THE TRAINING AND USE OF COMMUNITY HEALTH AGENTS IN ETHIOPIA

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ABSTRACT

The training of community health agents (CHAs) started in Ethiopia in 1978. Thus far, 4218 CH4s have been trained and deployed. A study covering 58 CHAs out of 1122 (5%) in three regions was conducted to evaluate the work of the CHAs before unidentified and/or unresolved problems arose which could jeopardize their future effectiveness. The study showed that the size of the population covered per CHA varied considerably among the three types of mass organizations. Support in the form of cash remuneration was most frequent in service cooperatives. Three-quarters of the peasants' associations provided no remuneration at all. Service cooperatives were most often able to supply drugs. Supervision by health units was high, although what that meant was not clear. Of the CHAs investigated, '62% had continued unbroken service, 17% of those initially selected as CHAs had not started work, and 21% discontinued work which gave a total attrition rate of 38%. The lack of full support by communities for community health services is noted, and some reasons are suggested.

INTRODUCTION

As a result of a policy decision by the Revolutionary (government of Ethiopia (I), and in line with the Alma-Ata Declaration on Primary Health Care (PHC) (2), the training of Community Health Agents (CHA) started in Ethiopia in 1978. To date, 4218 CHAs have been trained to serve in the 14 regions of the country.

This paper focuses on CHAs as an example of community participation in primary health care. Other aspects of PHC, such as the support provided by formal government services, the degree to which multi-sectoral action for health development exists, and the extent of health care services coverage of the population, are also critically important. The development of the necessary political will, the attempt to spread re-sources to rural areas, and the restructuring of the health services to provide better support for community-based activities have been described elsewhere (3) and discussed in several international workshops (4). The "peripheral " component of health service activity, that is, within the communities themselves, is an area about which relatively little has been written. The PHC approach is relatively new, and there is still much to learn about its practical implementation. Given the consequent potential for mistakes, it is very important to evaluate the work of the community health agents before unidentified and/or unresolved problems arise which might jeopardize their future effectiveness. The degree to which the community accepts responsibility for the cost of training community workers and (especially) for arranging continuing remuneration, and the
effectiveness of the training and supervision provided by the health services, are both crucial to the success of community-based health care. This paper describes an investigation into these particular community aspects of PHC in Ethiopia. The study had four objectives:

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1. To collect information on the activities performed by community health agents;
2. To identify the extent of support provided by communities and the health services to the CHAs;
3. To provide data on the drop-out rate of CHAs and to identify factors contributing to this; and,
4. To make recommendations based on the findings which would strengthen the services of CHAs in the future.

The CHA is expected to perform the following duties in the community (5):

1. Stimulate members of the community to participate actively in improving the health of their families and communities and coordinate this Participation;
2. Provide health education relevant to local health problems;
3. Implement different methods of controlling communicable diseases
4. Provide maternal and child health services;
5. Provide curative services for minor illnesses and injuries and refer those people who require more complex examination and treatment;
6. Collect health information and statistics; and,
7. Perform administrative work as required.

It is clear that most of the duties are related to health promotion and prevention of disease. With this job description as the basis, a training course of three to four months duration was designed. The course is given in health centres and rural hospitals. The contents of the course and the balance between practice and theory is shown in Table 1.

Table 1: Content of CHA Training Course (Total Hours -472)

Subject	Hours of Practice	Hours of Theory	Percentage of Total
Maternal & child health	36	30	14
Transmission and prevention of communicable diseases	6	8	3
Environmental sanitation	60	40	21
Nutrition and balanced diet	12	16	6
Health education	39	8	10
Examination and treatment	70	60	28
Precautions in handling and using drugs & medical equipment	6	6	3

Collection of health information	6	8	3
Traditional medicine	3	8	2
Orientation and evaluation	-	20	4
Political education	-	30	6
	238(50.4%)	234(49.6%)	100%

When CHA." begin actual work, they are given various items of standard equipment, e,g., forceps and "scissors. They are also supposed to be with 22 basic drugs including such items as oral rehydration mixture or salts, aspirin and eye ointments. The heavy emphasis on theory , with its connotation of hours of didactic classroom teaching, and the relatively small number of hours devoted to health education do not allow for much experience in stimulating and coordinating" the community or in working with groups from the mass organizations (Women 's Association, Youth Association etc.) Since health education is such an important and difficult part of CHAs work, more time should be devoted to it, as well as more emphasis put on practical experience.

