to hospital at Pune and Ahmednagar	None	None
Referrals to private hospitals	To Charotar Arogya Mandal hospital at Karamsad, which in turn refers to TF for followup of released patients	None	None (own hospital)	None (own hospital)
Relations with private practi-tioners modern & tradi-tional	None	Very little	None	None
FINANCES				
Prepayment scheme if any amount how set, what is provided, any co-payments, how non-members charged	Rs. 1 per month or Rs. 10 per year 10 paisa for 75 grams of supplementary food	Not applicable	Rs. 1 per month (Rs. 12 per year for family income up to Rs. 300 per month graded up to Rs. 300 per year for a family income of Rs.2,500 per month Non-members are charged a fee for service	Not applicable
How pre-payment collected	Deducted from milk coop bonus or collected at coop at that time Door-to-door canvas by VHW, field workers,	Not applicable	Mini Health Centre and multipurpose worker	Through Mini Health Centre before prepayment was discontinued after a a year because of drought
What services are free to all?	Immunizations, fam.planning daycare for undernourished	Immunizations family planning	Immunizations Family planning saniation	Immunizations family planning

Topic	Tribhuvandas Foundation	Jamkhed	Adayar	Ambilikkai
Methods of payment: if by ability to pay, how set? Do some poor pay zero?	The poor (about 20%) pay nothing	Sliding scale set by physician; about 20% pay nothing.	Prepayment according to income estimated by survey (see above) Fee for service is charged for defaulters and non-subscribers	By income
Financial relations with govt.	Use of govt. supplies for immunizations and for pre- and post-natal services	Small bed grant for fam. plan. beds, vaccines, anti-TB drugs (only 1 % of requests)	2/3 of operating cost in 1984, medical suppiles under govt. national programs	2/3 of operating costs from govt. medical under govt. national programs
Financial Problems with govt.	Immunizations no pay from govt. At first govt. would not pay FP transport	Irregular and inadequate delivery of govt. supplies Delay in payment for services such as training	Delay if agreed payments for operating costs and in supplies of drugs, TB, etc.	Delay in payments and supplies
Financial relations with other donors + organizations	smooth	Smooth	Smooth	Smooth
Financial problems with other donors	Only one donor wanted very detailed vouchers	No problems	No problems	No problems
MANAGEMENT PROBLEMS				
How VHF Selected	Milk coop. or village leaders	Chosen by the village panchayat and other villagers and recommended for appointment by the project leadership	From among the volunteers (all of whom are trained) a committee consisting of of public health nurse, doctor at MHC, & community health dept. of hospital	Project staff

Topic	Tribhuvandas Foundation	Jamkhed	Adayar	Ambilikkai
How VHF trained	2 week training at centre followed by weekly refresher	Initial one-week training at the main centre followed by weekly refresher. They begin in field by observing experienced VHWs, field workers of mobile teams	Initial 4 weeks (5 days a week, 4 hours per day) In-service training (1 day per week) at mini-health-centre	Lay First Aiders (LFAs) trained in one week as motivators and as first aiders
Method			Class, field, & clinic	
Location	main centre	Main centre + villages	Mostly at mini-health ctr. also PHC and hospital	
By whom	field worker teams	Main centre, int. staff, and other VHWs	Medical officer, male and female multipurpose workers and supervisors	
How VHF compensated	Rs. 100 to 150 per month paid by local milk coop	100 to 120 per month	Rs. 75 per month	Rs. 95-105 per month
How VHF supervised				
Training of intermediate level workers				Community Health Guides: Two years (one year theoretical training with concurrent village work followed by one year of practical field work)
How intermediate level personnel compensated				Community Health Guides: Rs. 450 - 600
Future plans				Initiating prepayment plan in 1986 Member loan plan in 1986 will permit loans for income generation

Topic	Kangazha	Tilonia	Jaipur	Agrindus
Initiator Charac. of Ind. or team	M.G.D.M. Hospital	Shri Sanjit Roy	Shri. Baraya	Dr. (Mrs.) Ragini Prem (Health Program) Shri Prembhai (Overall Program)
When	1978	1972	March 1983	Main Program 1954, Health in 1968
Objectives	Integrated health and socio-economic development activities for achievement and maintenance of positive health	Health as an integral part of overall development	To provide comprehensive medical care at the doorstep of the villagers; to take up programs of socio-economic development suited locally	Promote healthy habits develop village service study local health needs, indig.remedies; Provide health care & and training
Sources and nature of orig. resources Funds	ICCO three years 1,401,672 1,000,000 736,778 CMAI CBM of W. Germany	Government Foreign organization Private individuals	Hindustan Charitable Trust: Rs. 1,000,000 Govt. of Rajasthan: 1/2 salary VHW 1/2 cost of drugs Indian Dairy Corp.: supplementary feeding Natl.Dairy Dev. Board: grant	Pathfinder Fund EZE
Lands	Land for hospital sold for small fee by village	None	None	Provided by community
Bldgs	None	Originally leased abandoned bldgs. from state govt.	Panchayat	Provided by community
Other				
Pop. served now	20,000	80,000	99,167	250,000 out of 300,000 in area
Villages served	6	110 with 8 subcentres	63	300 out of 400 in area
staff Total:	92	100	102	258
Central	2	8 (serve multiple activities)	6	15 (serve multiple
Inter.	1	2	0	33 activities)
Local	89	90	96	200
Services by Local Personnel	Health and Development Promoters (HDPs) hold meetings of beneficiaries Multipurpose Health Workers (MPHWs): Health education, helps ANM	Simple curative care, maintain record of births, deaths, diseases. H. ed. meetings, immunization, disinfect wells, motivate for fp., identify and care for TB and malaria Vitamin A deficiency treated	Simple curative care; distribute contraceptives, motivate for family planning	Swasthya Mitra (Comm.health Fund) 1-2 per village - no pay. Ed. in nutrition, child care, fp, treatment of minor ailments using home remedies, distribution of malaria pills, clorination of wells

Topic	Kangazha	Tilonia	Jaipur	Agrind as
Services by int. level personnel	Auxiliary Nurse Midwife: Immunizations, conduct clinic, screen for diabetes and hypertension; followup TB & psychiatric patients, do home visits	Dispensary at Tilonia, immunization	No intermediate level yet. Two doctors visit villages on a regular basis for super-vision, consultation, guidance and help	Gramin Doctor -- One for 10 villages, fulltime with pay (subsidized), treats simple ailments, educates, keeps simple records
Services by main centre personnel	Hospital base plus weekly visit to clinic to support ANM Monthly specialty clinics if needed	Dispensary at Tilonia	No main centre yet	Hospital centre with medical doctor - 1 per 40 to 50 villages
Community develop ment activities e.g. dams, roads, literacy	Agriculture, veterinary programs	Started with water. Now have 30 non-formal ed. centres with about 30 students each. Do handicrafts, agriculture, ground water, afforestation, animal husbandry, e.g. give poultry to TB patients	None	Literacy, check dams
Income genera ting ac tivities e.g. handicfts	Seed loans, goat bank, fertilizers, seedlings, soil testing, basket making, pappad (food), brooms, bamboo mats, dried fish, etc.	Leather products, handlooms	None	Weaving, carpet making, leather and cottage industries
Community Involve ment Early support			None	Contribution of labor for construction of check dams, land development, village funds, etc.
Nature of Opposing Forces	Opposition from some powerful sections of the villages	Opposition from bureaucrats	None	None
Local Organiza tions like Panchayat, Mahila Ma. Far.Clubs Milk Coops Other Specify existing or created	Organized into subcentres (satellite units) each of which has 8 sectors of 60 to 75 families per sector	Does not have formal organization like Mahila Mandel, but informally organizations exist of pregnant women and mothers of children studying in balwadi (night schools) Action groups for women workers (local pressure groups)	None organized yet, plan to organize later	Gram Swarajya Sabha - all family head in village are members

Topic	Kangazha	Tilonia	Jaipur	Agrindus
Meetings held for Education Decision Making	Health Development Promotors hold weekly sector meetings Biweekly meetings at satellite units	Meetings held in the main centre and sub-centre		Gram Swarajya Sabha hold meetings periodically.
How health ed. carried out	Through multi-purpose worker	Village meetings with puppet shows. People in village of Harmada said entertainment should be combined with health ed. Use puppet shows and drama "nukkatnatak"	Camps for family planning and immunization	Village meetings and health education courses of long and short duration held mostly in villages. As of June 1984: 489 public meetng 2724 group discussions, 21 three day courses, 25 five day courses, 23 ten day courses at Agrindus
Contributions Mem.Ques.#604			Contributions of accomodations, food for family planning camps	There is a village health fund to help subsidize the Gramin Doctor
Relations with Govt. Training both ways	Multi-purpose health worker trainees visit govt. centers although there is very little happening there for them to learn from or observe.	Referral, integration in health activities as much as possible. Govt. specialists have helped train VHF's.	Participation of PHC doctors in VHG training and in treating referral patients. State medical department pays Rs.200 per month per VHG during the 3 month training, and govt. pays 1/2 the honorarium to the VHGs i.e. Rs.50 per month.	There is no overlap with the govt. We try support them in malar. leprosy, TB, govt. eye camps
Govt. Supplies	Vaccines, family planning supplies, and family planning incentive payment	Vaccines, TB medicines, family planning supplies	Govt. provides a manual, steel trunk, and medicines kit. Cost of medicines is shared between Trust and State Govt. Govt. provides Rs.50 worth of medicines per Village Health Guide per month, 1/3 the need	Medicines for malaria and leprosy
Govt. Services	None	VHFs help organize villages to receive govt. preventive services	ANMs, nurses to provide supervision, immunization, etc.	None
Referral of patients to govt. and govt referral to proj.	None	VHWs refer directly to govt. facilities	None	None

Topic	Kangazha	Tilonia	Jaipur	Agrindus
Referrals to private hospitals	No need	Never refer to private practitioners	To Amar Jain Medical Relief Hospital	To Hindalco Factory Hospital at Renukoot
Relations with private practitioners modern & traditional	N.A.	N.A.	N.A.	Apparently none
FINANCES Prepayment scheme if any amount how set, what is provided, any co payments, how non members charged	N.A.	"We do not get financial help from the villages." People expect mainly curative services from VHF; therefore cooperation is less in other efforts (preventive, etc.). We give preference to backward and poor communities and cannot expect much support.	Will start charging Rs. 10 per year plus medicines. Services and medicines are free but for camps people pay in kind.	People pay for cost of drugs; very poor do not pay
How pre payment collected	N.A.	N.A.	N.A.	N.A.
What services are free to all?		All services to ambulatory patients are free	All services now free	Free to very poor
Methods of charging if acc. to ability to pay, how set? Do some poor pay zero?	Previously services were free to all. Now services are free only for the poor.	Prior to 1984 recipients paid 25% of cost and a flat rate of Rs.2 per injection. In 1984 we started offering biochemical medicines. All ambulatory patients get services free but pay 25% of cost of medicines. The poor get both services and drugs free.	All services now free	Not rigidly defined
Financial relations with govt.	None	None	Govt. pays 1/2 salary of VHF	None

Topic	Kangazha	Tilonia	Jaipur	Agrindus
Financial Problems with govt.	None	None	None	None
Financial relations with other donors + organizations	No problem	No problem	No problem	No problem
Financial problems with other donors	These organizations are not interested in providing assistance for preventive services.			
MANAGEMENT PROBLEMS Methods of Recruiting Profess. Staff				
How VHF Selected	The 60-75 families of each sector select their own Health Development Promotor The villagers also select the multipurpose health workers	Project staff (according to to community members ques.) but originally candidates (male only) selected by village, now female dais are included	Selection panel of Sarpanch of village Block dev. officer of panchayat samiti medical officer of J.Trust medical officer of PHC	Project staff and village council
Criteria for selection			Must have consent of community One VHG per 1,000 pop. Resident of village Preferably able to read & write Have good rapport with community Female	
How VHF trained				
Period		2 weeks (originally 32 days -- during the 8 days does hospital and field work	3 months Refresher every 2 weeks at centers, where they also receive supplies	Health friend: 5,10 day courses Gramin doctor: 1-2 yrs. Village clinician: 5 yr.
Method				VHF in village, Gram.doctor, clinician at centre.
Location		Tilonia	5 different centre locations	
By whom		All depts. of SWRC take part (literacy, health, sanit.,women's status, kitchen gardens, etc.		

Topic	Kangazha	Tilonia	Jaipur	Agrindus
How VHF compensated	Health Development Promoter earns no money Multipurpose health worker earns Rs.250-325 per month	Rs. 225 - 325 per month Currently, no counterpart to VHF, existing staff like night school teachers perform health duties. Originally village paid part of salary.	Rs. 100 per month	No salary
How VHF supervised		Visit by staff to VHF every two weeks; selected team of villagers also responsible for supervision	Directly by the medical officer, who visits villages every two weeks	No supervision but regular meeings between Gramin Doctor and Sarthya Mitra
How intermediate personnel trained				
How intermediate personnel compensated				
Future plans		Prepayment scheme started February 1986	Mobile teams Prepayment scheme Lady doctor Own referral hospital Expansion to 100 villages Nutrition program	

Chapter V. Results -- Financial Problems

A. Introduction

The financial challenge for health programs is threefold:

First, to generate more resources for health; second, to increase the efficiency in the use of those resources; and third, to distribute benefits equitably to all members of society.

1. More resources -- Generating more resources for health is an overall concern for India, where health expenditures, public and private, constitute only two percent of gross national product (ICSSR 1981, p. 201). A realistic target for the year 2,000, the ICSSR group suggested, would be to raise health expenditures to six percent of gross national product. But many observers lament that health seems to lag other needs in villagers' priorities. The question then arises, how can voluntary community health programs generate more health resources and be financially viable? Of particular concern is how programs can raise resources within their own communities. We examine in this chapter how eight voluntary health projects have met this challenge by marshaling human resources and raising funds for both capital and recurring costs from external and local sources.

2. Efficiency -- Using health resources more efficiently implies that both providers and beneficiaries must use resources less wastefully. But short-term consumer demands may conflict, for example, with potentially more efficient preventive services. The selection and relative emphasis on services may therefore affect efficiency critically. For any services offered, programs must struggle to contain costs while upholding service quality. We focus particularly on cost containment in this chapter.

3. Equity -- Equity in health means equal access to health resources, especially for the rural poor who generally fare disproportionately worse than urban and affluent citizens. But the rural poor are not only least able financially to afford services; their multiple problems render access to health services more onerous. Often overlooked are the opportunity costs the poor must bear in obtaining apparently free or low-cost health services located in distant places. Another obstacle to equity is the lack of adequate health knowledge among the poor. We consider in this chapter how the eight health programs have attempted to achieve greater equity through reaching the poor.

B. Obtaining resources for initial and recurring needs

1. External versus internal support

Ideally, most projects would like to be independent of external support for two reasons: i) to permit greater freedom of decision at the local level and to work out their own priorities, and 2) to assure the project continuity should external funding be temporarily discontinued or cease altogether. We define external support as any resources obtained outside the local communities served by the project. Thus external support may include government funds and supplies, donations from domestic or international agencies including foundations, corporations, or charitable institutions. Internal support may include funds generated through service charges, prepayment of membership or

insurance fees, contributions of funds, labor, land, buildings or other in-kind donations. For primary health care projects, where needs are more labor- than capital-intensive, human resources may be equally as essential as financial resources.

a. Initial support

Complete freedom from initial external support may not be a realistic goal, at least judging from the experiences of the eight projects studied. Table 5.1 presents the percentages of external support for the projects' first year of funding compared with percentages for the years 1983 and 1984. All projects started with significant percentages of external support. Large in-kind contributions such as land, labor, and buildings make the percentage calculations somewhat approximate. Nonetheless, except for the special case of Agrindus, the estimates of external support for the first year ranged from 51 to 100 percent, and four projects met virtually all their expenses the first year from external sources.

Over all there was no correlation between project age and the percentage of funds generated internally (rank correlation = 0.03). But as the projects matured, the dependence on external support did decrease in relative terms for five of the eight projects and for the average of the eight projects. Whereas the average percentage of external support in the first year of operation was 93, by 1984 the average had dropped to 71. Or from the standpoint of internal funds, the percentage of internally generated funds rose from 7 percent in the first year to 29 percent in 1984. Three of the eight projects, Tribhuvandas Foundation, Jamkhed, and Agrindus ran counter to the trend by increasing their percentages of funding from outside sources.

For five of the projects, the first year entailed the largest budget of all years. These high initial capital costs help explain the difficulties of starting a health project. In response to the question, whether or not it is possible to start a community health program without external funding, four project directors responded, "No," and four said, "Yes." The four directors who felt that it was impossible to start without external assistance cited the lack of adequate knowledge or awareness of health needs on the part of local residents. Even if there were adequate resources available, they reasoned, it would not initially be possible to channel those resources into a health program. Moreover, argued these directors, no typical community has the resources to finance the initial investment.

Table 5.1
Amount and Percent of External Support, Internally Generated Funds by Project and Year of Operation
Amounts in thousands of Rupees

Project	Year	Total Funds	External Support	Percent External	Internal Support	Percent Internal
Trib. F.	1st yr	761	423	56	339	44
	1983	4,025	3,193	79	832	21
	1984	5,517	4,474	81	1,043	19
Jamkhed	1st yr	255	130	51	125	49
	1983	3,083	1,883	61	1,200	39
	1984	3,625	2,455	68	1,170	32
Adayar	1st yr	130	120	93	10	7
	1983	61	30	49	31	51
	1984	103	59	57	45	43
Ambi-likkai	1st yr	2,400	2,400	100	0	0
	1983	839	100	12	739	88
	1984	961	100	10	861	90
Kanga-zha	1st yr	1,402	1,402	100	0	0
	1983	1,100	1,000	90	100	10
	1984	753	737	98	17	2
Tilonia	1st yr	593	593	100	0	0
	1983	267	207	77	60	23
	1984	280	231	83	57 ?	17
Jaipur Trust	1st yr (1983)	1,019	1,014	99	5	1
	1984	152	86	56	66	44
Agrindus	1st yr	1	0	0	1	100
	1983	360	220	61	140	39
	1984	372	220	59	152	41
Total	1st yr	6,560	6,082	93	478	7
	1983	9,734	6,632	68	3,102	32
	1984	11,764	8,362	71	3,402	29

Source: Institutional Schedule

Table 5.2
Summary Financial Table and Rank Correlations
Amounts in thousands of Rupees

Project	Year Started	Population Served	1984 Budget	Per Capita Expenditure	Percent Funds Internal
Trib. F.	1980	427,500	5,517	12.92	19
Jamkhed	1971	250,000	3,625	14.50	32
Adayar	1971	20,462	103	5.03	43
Ambi-likkai	1976	124,000	961	7.75	90
Kanga-zha	1978	20,000	753	37.65	2
Tilonia	1972	80,000	280	3.50	17
Jaipur Trust	1983	99,167	152	1.53	44
Agrindus	1968	250,000	372	1.49	41

Spearman Rank Correlations

Variable	Variable	Rank Correlation
Percent Internally Funded	Year Started	.03
Percent Internally Funded	Population Served	.18
Percent Internally Funded	Budget Size	-.26
Percent Internally Funded	Per Capita Expenditure	-.45
Per Capita Expenditure	Year Started	-.22
Per Capita Expenditure	Population Served	-.09
Per Capita Expenditure	Budget Size	-.62

Source: Institutional Schedule

In contrast, four directors insisted that by motivating the community for self-reliance and involving them at each stage of the program development, it would be possible to start without external funds or with minimal outside

support. The main components of preventive and curative health can be provided without external assistance, they contended, but income-generating activities and comprehensive health care will require external funds. If the initial health workers, for whom only living expenses were provided, lived modestly within the community and slowly built the program, the pace would be slower than with external funds, but, they argued, a community health program can develop independently, nourished by its roots in the community.

Clearly, if the livelihoods, however modest, of those starting a program must be initially supported from outside the community, even those programs emphasizing community self-reliance from the inception cannot be absolutely independent. Also at issue are type of services, pace of development, and cost containment. We address the latter topic in detail below.

b. Support for Recurring Costs

Once a program has been established, is it possible to operate the program without external funds? To this question six directors responded affirmatively and only two negatively. Essential in any locally-sufficient program, insisted the majority would be peoples' awareness of their health needs, a condition clearly more difficult to achieve in tribal areas. A minority of the directors insisted that some type of subsidies would be needed for a prolonged period after initiation. "If I think about costs when I prescribe drugs for a patient, I may compromise his recovery," said one director at the workshop. "Self-sufficiency is not a reasonable goal for a community health program."

Since their inception, none of the eight projects have achieved complete self-sufficiency, but all projects raised more local funding in absolute terms in 1983 and 1984 than during their first year of operation (see the column Internal Support in Table 5.1). However, the absolute increase in the amount of local funding did not necessarily lead to a higher percentage of local versus external funding in the projects' total budgets. In fact, for several projects, despite increased local revenues, the percentage of local support decreased since the projects succeeded in attracting new external support (see the column Percent Internal in Table 5.1).

2. Government Financial Support

By far the most common type of external support received by the eight projects was governmental, either from the central or state level. The amounts of support were substantial, and the type of support highly variegated. In large part, the liberal government support derived from the explicit government policy of fostering voluntary agency involvement in areas of social and economic development to supplement government activities:

> "... during the Seventh Plan, serious efforts will be made to involve voluntary agencies in various development programmes, particularly in the planning and implementation of programs of rural development." (Planning Commission, Government of India 1985)

Table 5.3 summarizes the type of government support received by the eight projects. All projects received government vaccines, with the exception of Agrindus, which did not offer immunization services. The vaccines supplied were DPT, tetanus toxoid, polio, and BCG. Measles vaccine, heretofore supplied in

Tamil Nadu state by voluntary agencies, will soon be provided to the Adayar and Ambilikkai projects by the Tamil Nadu state government. With vaccines donated by the government, the Tribhuvandas Foundation has recently assumed complete responsibility for immunization activities in 60 villages.

For family planning, most projects received supplies, some received sterilization equipment, and in the case of Jamkhed, a grant for family planning beds. The Tribhuvandas Foundation conducted large sterilization camps in collaboration with the government and thereby helped its district achieve top family planning honors in the state. As an example of government and voluntary cooperation in family planning, Gujarat's State Health Minister, Vallabhbhai Patel recently called for free distribution of laparoscopes to voluntary agencies engaged in sterilization work (Hindustan Times 1986).

Other in-kind contributions included iron pills and medicines for tuberculosis, malaria, and leprosy; though as one director noted, the tuberculosis medicines fell far short of needs. Another collaborative activity was eye camps, in which the government paramedics worked closely with the project staff.

Support was by no means limited to in-kind contributions. For the Jaipur Trust program, the government paid half the monthly honoraria for the village health functionaries (50 Rs. per worker per 1,000 population) and 50 Rs. per worker per month for drugs (Baraya 1986). In the Adayar and Ambilikkai projects of Tamil Nadu, the state and the central governments have agreed to pay one-third each toward the cost of the project's mini-health centers (Ramaswamy and Sampath 1986). Kangazha was an exception, for the state government of Kerala makes no cash contributions to voluntary agencies (Joseph 1986).

Table 5.3
Nature of Government Support By Project

Project	Vaccines	Family Planning	Supple. Food	Medicines	Equipment	General Funds
Trib.F.	Yes	Yes	No	Yes	Yes	No
Jamkhed	Yes	Yes	No	Yes	No	No
Adayar	Yes	Yes	No	Yes	No	NO
Ambi-likkai	Yes	Yes	No	Yes	No	No
Kanghzha	Yes	Yes	No	No	No	No
Tilonia	Yes	Yes	No	Yes	No	No
Jaipur T.	Yes	Yes	Yes	Yes	No	No
Agrindus	No	No	No	Yes	No	No

Source: Institutional Schedule (completed by project management)

Training is an area where cooperation was a two-way street. Government personnel helped train project personnel, and in turn some projects assisted in

the training of government workers. For the Jaipur Trust, the government paid Rs. 200 to assist in the training of each village health worker (Jaipur Trust 1986).

Another area of mutual collaboration was patient referral. In Jamkhed, for example, community health workers referred patients to government centers, and government workers referred patients to Jamkhed clinics.

Despite the generous government support, half the projects objected strongly to the inordinate delay and irregular delivery of supplies. According to three directors, long delays also occurred for payments. Though some attributed the delays to conflicting interests of government bureaucrats in making illegal profits, others considered the delays as symptomatic of an endemic malady of bureacratization of the personnel, a lamentable, chronic disease difficult to cure but amenable to improvement.

3. Support from Non-Governmental External Donors

The majority of programs received some financial support from non-governmental external donors. In some cases the sums amounted to the programs' largest single source of income; in others the amount constituted a relatively small percentage of the total budget. Most programs reported no problems in dealing with external donors, though one project encountered a donor that insisted on vouchers for the most minute transactions. Some projects at the conclusion of funding, had been subjected to evaluation on terms they had not anticipated.

From the donor perspective, Dr. E. G. P. Haran (Project Manager, Private Voluntary Organizations for Health and Operations Research Specialist, Office of Health and Nutrition, USAID, India) pointed out that there were considerable funds from USAID and other sources available for health projects, but donors had a difficult job spending the money effectively. Some of the reasons were:

a. There is a lack of proper communication about the aid available and no examples of proposals or projects given in the communication to aid the would-be grantees in approaching the donors.

b. There is often a disjunction between what the donor wants and the grantee needs.

c. The size of the projects is often too small. The donor needs to give in large amounts to spend efficiently.

d. Government (both Indian and foreign) regulations may affect both the nature and time of a project.

e. Donors lack effective mechanisms for monitoring and evaluating projects (Haran 1986).

4. Community Financial Support

As stated above, the projects would ideally like to receive all their support from the communities they serve, both to achieve maximum freedom and to ensure project continuity. The task of raising more financial support from the community is therefore a common goal of all projects. Table 5.3 displays the sources of funds generated internally by project.

Labor was perhaps the single largest local contribution, though it was the most difficult to quantify. Health education and promotion was one of the most time-consuming. Hours contributed for construction and maintenance of facilites, and time given to assist in service delivery were also important. Village women's organizations, in particular, supported health education, environmental sanitation, kitchen gardening, afforestation, and nutrition programs, as well as immunization, family planning, and eye camps.

Some projects received land and buildings donated in kind by local individuals or groups. (Two projects had this provision as a condition for providing health care.) Though it is difficult to calculate the value of such donations, the costs of alternative land or buildings would have constituted a significant part of the budgets.

Two projects, Tribhuvandas Foundation and Adayar, charged fees for membership or health insurance. Tilonia has started the practice on a trial basis after data collection ended (Joshi 1986), and both Ambilikkai (Cherian 1986) and the Jaipur Trust (Baraya 1986) planned to begin collecting membership fees in 1986.