An assessment undertaken by the Ministry of Health in 1980 (6) showed that the selection of trainees was not always satisfactory; on-farmers and high-school students had sometimes been chosen. Further, there were not enough properly trained trainers. The lack of support by communities for their CHAs, i.e., not providing remuneration, not covering operating costs, not ensuring drug supplies, was an important issue to be addressed if the CHAs were to continue to provide their much needed services. This assessment also demonstrated a lack of supervision, both administrative from the community and technical from the government health services. Many CHAs were found to be concentrating on curative work and neglecting preventive activities.

METHODS

A survey was carried out in three regions[1]. Arsi, Bale and Gojam, which had trained relatively high numbers of community health agents since 1978, and were considered reasonably representative of the geography and dominant economy (agriculture) of the central, southern and north-western parts, respectively, of Ethiopia. The survey covered 5% of the total number of community health agents in each region. In each region, two to three awrajas, and in each awraja, five to nine woredas, were randomly selected. The total number of community health agents trained in each woreda was taken from the register of the training health institution (health centre or rural hospital). The total number of CHAs to be interviewed was allotted proportionally in each woreda based on the number of CHAs in that woreda. The team of investigators travelled to health units which were accessible by car and visited the CHAs under their supervision until the requisite number of CHAs were contacted. The survey covered 19 woredas in seven awrajas in the three regions In all, 58 CHAs out a possible 1122 were investigated. The data were collected by interviewing the CHAs and, if necessary to verify or supplement information, by checking health unit documents, e.g., monthly reports, or interviewing the chairman of the local peasants '

association and the staff of the supervising health unit. It would sometimes happen that a CHA had sent a report of his activities to the supervising health unit without keeping a copy and occasionally activities were not properly recorded. In a few instances, the team tried to visit the CHA at work and to observe some of his activities, Three types of forms were designed by the investigators and relevant information not covered by the questionnaire, but acquired during data collection was also noted.

Table 2: Distribution of Community Health Agents Interviewed

Region	Awraja& Covered	Woreda& Covered	CHAs Interviewed+
Arsi	2	5	9
Bale	5	2	7
Gojam	3	9	22
TOTAL	7	19	58

[l]Ethiopia is divided into 14 administrative regions; each region is further divided into awrajas and each awraja into woredas.

FINDINGS

The findings fall into four categories population covered per CHA; activities performed by CHAs; type of support given to CHAR and, continuity of work performed by CHAs

Population

The people served by CHAs were organized into three types of mass organizations: peasant association (PA), service cooperative (SC) and producers ' cooperative (PC). A peasant association includes the fanners living within an 800 hectare area a service cooperative consists of two or more peasant associations which have joined together to provide marketing services, cooperative shops, schools and clinics for their members. Producers ' cooperatives are more highly developed forms of associations; they encourage collective production and profit sharing through a work point system. The population served by one CHA varied considerably among these three types of organizations, as can be seen in Table 3.

Table 3: Population Covered per CHA (Total CHAs = 58)

Population	Arsi			Bale			Gojam			Totals		
Size	PA	SC	PC	PA	SC	PC	PA	SC	PC	PA	SC	PC
0-500	-	-	2	2	-	-	2	-	5	4	-	7
501-1000	-	-	-	-	-	1	5	-	1	5	-	2
1001-1500	1	-	1	5	-	-	-	-	1	6	-	2
1501-2000	-	-	-	5	-	-	1	-	-	6	-	-
2001-2500	-	-	2	-	-	-	3	1	-	3	1	2
2501-3000	-	-	-	8	-	-	-	1	-	8	1	-
3001-3500	-	-	-	1	-	-	-	-	-	1		-
3501-4000	-	-	-	2	-	-	-	2	-	2	2	-
4001-4500	-	-	-	1	-	-	-	-	-	1	-	-
Over 4500	-	3	-	2	-	-	-	-	-	2	3	-

TOTAL	1	3	5	26	-	1	11	4	7	38	7	13

In Arsi, a number of CHAs were trained for service cooperatives and therefore expected to serve populations of over 4500. In Bale, they served mostly individual peasant associations with populations of 1500-3000. These PAs are in reality resettlement villages for people displaced by war or drought. Here, the large size was perhaps not as serious a problem as in Arsi because the villages are more compact. In Gojam, CHAs were used by all three types of mass organizations, with the majority of them serving populations of under 1500.

Overall, the general pattern seemed to be:

- about 19% with populations under 500 (mostly PA and PC);
- about 47% with populations between 500 -2500 (mostly PA); and
- 34% with populations of over 2500.