The Tribhuvandas Foundation charged Rs.1 per month or Rs.10 per year. For those who were members of the milk cooperatives, deducting the Rs.10 from the milk bonus in July proved to be far more efficient than door-to-door collection. Some milk societies automatically deducted the membership fee from each milk cooperative member's account and transferred the sum from all members to the Foundation. Other village milk cooperatives insisted that a staff member of the Foundation be present at the milk cooperative to receive the Rs.10 from each member after the bonus was paid. For non-members of the milk cooperatives, the village health worker and project field staff visit door to door to collect membership fees. Originally, Tribhuvandas Foundation helped establish community-wide village health committees to supervise the village health workers and promote health activities. However, experience showed that committee members who were not members of the milk cooperative were reluctant to attend committee meetings. Subsequently the village milk cooperatives assumed responsibility for the program in the village. From the first year of operation, when the prepayments consituted only 2.4 percent of total program income, prepaid membeship fees have grown to be 30 percent of the budget in the most recent year of operation.

Table 5.4
Internally Generated Funds by Project, By Source and by Year
(Amounts in Thousands of Rupees)

Project	Year	Member Fees	Drug Sales	Community Donation	Service Charges	Income Gen.Act.	Other	T
Trib.F.	1st yr	46	60	2	2	---	---	1
	1983	108	113	8	---	---	---	2
	1984	126	166	32	---	---	---	3
Jamkhed	1st yr	---	---	---	125	---	---	1
	1983	---	---	---	1,000	---	200	1,2
	1984	---	---	---	1,020	---	150	1,1
Adayar	1st yr	10	---	---	---	---	---	
	1983	17		11	3			
	1984	22		19	3			
Ambi-likkai	1st yr	---	---	---	---	---	---	-
	1983	2	52	5	5	50	625	7
	1984	2	66	17	6	60	81	8
Kan-gazha	1st yr	---	---	---	---	---	---	-
	1983	21	16	2	49	12	---	-
	1984	17	---	---	---	---	---	
Tilonia	1st yr	---	---	---	---	---	---	-
	1983	---	60	---	---	---	---	-
	1984	---	57	---	---	---	---	
Jaipur Trust	1st yr	---	---	---	---	---	---	-
	1983	---	---	3	---	---	2	
	1984	---	---	7	---	---	59	
Agrin-dus	1st yr	---	1	---	---	---	---	
	1983	---	140	---	---	---	---	1
	1984	---	152	---	---	---	---	1

Source: Institutional Schedule

The Adayar project charged a minimal annual insurance fee of Rs.12 for those with a monthly family income below Rs.300. The fee was scaled upward to a maximum of Rs.300 per year for those earning Rs.2,500 or more. The multi-purpose health workers from the mini health centers collected the insurance fee through home visits programmed 20 visits per day, 3 days per week. Since there were two multi-purpose workers per mini health center, they contacted about 120 families per week and reached all 1,000 families served by their center in about 8 to 10 weeks (Ramaswamy and Sampath 1986). One of the major attractions for members was the high quality of service provided not only by the mini-health-center but also by the referral hospital. Nonetheless, for those who had been lucky enough to remain healthy, there was a tendency not to re-enroll. Thus the subscriber rate has remained about 60 percent of families in the areas served.

There was a local action committee responsible for each mini health center, but the Adayar project as of this writing was not yet satisfied with the level of community participation achieved. In 1984 the insurance fees constituted 50 percent of locally generated funds and 25 percent of total income.

Drug and service fees were a significant part of local income for nearly all projects, but such fees or co-payments were of course much less important for projects with prepayment schemes. For some projects such as Jamkhed, the payments for services received constituted the largest source of local funds and in effect served as a subsidy both for those who could not pay and for most preventive services.

Income-generation activities -- Some projects have established successful income generation activities, such as handicrafts, handlooms, and leather crafts. Most of these activities directly benefited the individuals involved rather than the programs. Nonetheless, the income-generation activities had major indirect benefit for the programs, by enabling the users both to obtain more food, shelter, and clothing and to afford the health project services. Bareilly Hospital in Uttar Pradesh has established a diagnostic laboratory for blood, stool exams, etc. People have become increasingly aware of the need for exams and willing to pay for them. The laboratory is now a source of income for community health activities (Shaw 1986).

5. Setting user fees by type of service and type of client

Apart from setting prepayment fees, if any, managers must decide a) how much to charge for each type of service, and b) whether or not to charge all clients the same fees.

a. By type of service

De Ferranti has categorized health services in three types: 1) Curative care; 2) Preventive services (patient-related), e.g. immunizations; and 3) Preventive services (non-patient-related), e.g. sanitation, control of pests and parasitic diseases. Under curative care he would include outpatient and inpatient services, rehabilitative services, and most drug sales. Curative care absorbs by far the largest share of health resources and is the easiest type of service for which to charge. In fact, as De Ferranti observes, it is virtually impossible to charge for non-patient-related preventive care since people who chose not to pay would nonetheless benefit from the services. Preventive services that are patient-related are much easier to charge for. Clearly, one can identify the child who receives an immunization, whereas it is difficult if not impossible to identify those who avoid malaria because mosquitos breeding places have been destroyed. It may or may not be true that people are less interested in paying for preventive than curative services and that present disability and pain are far more cogent persuaders than hypothetical future problems. But it is by no means certain that people are unwilling to pay for patient-related preventive services. Witness the recent boom in sales of condoms after the advent of AIDS. Immunizations and some other preventable services have "transmission externalities," i.e. benefits for society beyond those for the individual patients. These benefits are arguments for providing such services at low cost, zero cost, or even negative cost (material benefits or incentives for patients). (De Ferranti 1985).

In interest of program efficiency, De Ferranti has concluded that for

curative services, developing country programs should generally charge clients the marginal costs of providing the services. Though it is not practical to charge for non-patient-related preventive services, programs should try to recoup costs for patiente-related preventive services from those who can afford to pay.

Most of the eight programs made some charge for curative services. Adayar, however, charged no fee whatsoever other than the insurance fee, even if the patient was hospitalized. Some programs such as Jamkhed charged more than marginal cost for curative services in order the subsidize preventive services. For patient-related preventive services, programs did not charge for immunizations. Though the government provided free vaccines, the programs absorbed the costs of delivering the vaccines. For family planning, far from charging patients, the programs passed on the government-provided benefits such as blankets to the clients. Prenatal care and growth monitoring were generally provided free at the community level. In terms of nutritional supplemtns, when programs provided famine relief or distributed government rations, they did not charge. The Tribhuvandas Foundation, however, charged a nominal fee of 10 paisa for 75 grams of food for malnourished children.

In setting levels for charges, note that no program is without competition from other health providers. However, the charges for consultation and drugs by other providers may not be the whole story. One must consider travel costs plus opportunity costs for the time spent traveling and waiting for services from alternative providers. Note that even government services were not generally free since respondents report having to pay consultation fees at government clinics. Moreover, travel to government clinics entails patient opportunity costs.

b. By type of client

Most directors thought that project charges should be levied in accordance with ability to pay rather than equal charges for all. One director thought that the best way to implement different charges would to be have only two categories: poor and not poor, with free service for the poor and the same schedule of charges for everyone else.

The overwhelming majority of staff members echoed the viewpoint of the directors: 64 percent thought that charges should be cheaper for the poor, and an additional 15 percent felt that the poor should not pay at all. Only 21 percent thought charges should be equal for everyone.

Although charging hospital fees in accordance with the ability of clients to pay may generate substantial discretionary funds, the project experience showed it was difficult to subsidize entire projects in this manner. Some projects charged up to ten times more for wealthy hospital patients. Yet directors reported that the affluent tended to be more demanding and require more service than the poor. Thus, unless a project is associated with a very unusual hospital, it is difficult to subsidize an entire program through a hospital.

c. Setting Prepayment Fees

Community members associated with projects that charged a membership or insurance fee were asked whether or not they thought the coverage charge was

"too high, about right, or too low." Almost two-thirds (65 percent) thought that the charge was about right. Most of the remaining respondents (32.2 percent of the total) thought that the fee was too high, and only 2.8 percent thought the fee was too low.

When asked how much the monthly subscription should be, the respondents suggested fees ranging from 0 to 8 rupees per month. For those who suggested a charge greater than zero, the average suggested charge was 2.4 rupees per month. Note that this average was higher than the current charges of the Tribhuvandas Foundation and higher than the minimum fee charged by Adayar.

In a narrow view of risk-sharing programs, becoming a member of a prepaid health or risk-sharing scheme is a wager that one's family will become sick. One respondent explicitly stated that she became a member because of her frequent illnesses. She thought the probability was high that she would take good advantage of the program's services. Convesely, not joining may be a wager that one's family will have good health and not need the services. We explored reasons for not joining with the indirect approach described below.

TABLE 5.5

Percentage of responses to the question "Why do you think others in this village do not become members?" Community Members Questionnaire, Item 511.

Reason others do not become members	Total %	T. Found. %	Adayar %
Cannot afford to pay.....	85	89	80
Program does not provide needed services.....	10	4	18
Program does not provide medicines and drugs.....	4	0	10
Program personnel not available.....	3	2	5
Program personnel not competent.....	2	2	3
Program personnel favor special group.....	1	2	0
Number of respondents	(93)	(53)	(40)

Source: Community Members Survey, Item 511
Note: Because respondents were permitted multiple responses, the percentages sum to more than 100.

It may be embarrassing for respondents to refer to their own financial situations. In order to obtain an indirect but perhaps more telling indication of the difficulties of charging for membership, we asked respondents why other members of the community did not become members (subscribers). The response that others could not afford to pay was the most frequent of all responses. 85 percent cited inability to pay as a reason for not joining, whereas the next most frequently mentioned reason, that the program did not provide the services they needed, was mentioned by only 10 percent of the respondents. Four percent said the program did not provide medicines and drugs, only three percent said the program personnel were not available; one percent that the program personnel were not competent and only one percent said that program personnel favored a special group. One respondent said that others have more faith in a private doctor, and another respondent thought that the affluent would not use either the program or the government maternal health clinic (MHC).

6. Seasonal and cyclical variation in income

In response to the question of how to meet seasonal and cyclical variations in income, several project directors suggested the establishment of a reserve fund. One director endorsed the idea of a reserve fund but felt that in addition programs should help promote dams, crop diversification, and other initiatives to prevent natural calamities from having a disastrous effect on local income.

C. Equity: Equal Access to Health Resources

We consider here some of the ways the eight projects worked to achieve equity.

1. **Offering health services in the community** -- Probably the most significant contribution to equity made by all eight health projects is to offer health services in the villages themselves, close at hand to the rural poor. For the landless laborer the chance to obtain health services literally at his doorstep is often the chance for health service he would otherwise be forced to forego. Consider the landless village laborer for whom every day's wage is crucial for feeding his family. A trip to town, apart from the cost of transportation, means he cannot work at his normal job and must forego earnings that day. Unless he is disabled, he will not stop working to seek help. His wife may also be employed in daily labor and will similarly be hard pressed to leave her work. Prenatal care at a distant town clinic is a luxury she may never be able to afford even if the care itself is offered free.

2. Charging for services according to the ability of people to pay -- All eight projects made some allowance for differences in ability to pay. Tribhuvandas Foundation, for example, charged no fees for about 20 percent of clients. Jamkhed charged for curative services according to the doctors' judgment of the client's ability to pay. The differences in charges constituted not only a way of distributing health resources to those who would otherwise not be able to pay, but also a way of increasing revenues from more affluent clients. However, there was a practical limit beyond which projects could not charge affluent clients, lest they lose clients to other private sources.

3. **Charging by type of service** --and offering some preventive services such as family planning at negative prices, i.e. with material benefits for the family planning acceptor.

4. **Risk-sharing** through prepayment plans, either insurance or cooperatives -- Adayar and Tribhuvandas Foundation offered health coverage through risk sharing plans. The plans offered all participants basic coverage but had a safety net of referral for hospital care (at no additional cost in the case of Adayar). Thus a person who suffered a catastrophic illness was protected. On the other hand, a family with no health problems received only basic preventive services. These risk-sharing plans distributed health resources in accordance with health needs, but they also had the net affect of increasing equity since many of those served would not have otherwise received service.

5. **Income generation** -- All projects recognized the need for assisting community members achieve general economic self-reliance. More income would allow them to afford better food and also put families in a better position to afford health services.

D. Cost Containment -- How to Reduce Costs

The other side to raising funds to meet expenses is to reduce costs. In fact, some programs have found it far easier to reduce costs than to raise a commensurate amount of funds. This is particularly true for recurring expenses for which funds must be raised every year.

1. Per capita Expenditures

The annual per capita expenditures of the eight projects ranged from Rs. 1.49 to Rs. 37.65. Though one might expect some economy of scale to operate and although the project serving the smallest population did in fact have the highest per capita expenditures, there the rank correlation between the size of the population served and per capita expenditure was only -.09. Nor was there a meaningful correlation between the age of the project and the per capita expenditures (-.22). However, there was a small tendency for projects with high percentages of external funds and those with large budgets to have large per capita expenditures (Table 5.2)

2. The Edifice Complex

The first expenditure many community health programs consider is the acquisition or construction of a building to house their training, clinical, and administrative services. So obsessive is the desire of some program initiators to acquire (and some donors to finance) buildings that we dub this fascination with brick and mortor the Edifice Complex. If purchased or constructed, one or more buildings of any useful size constitute a major investment.

Project directors urged caution in purchasing or constructing buildings. Even with superb program leadership, the project directors considered the success of a community health program highly unpredictable. If a building were purchased or constructed, it might become a standing monument to the program's failure, difficult to sell at any reasonable price (Joseph 1986). The funds invested in a building might be better spent on developing the program. Although programs need some space for their activities, a program without a building is better than a building without a program.

Instead of purchasing or constructing a building, directors and workshop participants suggested using buildings contributed by the community whenever

possible, although Adayar has found that some communities could not contribute satisfactory buildings. In the Narangwal project, the community contributed buildings for subcenters and feeding stations (Taylor et al 1984). Other projects have used school buildings (Pandey 1986). At least initially, one solution is to rent buildings. Except for its main center, the Agrindus project has done without buildings of its own. If one does construct a building, one can build a simple structure as the Jaipur Trust plans to do and construct it in such a way that the building can be used for activities in addition to health.

3. Reducing Transport Costs

Several of the projects used four-wheel vehicles for transport. Though the four-wheel vehicles had capacity for multiple passengers and cargo, were relatively safe, and could be used to carry patients, they required high initial investment and burdensome maintenance. Drivers hired for them required competitive salaries.

Other projects reported good results using two-wheel vehicles. One project even passed the capital costs on to the staff by loaning them funds to purchase the vehicles. Since the staff owned the vehicles, they maintained them well. Fuel costs were less, and the project simply paid the staff mileage costs. There were no drivers to hire, and even the female project staff overcame their initial reticence to drive the vehicles (Sundaram 1986).

4. Lowering Drug Costs

Drug costs represented a high recurring cost for the projects. One solution to the high costs was to use biochemical medicines as in the Tilonia project, where the annual drug costs dropped from Rs.110,000 to Rs.30,000 (Joshi 1986). For allopathic drugs, Dr. E.B. Sundaram, Director of the Naujhil Integrated Rural Project for Health and Development, suggested a threefold approach:

1) Restrict drug purchases to the basic drugs recommended by W.H.O.
2) Purchase from suppliers at competitive prices
3) Distribute through project and commercial channels where prices can be monitored (Sundaram 1986)

Another approach is to establish a revolving drug fund managed in such a way as to take account of rising drug prices.

5. Mobilising Existing Government Resources

Rather than invest their own funds, several projects found they were able to mobilise existing but underutilized government funds. In some cases it was a matter of making people aware of opportunities. In other cases, projects have become executing agencies for the government. For example, Agrindus assumed responsibility for distributing food rations in a project area, where previously only one percent of available rations had been distributed (Clements 1983, p.24).

E. Conclusions

For enterprises that are essentially labor rather than capital intensive, voluntary primary health care projects confronted a myriad of resource problems. In particular, attracting initial capital, however small that capital might be, constituted a major obstacle at the inception of a program. Essentially there were three approaches to financing a project. First, all projects raised some funds and in-kind assistance from outside the community. The amount of the external help and the projects' dependence on it varied greatly. Both government and non-government sources were important. Second, the projects obtained resources from a variety of local sources. These sources included donations of land and buildings, fees for drugs and services, and membership and insurance fees. Third, projects pursued a policy of relentless cost containment; they cut expenses by using existing buildings, cheaper transportation and medicines and by developing local personnel rather than hiring outside professsionals.

These approaches were not mutually exclusive, but there was a decided difference of emphasis among the eight projects. Some projects emphasized that the key to meeting initial and recurring costs was to eschew the need for large capital infusions by designing health programs to operate on a nearly self-sufficient basis. Several programs have come close to achieving total reliance upon the community, but they acknowledge that developing such independence did not prove to be a swift process. Community education and training of indigenous personnel, the foundation stones for self-reliance, required large investments of time. For example, the training of the gramin doctors in the Agrindus project required two years. The time of people with vision and ability to invest in the training of indiginous personnel is itself a scarce resource. The investment, like any other capital cost, must realistically be amortized, i.e. depreciated, each year to account for the need in some future year to retrain or replace the worker. Nonetheless, the cost of such amortization of the training investment is likely to be less than the annual cost for hiring outside professionals.

Thus projects which hire outside professionals are able to obtain higher coverage more rapidly than projects which train local personnel, but more rapid coverage is purchased at the price of higher recurring costs. On the other hand, training indigenous personnel requires a larger investment in terms of training costs and takes more time, though recurring costs are lower than hiring outside professionals. It is an open question how best to combine the two strategies by hiring outside professionals and training indigenous personnel to produce the most effective program.

Factors such as community acceptance of the personnel, interest and dedication of the personnel, and appropriateness of the training are all factors one would have to weigh. In practice, as we have pointed out, no project incorporates one approach entirely. All hire some outsiders and train some local personnel.

The single most difficult financial problem cited by the project directors was how to achieve greater community self-reliance. In particular, how can programs involve community members in contributing toward the cost of preventive health services disassociated from current health problems and in developing resources for treating incurable diseases like blindness? Local organizations such as milk cooperatives, panchayats, and women's clubs proved to be important

resource bases. Where such organizations did not already exist, the health projects found it worthwhile to create new organizations or revitalize old ones. For collecton of membership or health insurance prepayments and for health education such organizations proved to be valuable assets. Lack of such an organization may not be an insuperable barrier. One technique suggested but not yet tried in practice was to commission in each community a local bonded representative to solicit payments. Any technique which promises more efficient fund collection warrants close attention. However, experience seems to indicate that the fundamental basis for any local funding is local organization. The programs that have been most successful in obtaining local financial support are also those which have been successful in establishing strong local organizations or in associating themselves with strong existing organizations. We turn to the subject of organization in the next chapter.

Chapter VI Organizational Problems

Chapter Outline:

A. Introduction
B. Organizational patterns -- the variables
C. Organizational patterns -- the findings

1. Types -- Theoretical and Actual
2. Project Descriptions
3. Number of Organizational Levels
4. Project Rationale for Organization Structure
5. Problems encountered

D. Community participation

1. The Rationale for Stressing Community Participation

2. Breadth of Participation (Coverage)

a. Attractions for participation

1) Availability of service

2) Quality of staff

3) Supplementary food

4) Hospital referral

b. Impediments and reasons for dropout

1) Poverty and Affluence

2) Illiteracy and Lack of awareness of program

3) Caste structure and organization of the community

4) Health considered as a low priority

5) Vested interests

6) Poor quality and inadequate quantity of services

2. Depth of participation

E. Initial Program Focus for Community Health Programs

F. Conclusions

A. Introduction

How a community health program is to be organized: what type of organization will plan, administer, promote, and deliver the health services? Since Alma Alta, increasing emphasis has been placed on community participation in all aspects of organization. On one dimension programs are interested in achieving broad community participation, the inclusion of all socio-economic sectors within the community and of a high percentage of the population. On a second dimension, programs strive for depth or quality of participation, participation of community members in planning, decision-making, and administering a community health program. This chapter examines types of organizational structure and the relationship of that structure to both breadth and depth of community participation.

B. Organizational Patterns -- the Variables

A basic organizational question is what type of organization should exist on the local level. The type of local level organization will often determine the nature and extent of local participation and much of the character of the services offered.

Description of variables used to classify organizational structure of the projects

1) **New or previously existing local organization:**
Does the project help revitalize existing local organizations and encourage them to include health as one of their activities, or does the project attempt to start entirely new organizations?

2) **Related or not related to another local organization:**
Does the local organization relate in some way to one or more other local organizations such as the village council or milk society or is the local health organization independent of other local organizations? Note that this variable concerns local or horizontal relationships within the proximate community as opposed to organizations outside the community.

3) **Single or multi-purpose:** Does the local organization have health as its only purpose or does it have other purposes such as agricultural development, savings and credit, etc.?

4) **Number of hierarchical levels of organization:** In how many levels of organizational structure do community members participate? The levels of health service may or may not correspond to the number of levels of community participation. Do the local organizations have representation at intermediate or central levels of the project, or is the local level the only level at which the public participates?

5) **Breadth of community participation:** Breadth refers to the coverage or percentage of the community members participating in the project and the degree of coverage across socio-economic strata. The larger the percentage participating and the more segments of the community participating, the greater the breadth.

6) **Depth of community participation:** Depth has to do with the extent of participation, the number of activities, the amount of decicsion-making, and

the extent of financial involvement of the community members, independent of the proportion of the community participating.

C. Organizational Patterns -- The Findings

1. Types -- Theoretical and Actual

Among the first three organizational variables, each dichotomous, there are eight theoretical possibilities:

*1. New, related, single-purpose
2. New, related, multi-purpose
*3. New, not related, single purpose
*4. New, not related, multi-purpose
5. Old, related, single-purpose
*6. Old, related, multi-purpose
7. Old, not related, single purpose
8. Old, not related, multi-purpose

A ninth possibility is to have no local community organization and to have project activities implemented by central-level staff and volunteers unrelated to local organizations.

9. No local organization

* Present among the health projects studied

Although all nine types are theoretically possible, in fact, we found only four of the nine types among the projects.

The four types represented were:

1) **Old, related, multi-purpose:** A previously existing local organization, related to other organizations and multi-purpose: examples were the village councils (panchayats) or revitalized committees of the councils, the Aryogyasmithis. Examples: Tilonia, Jaipur

2) **New, related, single-purpose:** Examples were independent health committees whose members were primarily or entirely derived from the village milk cooperatives. Example: Tribhuvandas Foundation, Jaipur, Kangazha

3) **New, unrelated, multi-purpose:** Mahila Mandels (women's clubs), Young Farmers' Clubs, Peoples' Committees, organized by the project. Example: Jamkhed, Ambilikkai, Agrindus

4) **New, unrelated, single-purpose:** Example, Adayar

Table 6.1

Summary of the Health Projects according to the Organizational Variables

	Organizational Variables			
Project	Related/ Not Related	New/ Old	Single-/ Multi-Purpose	Levels of Org. Partic.
T. Found....	Related to milk society	New	Single-Purpose	1 +
Jamkhed.....	Unrelated	New	Multi-Purpose	1
Adayar.....	Unrelated	New	Single-Purpose	1
Ambilikkai..	Unrelated	New + Old	Multi-Purpose	1
Kangazha....	Related to churches	New	Single	3
Tilonia.....	Related to multiple groups	Old	Multi-Purpose	1
Jaipur.....	Related to panchayats, Dev.blocks, Milk Scty.	New + Old	Multi- and Single-Purpose	1
Agrindus....	Unrelated	New	Multi-Purpose	3

SOURCE: Project case studies

2. Project Organization

The eight projects adopted varied strategies in regard to local organizations:

The Tribhuvandas Foundation, starting with members of the local milk cooperatives, attempted to form new, single-purpose health committees representative of the entire village, not just the milk cooperatives. However, the non-members of the milk cooperative, for whatever reason, did not participate actively. Perhaps they did not feel welcome or perhaps they lacked

interest. In any case, now, in almost all villages, the local health committee consists only of members of the milk cooperative (Vyas 1986). In the strictest sense, the health committees have no representation beyond the local level. There is no user representation at the intermediate level corresponding to the staff field workers. However, at the central level, the President of the Cooperative Union, the elected representative of 900 milk cooperatives in the district, serves on the Tribhuvandas Foundation Board of Directors.

The Jamkhed project from its inception helped start new local organizations to run food kitchens. Jamkhed has continued to emphasize new local organizations, in particular Mahila Mandels (women's clubs) and Young Farmers Clubs. These organizations encompass multiple purposes including health. There is no formal representation above the local level, but Jamkhed seeks to tap local groups for informal policy direction.

The Adayar project has started new, single-purpose, local health committees. The multi-purpose workers at the Mini Health Centers are primarily responsible for organizing the committees. In spite of the project's insistence that the program belongs to the people, participation has not met the project leaders' expectations (Voluntary Health Services 1986, 13).

The Ambilikkai project has organized new village organizations or encouraged existing ones, mainly multi-purpose youth and ladies clubs (Cherian 1986, 2).

The Kangazha project relates to existing local organizations such as church congregations (Joseph 1986). In addition, village Health and Development Promoters (HDPs) conduct biweekly meetings of program users. Every month there is a meeting of all HDPs in a supervisory unit to make suggestions and recommendations (Joseph no date, 2).

In Tilonia, the staff is very integrated in the community and have not established a local organization specifically for health activities. The staff works with multiple groups including leather-working cooperatives, and organizations for families attending evening schools.

The Jaipur Trust, as a new and evolving project, plans to develop new, single-purpose village health committees associated with the local milk cooperatives. Until now the project has worked with village councils (panchayats) and government community development organizations at the block level.

Agrindus has perhaps the most elaborate organizational scheme of the eight projects. The organization consists of three levels. In order to achieve Gramswaraj (village self-authority) at the village level, Agrindus has helped establish a Gram Swarajya Sabha (Peoples' Committee or Village Council), with a representative from each family. The Gram Swarajya Sabha oversees all village development activities, including health-related activities, and resolves village disputes. About two-thirds of the villages have Gram Swarajya Sabhas. Every 15 to 30 villages form a Kendra (cluster or pocket), with a Kshetriya Swarajya Sabha consisting of the chairmen and secretaries of the Gram Swarajya Sabhas in the area. The Kshetriya Swarajya Sabhas coordinate activities among villages in the area and settle larger or more difficult disputes. At the highest level and concerned with overall project planning, is the Kendriya Swarajya Sabha formed by representatives from each cluster and some of the Agrindus staff (Ragini Prem 1974, 9; Agricultural Finance Commission 1980, 9-12; Clements 1983, 23-4).

3. Number of Organizational Levels

Note that although all eight projects have three tiers of service delivery, only three projects, Tribhuvandas Foundation, Kangazha and Agrindus, have two or more levels of organized community participation. Most have community participation at the village level only. Since many project activities are planned at a higher level than the village, it would seem to follow that users in projects in community participation at higher levels than the village would have more imput in program planning than in the other projects.

4. Project Rationale for specific types of local organizations

Some organizations had an explicit rationale for the type of organizational structure they selected. The Tribhuvandas Foundation, for example, followed the experience garnered over many years by the National Dairy Development Board (NDDB). The NDDB strongly advocates single-purpose rather than multi-purpose cooperatives. In a multi-purpose cooperative, contends the NDDB, a single unsuccessful activity can bring the entire organization to financial ruin, even though the remainder of the organization's activities are economically viable. The solution, says the NDDB, is to isolate financially the various activities, so that, at least in economic terms, each activity stands or falls on its own. The economic isolation need not preclude economic or technical assistance from sister organizations, but such assistance will be limited, and the accounts of the two organizations must be strictly separate.