In Bale, the latter were mostly peasants, associations and in Arsi and Gojam mostly service cooperatives. Given their generally larger populations, service cooperatives should usually be able to afford more than one CHA.

Activities

The activity most frequently mentioned was health education, which would also have been a prelude to many of the environmental activities. The most common of these were latrine construction, digging of refuse pits and cleaning campaigns. It appears little effort is put into water protection (cleaning and fencing of wens and springs) dividing rivers into zones for washing laundry , human bathing, animal drinking etc.) or improvement of housing.

The ability to treat illnesses and injuries would depend upon the availability of drugs, just as maternal and child health (MCH) activities would be related to the presence of a traditional birth attendant, drug availability and immunization outreach from a health unit. On the whole, MCH and immunization outreach were disappointingly infrequent, especially in Arsi and Gojam. Referral at best could be judged, were inversely related to drug availability. The major health information activities, e.g., birth and death registration, and school health were rarely attempted, About one-third of the CHAs had had epidemic outbreaks to deal with at some time during the period they had been working.

Support

Of the 58 CHAs, 23 received remuneration either in cash or "in kind ". In kind remuneration included a variety of methods, for example, a work point system for PCs or exemption from duties and obligations in the community .Six of the seven service cooperatives (85%) paid in cash whereas only four of the 38 peasants ' associations (11%) and none of the 13 producers' cooperatives did so. Payment in kind was only by producers' cooperatives, 8 out of 13 (62%) and by peasants ' associations, 5 out of 38 (13%). No remuneration was provided by 29 of the 38 peasants' associations (76%) and 5 of the 13 producers ' cooperatives (38%); however, only I of the 7 service cooperatives (14%) was unable to provide remuneration (Table 5).

The provision of drugs was a source of support to the CHA who felt that with these drugs he could provide a service which was clearly wanted by the community. Frequently it was also a source of income for the peasants ' association or producers, cooperative and the profit made on the sale of the drugs provided the money with which to pay the CHA.

Two-thirds of the CHAs (40 of 58) overall were supervised by a health institution but only 43% were supervised by their communities. In Bale, where all except one of the CHAs interviewed were in peasants associations, (74%) were supervised by a health unit. Continuing education of some sort had been provided for only 19% of .the CHAs; 400/0 were working in communities with functional; health committees.

TABLE 4: Distribution of Activities Performed by CHAs

Activity	Arsi (9)	Bale (27)	Gojam (22)	Total Number	(58) Percent
Wells/Springs	5	25	11	41	71%
Latrine Construction	1	2	11	14	24
Refuse Pits	3	20	3	26	45
Cleaning Campaign	3	12	8	23	40
Improved Housing	0	2	1	3	5
River Zoning	0	1	1	2	3
Health Education	7	20	16	43	74
Maternal & Child Health	1	17	3	21	36
Treatment	5	13	9	27	47
Referral	5	10	8	23	40
Birth Registration	1	4	6	11	19
Death Registration	2	5	3	10	17
Immunization (E.P.I.)	2	10	1	13	22
School Health	0	0	1	1	2
Epidemic Calls	3	11	7	21	36

TABLE 5: Type of Support Provided to CHAs

	Arsi			Bale			Gojam			Total			Total
Support	PA	SC	PC	PA	SC	PC	PA	SC	PC	PA	SC	PC	
Remuneration													
Cash	0	3	0	0	0	0	4	3	0	4	6	0	10
In Kind	0	0	5	5	0	1	0	0	2	5	0	8	13
None	1	0	0	21	0	0	7	1	5	29	1	5	35
Drug Supply													
Supplied	0	3	1	12	0	0	6	4	2	18	7	3	28
Not Supplied	1	0	4	14	0	1	5	0	5	20	0	10	30
Supervision													
By Community	0	3	3	10	0	1	3	4	1	13	7	5	25
None	1	0	2	16	0	0	8	0	6	25	0	8	33
By Health Unit	0	3	3	20	0	0	7	4	3	27	7	6	40
None	1	0	2	6	0	1	4	0	4	11	0	7	18

Continuing													
Education	0	0	1	3	0	0	4	3	0	7	3	1	11
No Education	1	3	4	23	0	1	7	1	7	31	4	12	47
Health Committee	0	0	2	18	0	0	8	3	4	26	3	6	35
Functioning	0	0	2	10	0	0	7	0	4	17	0	6	23
Non-functioning	0	0	0	8	0	0	1	3	0	9	3	0	12
No Committee	1	3	3	8	0	1	3	1	3	12	4	7	23

In summary , support in the form of cash remuneration was most frequent in service cooperatives. and in kind remuneration in producers ' cooperatives. Almost three quarters of the peasants ' associations provided no remuneration at all. Service cooperatives were most often able to supply drugs.