Agrindus, for its part, is strongly committed to the self-reliant village and to the active participation of the village community in both the provision of services and in decision-making. While such an ideology does not preclude single-purpose organizations, it stresses the interrelationshops of development activities.

D. Community Participation

1. The Rationale for Community Participation

In the last ten years the community health field has manifested an increasing interest in achieving community participation. Alastair T. White (White 1982) has presented ten propositions for the case for community participation:

1) More will be accomplished

2) Services will be provided at lower cost

Note: Skeptics argue that community participation merely transfers the cost from well-to-do to the poor. However, if the participation results in lower total delivery costs, counting both opportunity costs for patients and delivery per se, then net cost may be lower in every sense. There is clearly a possibility for reducing patient opportunity costs if services can be delivered in the village. All-day travel to a town clinic may result in loss of an entire day's wage plus transportation costs.

On the benefit side, if services can be delivered earlier, either as preventive or early curative services, then the service may be more effective and thus more valuable.

3) Participation has an intrinsic value for participants

4) Participation is a catalyst for further development efforts

5) Participation leads to a sense of responsibility for the project

6) Participation guarantees that a felt need is involved

7) Participation ensures things are done the right way

8) Participation helps facilitate use of indigenous knowledge and expertise

9) Participation gives freedom from dependence on professionals

10) Participation facilitates conscientization

2. Breadth of Participation

a. Attractions for participation in community health programs

To investigate the positive side or attractions to community partiicpation in health programs we used three data sources: 1) interviews with community members, 2) project staff members, and 3) project directors.

We asked community residents who were project members, "Why did you become a member?" (Community Members Questionnaire, Item 507)

We asked staff, "What do you think is the most important motivating factor for villagers to participate (and become members in the project)? (Staff Questionnaire, Item 304)

We asked the directors, "What do you think is the most important motivating factor for villagers to participate and (become members of the project)?" (Directors' Questionnaire, Item 306).

1) Availability of service

We examine first why members joined prepayment health plans in projects where such plans were offered. Table 6.2 presents community members' responses to the question, "Why did you become a member?" The largest percentages of the members (76 and 70 percent) cited "services at hand" and "first aid." Nine percent mentioned "to obtain medicines in the village." All of these responses we interpret to mean the ready availability of services.

Similarly, the overwhelming majority of the staff pointed out the advantage of the availability of program workers. 50 percent emphasized that health services were available at the villager's door step, and 24 percent said that the VHF in particular was always available. As one staff member pointed out, the availability of the health workers contrasted sharply with the scarcity of other services in the village.

Directors, like the members and staff, stressed the availability of services at the members' "doorstep," coupled with referral facilities for serious health needs -- all at a reasonable cost. The availability of services was attractive, insisted these directors, but it was the complete health service package which drew members.

TABLE 6.2

Percentage of responses to the question, "Why did you become a member?" Community Members Questionnaire, Question 507 (Responses are for the Tribhuvandas Foundation and Adayar Project only.)

Reason for joining	Total %	T. Found. %	Adayar %
Services at hand	76	70	85
First aid	70	72	67
Supplementary food	46	61	24
Good treatment	42	52	27
Possibility of hospital referral	41	39	42
Easy communication with project staff	19	4	39
Project leadership persuaded me	13	0	30
To obtain medicines in village	9	9	9
Through friends and neighbors	8	2	15
To help promote the health of the village	8	13	0
To get economic benefits	5	9	0
Village leadership persuaded me	1	2	0
Number of respondents	(79)	(46)	(33)

Source: Community Members Questionnaire 507
Note: Since multiple responses were permitted, percentages add to more than 100.

2) Quality of staff and services

"Good treatment" was what many health plan members cited as a reason for joining. 19 percent also mentioned "easy communication with staff."

Three staff members explained that the success of their program derived from the dedication, commitment, and good behavior of the staff, which in turn elicited faith on the part of the people.

One director emphasized that it was the manner in which the services were delivered as well as their availability which constituted their major attraction: " ... **the humaneness of the health workers expressed through frequent home visits by the village level workers and the personableness and sincerity of the visiting nurse and doctor.**"

3) Supplementary food

Only the Tribhuvandas Foundation offered supplementary food on a systematic basis, but in that program, 61 percent of respondents cited supplementary food as a motive for joining (Table 6.2). Even though supplementary food played a minor role in Adayar's services, 24 percent of Adayar members cited supplementary food as a reason for associating with the project.

Several staff members in the Tribhuvandas Foundation reported that once supplementary feeding for children was introduced as program service, recruiting for membership became much easier. While it might be an exaggeration to say that people joined only for supplementary food, the staff thought villagers did see supplementary food as a very attractive benefit. For a great number of families, the food probably made the difference between joining and not joining.

4) Hospital referral

Both Tribhuvandas Foundation and Adayar offered referral to major hospitals as a membership privilege. In the caseof Adayar, all hospital care was paid as part of the membership fee. For the Tribhuvandas Foundation, patients referred to the hospital paid nearly the normal hospital rates but received special attention in terms of continuity of care. At discharge, the hospital referred patients back to the project with written explanation of the care provided and instructions for continuing care. The survey showed that a substantial percentage of respondents in both projects appreciated this benefit. 39 percent of respondents in communities served by the the Tribhuvandas Foundation and 42 percent in villages of the Adayar project, cited hospital referral as a reason for joining.

5) Liberation and other reasons

Two directors stressed the internal "liberation" the project brought to the poor majority and the way in which the project minimized the inequalities in society. One director and 7 percent of staff felt that income-generating activities were a major attraction. When people have an opportunity to earn sufficient money to cover their basic needs for food, shelter, and clothing, they also help cover their health needs. Health without attention to income-generation is too narrowly focused, argued many staff and directors. Finally, one director cited the "identification with the program when people have a feeling that they are not just recipients but also planners and implementors of

the program."

b. Impediments to participation and reasons for dropout

To investigate the negative side, reasons for not participating, we asked community members the indirect question about others' reasons in hope of obtaining more objective responses than might have been obtained by asking directly for the respondents' reasons. (One of the authors had used the same type of indirect technique in Mexico in a study of breastfeeding. In Mexico no respondents mentioned that they themselves failed to breastfeed because of concern for their figures, but a very high percentage of urban respondents said maintaining their figures was the reason for other women.)

TABLE 6.3

Percentage of responses to the question "Why do you think others in this village do not become members?" Community Members Questionnaire, Item 511.

Reason others do not become members	Total %	T. Found. %	Adayar %
Cannot afford to pay.....	85	89	80
Program does not provide needed services.....	10	4	18
Program does not provide medicines and drugs.....	4	0	10
Program personnel not available.....	3	2	5
Program personnel not competent.....	2	2	3
Program personnel favor special group.....	1	2	0
Number of respondents	(93)	(53)	(40)

Source: Community Members Survey, Item 511
Note: Because respondents were permitted multiple responses, the percentages sum to more than 100.

1) Poverty and affluence

When community members were asked why others do not join, by far the most frequently cited response (85 percent) was that others could not afford to pay (Table 6.3). The other responses such as "program does not provide needed services" -- 10 percent and "program does not provide medicines and drugs" -- 4 percent were at least far less salient in the respondents' minds.

In Adayar, 12 of the respondents were former members of the program. We asked them, "Why did you not continue as a member?" (Question 502). Nine of the twelve or three quarters said they could not afford to continue. But another respondent said her brother, financially well established, had assumed responsibility for their health needs.

A substantial percentage of the staff, 15 percent, thought the failure of community members to avail themselves of the program services had to do with money, either the lack of funds to pay or inappropriate charging policies. Six staff members replied that people simply could not afford to pay: "The very poor can't pay." "They have no money to pay membership." Another four staff members attributed the lack of participation to inappropriate charging methods: "Earlier the treatment was free (for three years). That is why some people are reluctant to pay now." "We charge less that's why some people think that our medicines are less effective." "People want to pay the minimum irrespective of ability to pay." "People want to pay the maintenance; they don't want sliding scale." All these respondents thought that a different fee structure would elicit more participation.

By far the largest number of staff members explained lack of participation in terms of reasons of affluent community members. 32 percent of the staff replied that the more well-to-do villagers have private doctors and therefore do not want to use the program services. In a related vein, 16 percent said that the VHF lacks professional training, and 7 percent pointed out that using the program does not fit with some villagers' idea of prestige.

The directors were generally concerned about poverty as a deterrent to participation. One director stressed that although poverty was a problem in an objective sense, that health did indeed compete with other necessities for the small funds available in household budgets, another part of the problem was subjective, that some people considered that their poverty justified their getting services free. This attitudinal problem was particularly acute in Kangazha, where many services were originally free.

Affluence was an impediment to broad community participation in another sense. In some projects, local organization members tended to represent more affluent classes, and although they were not threatened by the health project activities, neither did they or their families benefit directly. Without such personal benefit, some well-to-do members lost interest and dropped out. Others assumed a more helpful attitude of noblesse oblige, i.e. an interest in helping their less affluent, fellow villagers. Projects addressed this problem in several ways:

First, by explicitly urging elites to help those less fortunate than themselves.

Second, by stressing problems such as sanitation and clean

water which benefit all members ofthe community

Third, by offering services such as hospital referral which elites cannot easily duplicate through private channels.

If the above data are taken at face value, one would have to conclude that ability to pay, either too little or too much money, is a major deterrent to prepayment. Yet in an objective sense, the fees that Tribhuvandas Foundation and Adayar charge seem relatively low as a percentage of a daily laborer's wage of about 8 to 12 rupees per day. Tribhuvandas Foundation charges 1 rupee per month or 10 rupees per year, and Adayar charges a minimum fee of 15 rupees per year. If one assumes a wage of 10 rupees a day, 150 days per year or 1,500 rupees per year, then the charge is less than or equal to 1 percent of annual income. However, when faced with choosing between a fee for services his family may or may not need and food he knows his family can use, it is not difficult to understand why a landless wage earner might opt for the more tangible alternative.

TABLE 6.4

Staff Members' responses to the question, "What do you think is the major reason why people do not participate (or become members) in the program?"

Reason for not participating in program	Percentage
People have private doctors	32
VHF lacks professional training	16
Program lacks prestige	7
People cannot afford to pay	9
Charging scheme inappropriate	6
People not aware of program	15
Other	10
No Response	4
Total	100
Number of Respondents	(68)

Source: Staff Members' Questionnaire, No. 304A

2) Illiteracy and lack of program awareness

A significant percentage, 15 percent, of staff members said that people do not participate in the program simply because they are not aware of it. Illiteracy, they said contributed to this lack of awareness, because written materials were some of the most efficient means of communicating with the public. Illiteracy was also a barrier to effective participation because those unable to read were not able to comprehend the written health education materials. Without such understanding, they did not understand the need for participating.

3) Caste structure

Both staff members and directors mentioned caste structure as an impediment to

broad community participation. Longstanding divisions in the community were not bridged in a day. Caste was a reason for rejecting some otherwise qualified candidates for community health worker, and caste clearly played a role in preventing more free and open participation in local organizations. Yet the experience of several of the projects was heartening in demonstrating that the health project itself could serve as a catalyst for breaking down caste prejudice. In Jamkhed, for example, trainees for community health workers ate together for the first time with members of other castes. They slept together under a large single blanket. When the trainees returned to their villages they saw beyond the caste divisions and persisted in trying to serve all villagers. Gradually the value of their services was appreciated and they began to win acceptance from households of all castes.

4) Health considered as a low priority

In a narrow view of the nature of a health program, becoming a member of a prepaid health scheme is a wager that one will become sick. One respondent very frankly said she became a member because of her frequent illnesses. She judged the probability of sickness so high that she thought she would take good advantage of the program's services. Conversely, those in good health may have thought they would not need the services. In a broader understanding of the health scheme, of course, the curative services are only one part of the health program.

Directors insisted that the low priority of health was only apparent in terms of abilities of people to plan for health needs. In moments of crisis, health assumed the highest priority. Moreover, locally available services could save villagers valuable time in traveling to distant clinics. Once communities saw the advantages of good primary health care at the village level, they would ascribe a value to the health project.

5) Vested interests

Several directors mentioned that vested interests of members of the local organization conflicted with the project objectives. As the project mobilised the poor, members of the local power structure became alarmed. Conflicts seemed more liable to occur in issues related to food or water than health per se. Water was an issue in Tilonia, when the location for drinking water was disputed, and the elites tried to prevent the lower castes from using the wells. (Werner has reported similar conflicts related to food in rural Mexico; Werner 1981.) Other community health projects in India, e.g. the Mandwa project, have encountered conflicts between project activities and vested interests (Faruqee and Johnson 1982, 22). Traditional health practitioners and dais, whose practices were threatened, proved generally quite cooperative, especially where dais were trained to participate in the project.

Vested interests of the social and caste hierarchy played a strong negative role, said some directors. Either prestige considerations of the rich prevented them from using the project's services, they thought, and/or the liberating influence of the program on the population diminished the rich peoples' traditional opportunity to exploit the poor.

6) Poor quality and inadequate quantity of services

In Adayar, two respondents explained they dropped out because the program did not provide the services they needed or the personnel were not available. In Tribhuvandas Foundation, one dropout explained that his family had dropped out because the program personnel were not competent.

10 percent of the community members complained that the program did not give services they needed; 4 percent objected that the program did not provide medicines and drugs, but only 3 percent faulted the program personnel for not being available; only 2 percent rated the program personnel as incompetent, and only 1 percent thought program personnel favored a special group. One respondent explained that others had more faith in a private doctor, and another respondent thought that the affluent would not use either the program or the government maternal health clinic (MHC).

The directors gave a variety of additional responses to the question of why community members did not participate. Some people, insisted one director, do not think that the community health program serves their felt need, nor do they identify with the program since they had no share in the selection of the village health worker. Another director explained that village workers and project leaders lacked personableness and humanity. Furthermore, villagers were initially suspicious of outsiders and thought their apparent goodness masked some ulterior motives.

c. Methods of enlisting popular support

Armed with reasons discussed above for participating and not participating, community health workers should be better able to communicate with prospective members. Beyond the attitudinal questions of what to communicate lies the question of how to communicate. What methods are best suited to communicating with community members?

As is apparent from Table 6.5, the large majority of staff members (81 percent) thought that house-to-house visitation was the most effective method. Use of one method clearly does not imply the absence of others, and for that reason the question allowed for multiple response. 62 percent of staff members mentioned community meetings as the next most effective method. Other methods mentioned were through the help of local institutions (44 percent), the help of influential persons (31 percent), and through the delivery of services (19 percent).

One staff member suggested that promotional efforts should include small group meetings with slide shows about what is happening in other villages, as well as mass meetings and film shows were instrumental in gaining participants.

TABLE 6.5

Staff Members responses to the question, "How can the project enlist popular support (or enroll members) for the program?" STAFF 305

Type of Activity	Percentage
House-to-house visitation.....	81
Community Meetings.....	62
Through help of local institutions, e.g. Milk Cooperatives	44
Through help of influential persons...	31
During delivery of services.....	19

Note: Multiple responses were possible. Percentages therefore add to more than 100.

4. Depth in community participation

Broad coverage or participation of the community is not very meaningful if the community is only nominally involved. Depth in the participation is characterized by participation in activities such as planning of program activities, health education and promotion, and service delivery by the people themselves, not just receiving services. The eight projects evidenced considerable variety in community participation. Some consciously attempted to achieve community participation in decision-making and planning. Others de-emphasized decision-making and stressed promotion and health education by community members.

TABLE 6.6
Percentage of Respondents who Participated in Program Meetings by Type of Meeting and Program

Project	Any Mtng.	Type of Meeting: Education	General Mtng.	Finance Meeting	Select Services	Select VHF
T. Found....	36.1	32.8	26.2	16.4	11.5	11.5
Jamkhed.....	85.0	83.3	80.0	83.3	78.3	83.3
Adayar.....	23.3	21.7	6.7	8.3	5.0	6.7
Ambilikkai..	8.3	8.3	6.7	1.7	1.7	0.0
Kangazha....	86.4	78.0	81.4	78.0	72.8	32.2
Tilonia.....	33.3	33.3	18.3	3.3	8.3	10.0
Jaipur.....	18.3	16.7	6.7	0.0	5.0	6.7
Agrindus....	76.7	73.3	70.0	30.0	31.7	11.6
All Projects	45.8	43.3	36.9	27.5	26.7	20.2

Number of respondents = 480

SOURCE: Community Members Survey, Items 602, 603A, 603E, 603B, 603D, 603C

The community participation in meetings varied in accordance with the type of meeting. People most frequently participated in educational meetings, that is, meetings conducted for education in health topics. Next most common were meetings having to do with program finances. Presumeably most meetings about finances had to do with finances at the village level, i.e. payment of the VHF, charges for services, etc. The next most popular type of meeting concerned selection of services. It is not likely that community members meant choice of services to be offered by the program but rather selection of services already offered. Lastly, only 20.2 percent of respondents said they had attended a meeting to select the VHF.

E. Initial Program Focus for Community Health Projects

1. What services should be started first?

It is difficult if not impossible to initiate from the outset comprehensive health services even if comprehensive services are an objective of the project. Perforce one must start selectively, but with which services?

Some experience from the eight projects argues strongly against starting with lavish free services in health or any field, for which the project must later seek community funds. Kanzagha started agricultural services, which proved

beneficial, but discontinued them when it became apparent community residents were becoming dependent. When fees were charged for previously free health services, there was great reluctance on the part of the community to pay (Joseph 1986). Similarly, for the Indo-Dutch nutrition program, located in the Hyderabad District of Andhra Pradesh, it was difficult to institute charges for what had previously been free services (Faruqee and Johnson 1982, 22).

Should the project focus on health only or on health plus development? Almost all the projects have combined health and broader development efforts. Agrindus is perhaps the broadest of all the eight; Adayar the most specialised in health. The directors emphasised that health was often judged a low priority by villagers. But as a health practitioner in a Gujarat village explained, health for a daily wage earner is not really such low priority, because if a health problem keeps him from working, he earns no money. In fact, for him or her, obtaining services locally is a great benefit if it means avoiding a time-consuming trip to town. A wage earner would rather pay in the village for an injection than spend all day traveling to and from town for free services (Pretest interview 1985).

Starting with a service for a need more acutely desired by the community is likely to win more acceptance. Inclusion of socio-economic services need not imply large expenditures on the part of the project, particularly if the project can successfully mobilise existing government resources. For example, in 1982-3 a survey in a section of the Agrindus project area showed only 1 percent of government rations were being distributed. Agrindus took the issue to the national level and then to the Uttar Pradesh state government. An agreement was worked out for the Ashram to distribute government rations. Over six months Agrindus distributed Rs.2,500,000 worth of rations to 25 villages (Clements 1983, 24).

F. Conclusions

Previous community health experience has indicated that it is more effective to work with existing organizations than to create new ones and that multi-purpose organizations are generally more successful than single-purpose organizations (Goldsmith et al, 1985, p. 30).

TABLE 6.7
Average Percentage of Community Members who have Attended a Health Meeting by Type of Local Organization

Single Versus Multiple Purpose	Existing or Related to Existing Organization	New Organization	Total
Single Purpose	61.3	23.3	48.6
Multiple Purpose	25.8	56.7	44.3
Total	43.5	48.3	45.8

1. Existing or related organizations versus new organizations:

Is it better for health projects 1) to start entirely new local organizations or 2) to work with existing organizations or a new organization related to an old organization?

Our research indicates that starting with existing or related organizations instead of new organizations helped achieve broad coverage more quickly and more easily -- at least over the short run. Evidence from the case studies shows that the Tribhuvandas Foundation and the Jaipur Trust both started with existing milk cooperatives and achieved rapid growth. On the other hand, Jamkhed and Agrindus started new organizations and required a long period to achieve broad coverage.

The fast and efficient start achieved through existing organizations may not necessarily result in greater breadth of participation in the long run. Both Jamkhed and Agrindus, which started new organizations, achieved very broad levels of participation. Moreover, Tribhuvandas Foundation encountered some vexing problems related to the existing milk cooperatives. The Tribhuvandas Foundation found that less affluent community members, who were not members of the milk cooperatives, participated less and less in health committee meetings as time went on. This drift away from broad participation occurred even though the Tribhuvandas Foundation made a conscious and concerted effort to involve all socio-economic strata and and despite the fact that the local health committees were, at least in principle, affiliated with but different from, the milk cooperatives. Thus there is some evidence that a pre-established organization, if it represents only part of the community, may perpetuate restricted community participation.

As one indicator of depth of community participation, the attendance at health meetings showed no overaall relationship to the use of old versus new organizations (Table 6.7). However, as described below, there was an important interaction effect of old versus new organizations with the variable single-

versus multi-purpose organizations.

We conclude that initiating a health program with existing organizations provides a faster start with less effort. However, use of existing organizations is fraught with problems, which may become apparent only after some time. Over a long period, new organizations have also achieved broad community participation. There was no zero order correlation between the use of existing organizations and greater depth of community participation, but there was an interaction effect described below with single- versus multi-purpose organizations.

2. Single-purpose versus multi-purpose organizations:

Is it better to establish a single- or a multi-purpose organization? We found adherents on both sides of issue. On the side favoring single-purpose organizations were those who cited the experience of the National Dairy Development Board. Many multi-purpose cooperatives in India had foundered, they said, because a single activity had failed and dragged down the entire cooperative, even though the remainder of the cooperative's activities had been successful. Also favoring a single-purpose organization was the zero-sum theory that villagers' energies and time were limited to a given amount. According to that theory, adding more activities would diminish the amount of energy and time available for health.

On the side of multi-purpose organizations were those who insisted that health projects should start with a strongly felt need in the community, even if that need was only indirectly related to health. Then, once people had learned to work together and had confidence in the outside leaders, health activities could be added within the same local organizations. Also in favor of multi-purpose organizations was the contention that the more activities an organization offered, the more people it was likely to attract. Within that larger audience, those with only a nominal interest in health might be more likely to participate in health activities than if they had no organizational ties.

In regard to breadth of participation, the case histories did indicate some advantage for multi-purpose organizations. Several of the projects, for example, Jamkhed and Tilonia, initiated their projects by meeting strongly felt needs such as food and water. Agrindus initially helped advance local agriculture. All these projects later added health activities.

Concerning depth of participation, there was no measurable overall difference between single- and multi-purpose organizations. However, there was an interaction effect between the variable 1) existing or related organizations versus new organizations and 2) single- versus multi-purpose organizations. (See Table 6.7.) Single-purpose local organizations were more likely to achieve depth of participation if they were related to previously existing organizations (61 versus 23 percent participation). On the other hand, multi-purpose organizations were more likely to achieve depth of participation if they were newly organized (57 versus 26 percent).

We did not find health projects which failed financially because they were integrated with multi-purpose organizations. We do think the warning of NDDB of such a danger warrants concern. In regard to the theory that multiple activities dilute peoples' interest in health activities, the vigor in implementing health activities by some of the multi-purpose organizations we

examined led us to conclude that in fact, multiple activities may stimulate greater health activity. Again our research neither confirmed or disproved such a possibility.

However, our research did confirm that, at least in the short run, established, multi-purpose organizations achieved greater breadth of community participation than did new, single-purpose organizations. However, the benefits of starting with existing organizations seem less certain for the long run. Several of the projects, in particular Jamkhed and Agrindus, achieved remarkable breadth and depth of community participation through new organizations, but they achieved these levels of participation after long periods of effort.

In sum, in terms of breadth of participation, there was evidence from the case histories that multi-purpose organizations were more effective than single purpose organizations. In regard to depth of participation there was no overall advantage of multi-purpose organizations. However, both with regard to breadth and depth of community participation, there was an important interaction effect of this variable with the use of existing versus new organizations.

Poverty and affluence

Community poverty was a real barrier to the projects in achieving broad coverage, but so was wealth. Not only did poor people refrain from joining health schemes, but affluent community members gravitated to private physicians. Serving the entire spectrum of economic strata therefore required, on the one hand, services to attract the wealthy and, on the other hand, methods of drawing in the poor. To serve the affluent community members, an organizational structure which permitted referral to good hospital service proved to be an effective strategy. Some projects referred patients to their own hospitals, but others simply established close working relationships with hospitals in their areas. To reach the poor at the other end of the spectrum, project staff and directors stressed the importance of income-generating activities and the need to start with strongly felt needs in the community, even if that need was only indirectly related to health. Such an emphasis on activities other than health implied the use of multi-purpose organizations.

Chapter VII Management of Personnel

A. Introduction

As opposed to organizations established to maximize profits, the not-for-profit community health programs strive to maximize coverage, effectiveness, and equity. This chapter treats a management topic crucial for achieving those goals: the management of personnel. Management of personnel is important first, because for all programs studied, personnel expenditures constituted the largest budget item, and second, because of the crucial role personnel play in interaction with the community at the village and all other levels.

B. Goals of Personnel Management

Regardless of how the eight projects defined personnel roles, all had in common at least implicitly the goals of 1) recruiting effective personnel and 2) reducing personnel turnover. Reducing personnel turnover was particularly important for positions for which the project invested considerable training or where the personnel were expected to develop rapport with the community over the years. A large investment in initial training required a long subsequent period of service to amortize the training investment. Similarly, if trust in project staff only gradually overcame initial community suspicion, premature staff turnover might disrupt the development of that trust.

Table 7.1 displays the number of staff employed by projects 1981-1984, the number of resignations (including dismissals) during that period, and the Index of Staff Turnover, defined as 100 times the number of resignations divided by the number of staff positions. With a range of zero to 18.2, the Index of Staff Turnover reflected wide variation in projects. The data should be interpreted with caution, in part since the Index is not a true rate. The denominator is the number of personnel employed at the end of the period. But since the number of employees was not constant over the period, the denominator does not represent a true indicator of the number of persons at risk of resigning. In the case of Kangazha, where no resignations were recorded, there is reason to believe the item was misunderstood. Four other projects, Jamkhed, Tilonia, the Jaipur Trust, and Agrindus had low turnover. Since the Jaipur Trust is newly founded, the data for that project do not correspond to the entire period 1981-4. Conceivably the Index for the Jaipur Trust might have been comparatively higher had the project been in existence during the entire period. Unfortunately the data were not collected by type of position, so it is not possible to distinguish what type of personnel resigned, professional or village-level staff. However, even projects with low staff turnover insisted that turnover was a problem. For example, at one point three auxiliary nurse midwives at Tilonia left within a week to join different government centres and caused a "severe shortage of staff" (The Social Work and Research Centre 1978, p. 17).

TABLE 7.1

Number of Staff Employed, Number of Resignations, and Index of Staff Turnover 1981-1984 by Project

Project	A No. of Staff Employed 1981-4	B No. of Resignations 1981-4	C Index of Staff Turnover 100 * A/B
T. Found.....	486	79	16.3
Jamkhed.....	1,082	6	0.6
Adyar.....	128	22	17.2
Ambilikkai.....	556	101	18.2
Kangazha.....	204	0	0.0
Tilonia.....	328	11	3.4
Jaipur Trust*...	104	3	2.9
Agrindus.....	144	5	3.5

Source: Institutional Schedule
* Data for the Jaipur Trust are from the inception of the program in March 1983.

C. Defining Personnel Needs

1. The management of personnel is integrally related to the particular type of program structure and levels of operations of each program. Nonetheless, there are common elements in all programs which transcend the particularities of the individual projects.

Reducing Professional Personnel Requirements: One way of overcoming the problem of recruiting professional personnel is simply to recruit as few as possible by training local people. At the polar extreme is the positiion of Ivan Illich, who has advocated collective self-care as a way of overcoming the monopoly of medical specialists (Illich, 1976). David Werner's work in Mexico has similarly deemphasized the role of the physician except as an instructor. All eight projects have trained local personnel to perform functions that might have been performed by a physician. None, however, has seen fit to do away with the role of the physician altogether, though the role for the physician varies considerably from project to project.

2. Defining personnel roles -- Defining personnel roles, tasks and appropriate training is fundamental. Among the eight projects, the roles of personnel differed remarkably. For example, in some projects the village health worker provided few health servieces and mainly promoted better health practices and referred patients to higher level project personnel. In other projects the village health workers performed a variety of health services. Clearly, the

10

training required for these disparate roles was radically different.

Similarly, if the role of the physician was largely clinical, then communications skills were not so crucial as in the case where the physician was expected to train paramedical personnel and village health workers. Consequently, selection criteria for the two roles were different.

D. Issues in Recruiting Personnel

1. Training local personnel versus recruiting staff from outside the area

Two directors took a somewhat different tack. If doctors and nurses were so hard to recruit and retain, why not develop skills in the communities themselves? As one director explained, experience in his project indicated that auxiliary nurse midwives (ANMs) as a group were largely interested in upward social mobility and not suited for the project. It would be better to develop personnel wholly within the project, insisted the director. Similarly, another director argued that most of the needed skills can be cultivated on the job. Commitment was more important than previously acquired medical skills. A compromise suggested was to train ANMs, whatever their origin, in the villages instead of hospitals (Haran 1986).

2. Commitment and personal dedication versus good compensation and benefits

We asked the directors, "How can the project do a better job in recruiting skilled personnel?" (Item 303, Directors Questionnaire). "Pay well. Give them responsibility," said one director. Two other directors, as well as the project staff themselves, echoed the view that better pay was an important factor for recruiting professional medical personnel. Some workshop participants insisted that if community health projects were to proliferate, one could not expect to find unusually dedicated and charismatic individuals. The community health projects of the future would need ordinary people; there will not be enough extraordinary people to go around. Projects need to professionalize the posts: pay well and give employees responsibility. On the other hand, some participants stressed the continuing need for dedication on the part of professionals. This dedication must be developed early in both professionals and their parents, who need to press children less for high salaries and security.

When we asked the staff themselves how the project could recruit doctors and nurses, it was clear that they felt housing and salaries were important. 54 percent mentioned reasonable salaries and 46 percent, adequate housing. (See Table 7.2.) 31 percent said projects should seek professionals with commitment, and 26 percent suggested the project recruit people who enjoy working with people.

TABLE 7.2

Responses to the Question, "How can the project attract or recruit doctors and nurses?" Question 301, Staff Questionnaire

Method	Percentage
Provide adequate housing.....	46
Give reasonable salary.....	54
Provident fund and other financial arrangements.....	9
Involve in decision-making.....	13
Recruit people with commitment....	31
Recruit people who enjoy working with people	26

Source: Staff Questionnaire, No.301.
Note: Percentages sum to more than 100 since multiple responses were permitted.

E. Strategies for all Personnel

If the project cannot provide good material benefits, other non-monetary rewards can help alleviate the low financial compensation. Directors stressed:

* Encouraging initiative on the part of professionals so long as the initiative was within the overall project design
* Job security in so far as possible
* Full support of personnel when there is unfair opposition
* Recognition for good service

F. Special considerations for Recruiting and Retaining Physicians

1. Problems of Recruiting Physicians

Several of the projects reported problems in recruiting professional personnel. One project offered Rs. 1.400 per month to physicians, and in other project the top monthly salary was Rs. 1,000. The Government offered Rs. 1,800 plus accomodations to physicians in Primary Health Care Centers. Moreover, working locations outside major hospitals may not have met the clinical expectations of physicians. Rural areas may have lacked amenities such as adequate educational facilities for staff children. Voluntary health projects were not alone in facing the difficulty of recruiting professional personnel. Minister of Health and Family Welfare, Mrs. Mohsina Kidwai recently lamented in Parliament that some 10 percent of existing Primary Health Centers did not have physicians. In order to attract doctors to rural areas, she said, the government was offering 30 percent more income than for similar positions in

17

urban areas and was trying to provide reasonable accomodations (Indian Express, 28 February 1986).

2. **Meet physicians' desire to serve clinically**

Workshop participants suggested it was easier to recruit doctors if their work was related to hospitals, where they could use their clinical skills and serve more as medical consultants than as key trainers or service providers. In the first place, doctors may not be interested in giving training courses in primary health care, and in the second place, may not be as effective in training village health workers as paramedical personnel. As doctors become more sensitized to community needs and interests, they might become both effective and interested enough to assume more training responsibilities.

G. Registered medical practitioners (RMPs)

The workshop participants had two divergent views regarding the involvement of paramedical personnel who in India are termed "registered medical practitioners" (RMPs). One group favored integrating them in the projects to give them skills and insights for better health care. Others cautioned that if registered medical practitioners gained credibility through their association with the projects, they would use their enhanced status to exploit the community.

H. Support Staff (Drivers, Secretaries, Maintenance, etc.)

Some of the same recommendations regarding non-monetary compensation apply to non-professional as well as professional staff. The importance of maintaining high levels of job satisfaction among non-profesional staff is underlined by the recent experience of one of the projects in dealing with a labor union formed by the project's drivers. The drivers compared their job conditions with those in similar jobs outside the community health project and threatened a strike. Only intensive negotiating prevented the strike. Directors unanimously thought that a labor union for their employees would adversely affect their projects, though one director thought a labor union in the current social milieu was virtually inevitable. Staff members themselves were less unanimous. 38 percent thought the staff should have a union, and 34 percent thought a union would help achieve the project's objectives (Staff Interview, Questions 302,303). In regard to non-professional staff, workshop participants made two recommendations: 1) whenever possible, the support staff should be appointed from the community itself, 2) The professional and technical staff must learn to carry out those tasks performed by the support staff, both to avoid unnecessary dependency and excessive numbers of employees, e.g. let physicians and nurses learn how to drive vehicles instead of hiring drivers.

I. Village Health Workers (VHWs)

1. Selection of the VHW

We found three patterns of selecting the village health worker represented in the eight projects.

a. Joint selection by the project leadership and a local organization or local

A11

leaders.

Tribhuvandas Foundation: Selected primarily by the village milk cooperative, with some participation by the projiet staff

Jamkhed: Selected by the Panchayat (village council) and other villageers in conjunction with the project leadership

Adayar: Joint selection by village leaders and project staff

Jaipur Trust: The selection is made by a panel consisting of the Sarpanch (Mayor) of the village, the Block Development Officer of Panchayat Committee, the Medical Officer of the Jaipur Trust, and the the medical officer of the government primary health center.

b. Joint selection by project leadership and thc entire village

Kangazha: Selection by the entire village

c. Selection largely by the project staff

Ambilikkai
Agrindus
Tilonia

No project entirely lacked community participation in the selection process but in the three projects above community participation was relatively minor.

3. Problems in Selecting Village Health Workers

a. Caste discrimination The major problems cited by the staff in the selection of the VHW are presented in TABLE 7.3. Caste discrimination and low remuneration, each mentioned by 32 percent of the staff, were the problems most frequently cited. In villages with sharp caste differences, it was difficult to identify a person acceptable to all. The solution seemed to lie in selecting someone from a low caste who might ultimately prove herself widely acceptable. Although staff considered caste a problem, there were remarkable examples in almost all the projects of how caste prejudices had been overcome. For example, in Jamkhed, the village health workers reported that as untouchables they had previously not been able to enter the house of upper caste villagers. When they attended training sessions at the Jamkhed main centre, for the first times in their lives, they ate together and slept under a single large blanket with members of other castes. Returning to their villages with new confidence, they soon found that nearly all villagers, regardless of caste, demanded their skills. Today the same untouchable health workers serve virtually all members of village.

b. Low Remuneration: Staff members thought low remuneration was a problem for two reasons: morale of the village health worker and turnover, i.e. the premature resignation of trained VHWs. The position of village health workers competed in some cases with the opportunity to perform other more highly paid work. Even if the candidates themselves were not involved in other remunerative jobs, they compared themselves with those who were. As

discussed below, the projects often had to find non-monetary means of compensation to overcome this problem.

c. Lack of Interest by Most Qualified: Yet another problem cited was that some of the most educated women, ostensibly the most qualified for the job, often expressed little interest in the position.

d. Favoritism: Favoritism on the part of leaders was another problem mentioned by 28 percent of the staff. The favoritism often meant that the leader had in mind some individual who by objective criteria did not compare well with other candidates. In projects where the project leadership consulted with the local leaders, the project leaders often had a difficult time in dissuading the local leaders from selecting a favorite.

TABLE 7.3
Staff Responses to the Question, "What problems have there been in selecting the village health worker?" Question 403

Problem	Percentage
High caste prestige or discrimination against low caste	32
Educated women show little interest	19
Very low remuneration	32
Communications problems in the village with the result that all were not aware of the need	9
Favouritism of current leaders	28

Source: Staff Survey, Item 403.
Noacte: Percentages sum to more than 100 since multiple responses were permitted.

4. How to compensate the Village Health Worker

The problem of how to compensate the village health worker is crucial if projects are to recruit and retain village level personnel. On the one hand, the village health workers constituted the largest single category of personnel, and few projects believe they can afford to pay salaries competitive with government or commercial enterprises. There were clearly intangible compensations for many village health workers, who earn the respect and appreciation of their fellow villagers. On other other hand, it seems inherently unfair for the village health worker to serve without any financial compensation. The salaries paid by the eight projects ranged from no salary in Agrindus to Rs. 250 to 325 per month in Kangazha.

5. Who pays the Village Health Worker?

Some projects paid the village health worker from the central office and used the refresher training meetings as a time to pay the VHW. In other

projects the local village organization such as the milk cooperative was responsible for paying the VHW. Although one might suppose that supervision was coupled with payment, that was not necessarily so. In the Tribhuvandas Foundation, for example, the local health committee through the auspices of the milk cooperative usually paid the VHW, but the main center provided frequent technical supervision.

6. How is the Village Health Worker Trained?

How a Village Health Worker is trained is integrally associated with the tasks he or she is expected to perform, and her functions, in turn, depend in part on the project structure. In projects where there were relatively accessible and comprehensive services available at the intermediate level, the village health worker tended to serve mainly as a health promoter and referral agent. Her training was correspondingly short. Examples of this pattern are the Tribhuvandas Foundation (two weeks initial training), Jamkhed (one week), Adyar (four weeks of 1/2 day), Ambilikkai(not clear), Tilonia (two weeks), Agrindus (five or ten days). Among these projects characterized by relatively short training for the village health worker, there were great differences in functions. The Jaipur Trust contrasted sharply with the other projects by offering an initial three months of training for its Village Health Guides and subsequent refresher training every two weeks. Moreover, the medical officer made supervision visits to the villages every two weeks. In accordance with the extensive training and intensive supervision they receive, the Jaipur Trust Village Health Guides dispensed basic drugs and carried out more tasks than did most community health workers in the other projects.

e. What services does the Village Health Worker Provide

All village health workers provided first aid, motivated villagers for services such as immunization and referred patients to intermediate or centre levels. Beyond these basic functions there was great variation. Most were trained to provide oral rehidration therapy (ORT) as a part of first aid. Basic medicines distributed by the VHWs generally included an analgesic, TB and malaria medicines, vitamin and iron pills. In Jaipur, where the VHWs had received the most extensive training, VHWs distributed a more comprehensive set of medicaments, including contraceptives. The Jaipur Trust received Rs.50 per month per VHW for medicines, a sum which covered only about half the need. In Agrindus the local volunteers had fewer medicines and were trained to emphasize home remedies.

Supplementary feeding

Three of the projects -- Ambilikkai, Tilonia, and Tribhuvandas Foundation -- provided supplementary feeding for young children. Tilonia prepared food according to local recipes. In the Tribhuvandas Foundation program, the village health worker distributed the supplementary food in conjunction with growth monitoring. The food, composed of corn, soya, and milk, was distributed at 10 paisa for 75 grams. The supplementary food has proved to be a major attraction for recruiting new members for the prepayment scheme.

J. Traditional medical practitioners and birth attendants

Several of the projects incorporated traditional medical practitioners and

birth attendants (dais). One of the projects, Tilonia, early in its history employed nine dais. The dais carried out nutrition education, brought women to clinic for tetanus toxoid injections, and referred difficult cases (The Social Work and Research Center 1978, p. 24-25). Tribhuvandas Foundation has found that trained dais have been their best village health workers (Vyas 1986). However, caste proved to be more of a barrier for former dais than for those hwo had previously worked as dais. The severity of the problem stemmed from the fact that village dais historically served different castes, and there was a tendency on the part of the dais, and perhaps an expectation on the part of some in the community, to perpetuate that tradition. Higher caste dais expressed "distaste" for entering a lower caste household, and lower caste dais feared rejection from upper castes. The Tilonia Project had to insist on willingness of the dais to serve all castes as a condition for selection (Social Work and Research Center 1978, p. 6).

K. Relationship of Personnel Management with Program Financing and Organization

How does the management of personnel relate to program financing and organization? Since the percentage of financing from local sources was one important measure of project independence, we examined that variable in relation to several personnel management variables. We reasoned that the more thorough the training of the intermediate level and village health workers, the more capable the VHW and intermediate level personnel would be in resolving local health problems, and consequently, the more willing community members would be to pay for such services. Since we did not have a measure of the competency of project personnel, we looked instead at the length of training of village and intermediate level project personnel. Table 7.4 summarizes by project the training of the village level health worker, the intermediate level workers and the percentage of local financing.

TABLE 7.4
Length of Training for Village Health Worker and Intermediate Level Personnel, Percentage of Local Financing by Project

Project	Length of Training VHW	Rank	Int. Level	Rank	Percent Local Fin.	Rank
Trib.F.	2 wks. + weekly	3			19	6
Jamkhed	1 wk. + weekly	7			32	5
Adyar	4 wks.	2	Multipurpose worker		43	3
Ambi-likkai	2 wks.	4.5	Com.Health Guide 2 yrs.		90	1
Kangazha	?	8	?		2	8
Tilonia	2 wks.	4.5	?		17	7
Jaipur	3 months +	1	Doctor visits from main ctr.		44	2
Agrindus	1-2 wks.	6	Gramin Doctor 1-2 years		41	4

Source: Case study interviews and materials

The rank correlation for length of village training and percentage of local financing is only .55, indicative of a positive but not a strong relationship. Although other interpretatins are possible, this finding is at least compatible with the expectation that the more training a VHF receives, the more local financial will be forthcoming.

Are villagers more likely to use services if the VHF is highly trained? It seems logical that more training would augment the confidence of villagers in the VHF's competence and therefore increase their use of her services. Moreover, it seems likely that a highly trained VHF would herself both have more confidence in her own abilities and more openly and readily offer her services to the community. Her increased self-confidence and proactive approach should logically generate more services.

We therefore examined the hypothesis that the longer the training of the village health worker, the more community members would be likely to use her services. Table 7.5 displays the length of VHW training by the Index of Use of Services.

18

TABLE 7.5
Length of training of VHF and Stated Customary Use of Program Services by Community Members by Project

Project	Length of Training VHW	Rank	Int. Level	Rank	Stated Use of Services Index	Rank
Trib.F.	2 wks. + weekly	3			27.8	8
Jamkhed	1 wk. + weekly	7			60.6	1
Adayar	4 wks.	2	Multipurpose worker		48.9	5
Ambi-likkai	2 wks.	4.5	Com.Health Guide 2 yrs.		55.6	2
Kangazha	?	8	?		46.7	6
Tilonia	2 wks.	4.5	?		51.1	4
Jaipur	3 months +	1	Doctor visits from main ctr.		28.9	7
Agrindus	1-2 wks.	6	Gramin Doctor 1-2 years		52.8	3

Source: Community members questionnaire, case study interviews and materials

The rank correlation between length of village health worker training and community members' stated use of program services was -.49, a negative or reverse correlation. Clearly the data do not support the hypothesis that longer training is associated with higher community use of services.

L. Conclusions and Recommendations

1. Turnover and salaries are likely to be lower and dedication higher among locally trained staff as opposed to professionally trained personnel. Recruit a minimal number of outside professionals. Instead train local personnel to undertake many tasks which would otherwise be performed by professionals.

Recruiting professional personnel with proper credentials is a burden projects can at least partially mitigate through good management. On the one hand, it is true that even when their ailments are simple, the public has come to expect and demand attention from a fully trained physician. It is also evident that full staffing with professional personnel can help new projects get off to a quick start. On the other hand, projects reported that turnover among professionally trained personnel, particularly auxiliary nurse midwives, was relatively high and dedication lower than among staff trained locally.

The alternative to recruiting professionally trained staff is to train local residents to carry out tasks physicians and nurses might otherwise do. The process is longer and the investment greater, and there are tasks that locally trained personnel cannot undertake. But people who have their homes and relatives in the area are likely to remain longer and be more interested in the people than those who come from the outside. Though the investment in training is greater and the loss of that investment greater when staff leave, the recurrent salary costs are likely to be much lower than for professionally trained staff. Moreover the longer continuity of staff is likely to permit local residents to develop more confidence in the staff and the project.

2. Professional and technical staff should learn skills of support staff to lessen social distance and reduce dependence.

The over-specification of tasks has the effect of increasing staff size and reducing flexibility of the project to respond to health needs, in particular emergencies. Though staff resistance to greater flexibility is in part culture-bound, the demonstrated success of projects in changing long-standing customs is encouraging. Allowing fieldworkers to drive and maintain their own two-wheel vehicles instead of riding as passengers with drivers of more expensive four-wheel vehicles is a very cost-effective example of change.

3. Although extensive investment in the training of community health workers may improve quality of service, extensive training alone is not likely to attract a larger number of users.

The training of personnel is one of the largest investments projects made. Equipment purchases were generally lower than training costs. Thus it is a sobering discovery that length of the training period was not associated with higher percentages of community members using the project services. Cautiously, we may suggest that the finding was confounded by other variables not measured.

Chapter VIII Conclusions and Recommendations

It would be a major error to attempt to foist a single orthodox pattern upon new community health projects. A major lesson of this study is that community health projects can be, and have been successful, following quite varied financial and organizational strategies. On the other hand, we found successful strategies common among many projects, patterns which warrant replication in diverse geographical and cultural settings.

A. Financial Problems

Experience of the projects we analysed suggests that initial capital requirements for community health projects are not likely to be met entirely from community sources. The initial needs, particularly for training of personnel and community education, are so great that it is difficult to develop the resources entirely from the local community. On the other hand, health projects have demonstrated that as they mature, they can raise increasingly large amounts from the local communities.

Non-governmental donors can continue to play important roles but there is need for better communication between donors and grantees about the type of assistance available and the conditions which projects must meet to obtain the assistance. For external donors, the size of many health projects is too small to warrant their monitoring and administration. Intermediary organizations could help facilitate the administration of funds. Other independent organizations to audit and evaluate the projects are needed to give donors confidence that their funds are well spent. However, project directors stressed that terms for monitoring and evaluation need to be spelled out explicitly and mutually agreed upon before funds are disbursed.

The experience of the projects we examined is particularly heartening in regard to collaboration with the federal and state governments. The projects received both supplies and cash, exchanged training resources, referred patients to government facilities and in turn received patients referred by government workers. Projects participated jointly with the government in special camps for services such as family planning and eye care. Although there were some complaints in regard to delays in payment or irregular deliveries of supplies, the experience of collaboration with the government was overwhelmingly posiitive.
Specific recommendations for enhancing collaboration with the government included:

* **Give due credit to the government for joint achievements**

One way directors suggested for improving government collaboration was to give due credit to the government for joint achievements. Do not begrudge the government any plaudits. Be the first to give praise. If you want continuing collaboration, be modest about your own role and let the credit redound to the officials who helped you. If you think that sounds unjust, remember the old politician who always took credit for himself when the monsoon came on time. The heavenly forces survived in spite of him, and survival is what it is all about.

* A second recommendation for improving government collaboration and

obtaining support was to persevere -- **keep on requesting support time after time.** For example, the Tribhuvandas Foundation had to argue long and hard for mattresses and transport money for its family planning camps. The government finally delivered both the mattresses and the funds.

* **Take requests for support to higher-level as well as lower-level officials.** Workshop participants experienced no problems with the state health ministers or the district officers but found that lower-level officials sometimes presented stumbling blocks. Obtain higher-level support and then visit lower-level officials. Treat all officials with respect; expect and assume they will act positively. If they do not at first respond, visit again. Avoid confrontation. Combine perseverence with respect. Cultivate the attitude that both the government and voluntary sectors have important roles and deserve mutual respect.

* **Simplify government regulations for obtaining support and establish committees at state level to approve,disburse, and monitor funds for voluntary health progrrams**

Workshop participants recommended simplifying government regulations for obtaining support and recommended establishing new committees at the state level to review requests, disburse funds, and monitor funds for volunteer agencies.

* **Increase the level of the overall health budget**

For future governmental funding, the directors contended that the overall governmental expenditure for health was low relative to the entire budget. In terms of particular programs, they suggested increased funds to provide comprehensive care for tuberculosis patients, for leprosy, prevention of blindness, school health programs, environmental sanitation and drinking water, and increases in salary subsidies for community health workers.

Involving the poor was a major concern of all projects. One strategy important for involving the poor proved to be income generating activities. Although income generating activities did not directly redound to the project, by increasing the economic well-being of the community members, they facilited the villagers' participation in health activities. Food supplementation also proved to be popular among the needy and encouraged membership applications where it was offered. The availability of services in the village itself was a program feature which villagers most often mentioned favorably. Treatment at one's doorstep is a great savings in opportunity cost for landless wage earners, who must otherwise lose wages when they travel to distant towns. For the affluent members of the community, the possibility of referral to a high quality hospital was an attractive feature of project membership.

To achieve greater efficiency, projects stressed the need for economy in areas of buildings, transport, and the purchase and use of drugs. They emphasized 1) using existing buildings if possible; 2) two-wheel vehicles maintained and owned by project personnel instead of four-wheel, project-owned vehicles; and 3) reduction of drug costs by restricting purchases to basic drugs recommended by WHO, purchased in bulk at competitive prices, and distribution through selected, reliable vendors at fixed prices.

B. Organizational Problems

The projects both helped establish new local organizations and collaborated previously existing organizations. At least over the short run, the case studies showed that working with previously existing organizations did help projects achieve broad coverage more quicky and more easily than by starting new organizations. For example, the village milk cooperatives were instrumental for the recruitment of new members and in facilitating payment of membership fees for the Tribhuvandas Foundation. However, the problems experienced by some projects suggested that collaboration with existing organizations might not be advantageous over the long run. There ws no overall association between collaboration with old versus new organizations in regard to depth of community participation. However, there was an important interaction between old versus new organizations and the variable single-purpose versus multi-purpose organizations Single-purpose local organizations were more likely to achieve depth of participation if they were related to previously existing organizations. On the other hand, multi-purpose organizations were more likely to achieve depth of participation if they were newly organized.

C. Management of Personnel

1. Turnover and salaries are likely to be lower and dedication higher among locally trained staff as opposed to professionally trained personnel. Recruit a minimal number of outside professionals. Instead train local personnel to undertake many tasks which would otherwise be performed by professionals.

All projects employed both locally and externally trained personnel. A higher mix of externally trained personnel was coupled with a fast start and lower initial costs but higher recurring costs, whereas a higher mix of locally trained personnel was associated with a slow start and higher initial costs but lower recurring costs. The lower recurring costs resulted from both lower salaries and fewer resignations from locally trained personnel.

Recruiting professional personnel with proper credentials is a burden projects can at least partially mitigate through good management. On the one hand, it is true that even when their ailments are simple, the public has come to expect and demand attention from a fully trained physician. It is also evident that full staffing with professional personnel can help new projects get off to a quick start. On the other hand, projects reported that turnover among professionally trained personnel, particularly auxiliary nurse midwives, was relatively high and dedication lower than among staff trained locally.

The alternative to recruiting professionally trained staff is to train local residents to carry out tasks physicians and nurses might otherwise do. The process is longer and the investment greater, and there are tasks that locally trained personnel cannot undertake. But people who have their homes and relatives in the area are likely to remain longer and be more interested in the people than those who come from the outside. Though the investment in training is greater and the loss of that investment greater when staff leave, the recurrent salary costs are likely to be much lower than for professionally trained staff. Moreover the longer continuity of staff is likely to permit local residents to develop more confidence in the staff and the project.

2. Professional and technical staff should learn skills of support staff to

lessen social distance and reduce dependence.

The over-specification of tasks has the effect of increasing staff size and reducing flexibility of the project to respond to health needs, in particular emergencies. Though staff resistance to greater flexibility is in part culture-bound, the demonstrated success of projects in changing long-standing customs is encouraging. Allowing fieldworkers to drive and maintain their own two-wheel vehicles instead of riding as passengers with drivers of more expensive four-wheel vehicles is a very cost-effective example of change.

3. **Although extensive investment in the training of community health workers may improve quality of service, extensive training alone is not likely to attract a larger number of users.**

The training of personnel is one of the largest investments projects made. Equipment purchases were generally lower than training costs. Thus it is a sobering discovery that length of the training period was not associated with higher percentages of community members using the project services. Cautiously, we may suggest that the finding was confounded by other variables not measured.

D. Future Action

With the explicit encouragement of the Indian government, the National Dairy Development Board, and other agencies, private community health projects are expanding rapidly in India. Some are expressly following the general pattern of one or another of the successful projects described in this report, but others are venturing new strategies. To serve the mutual interests of all projects, the directors of the projects represented at the workshop strongly recommended establishing a mechanism for information sharing, for management training, and for continuing operations research. The Institute of Rural Management Anand is currently exploring the possibility of fulfilling those functions.

Chapter IX. Administration

Project Personnel

Professor D. Nagabrahmam, Project Coordinator, Institute of Rural Management Anand

Shri. Subhash Chandra Sharma, Research Associate, Institute of Rural Management Anand

Shri. Monaj Shedhani, Data Processing, Institute of Rural Management Anand

Mr. George Varky, Consultant, Management Sciences for Health

Dr. Henry Elkins, Principal Investigator, Management Sciences for Health

Project Finances

Initially, PRICOR contracted for this research with the Center for Population and Family Health, Colombia University. Subsequently, when the Principal Investigator affiliated with the Management Sciences for Health (MSH), a new research agreement was established between PRICOR and MSH. MSH, in turn, established a subcontract with The Institute of Rural Management Anand. To date, Management Sciences for Health has received from PRICOR the amount of $115,363. This figure is a preliminary amount and may or may not agree with the final amount to be reported in the official financial report. A much smaller amount, estimated at less than $4,000, was expended by the Center for Population and Family Health, Columbia University, prior to the shift of the project to MSH. To support the research, both MSH and IRMA have expended from their unrestricted budgets more funds than they received from PRICOR.

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96

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