It was not clear what was meant by "supervision " from a health unit. Such supervision was probably more of a routine check than a process which included continuing education for the CHA, stimulation of the health committee, assistance with the drug supply and with referral, bringing MCH activities to the community etc. If all these aspects of supportive supervision had been conscientiously carried out by the health unit staff, it is likely that there would have been fewer drop-outs and more participation by the communities as well.

Continuity of Work

Of the 58 CHAs visited or investigated, 36 (6~!o) had continued unbroken service, 12 (12%) had stopped work and 10 (17%) had never actually started work after being trained. None of those who had stopped working as CHAs had ever started up again. Three variables were examined separately for each of these categories, availability of drug supply, supervision by health institution and/or community, and provision of continuing education. The results are summerized in Table 6.

It is quite clear that these three factors were very important in determining whether or not a CHA continued his work. Those who quit work had not been kept supplied with drugs, only one-third had been supervised and only one had had continuing education. There is obviously little motivation to continue working if there is no support from the community or the health services.

Table 6: Factors Influencing the Work of CHAs

Continuity of Work	Drugs Available		Health Supervision		Community Supervision		Continuing Education	
	Yes	No	Yes	No	Yes	No	Yes	No
Unbroken (62%)	27	9	33	3	25	11	10	26
Quit after 1-2 years(21%)	0	12	4	8	0	12	1	11
Did not start (17%)	0	10	1	9	0	10	0	10

TOTAL	27	31	38	20	25	33	11	47

Despite inadequate information on attrition rates, researchers in other countries have found that the turnover of CHAs and similar types of community workers is quite high for a number of reasons, the most common ones being poor selection and low or no remuneration and other forms of support. In Costa Rica, the attrition rate of rural health assistants was about 20% during the first two years that the RHAs were working, when people who had worked in the malaria programme, and were not particularly interested in community work, were selected for training, with the training and utilization of other community members who were more interested in this type of work, the attrition rate dropped to 2%. In the Kasa and Palghar nutrition projects in India, the drop-out rate of the part-time social workers was found to be about 60% after one to two years of work. Reasons given for the high drop-out rates in these In this study, 17% of those initially selected as CHAs did not start work, and 21% quit, for a total attrition rate of 38%.

DISCUSSION

A number of countries have launched primary health care programmes using community based workers and important lessons are emerging from these experiences. The size of the population covered by a single CHA has varied widely from country to country, from a low 0£ 1:200 to a high ranging from I :2000 to 4000. An Indian study of village health workers suggested that the optimum CHA/population ratio is 1:500 to 1: 1000 (8). Other researchers have suggested that, generally, a CHA should be able to maintain a responsible continuous relationship with about 100 families (500-800 people), with, in most cases, these 100 families being within one hour walking distance (9).

In the three regions of Ethiopia studied here, the population served per CHA varied from 1: <500to 1: >4500. It was found that the CHA serving a large and scattered population, as £or example in the Arsi service cooperatives, each of which is made up of several peasants ' associations, limited himsel£ mostly to curative services. On the other hand, the CHA who worked with the PAs and PCs generally had a smaller and less dispersed population to serve and so performed a relatively greater variety of activities (curative, promotive and preventive services).

With the exception 0£ the Bale resettlement villages (PAs) which were large but quite compact, the PAs As and PCs served ranged from 500-2500 population, and 45% of the CHAs investigated (26 of 58) served populations 0£ less than 1500. If a CHA is to provide adequate services in PAs and PCs, it is desirable to keep the CHA/population ratio to approximately 1:1000.

Certainly a CHA should not be expected to maintain responsible continuous monitoring of more than 1500 people. Since SCs by their nature will always have populations greater than 1000-1500 they should employ
at least two CHAs.

The remuneration of CHAs is a vital issue (10) for two reasons. First, it is important as an incentive, assuring the sustained interest of the CHA in his duty. Second, the training and deployment of this new type of health worker requires additional resources. At present, the main sources of funds for remuneration are:

1) the government, through direct budgetary allocations to state fanns; and,
2) communities, through the mobilization of their own resources (P A, SC, PC and Urban Dwellers ' Associations).

Out of the 58 CHAs covered by the study 41% received remuneration in cash or in kind, mostly from service cooperatives (85%) and producers ' (64%) cooperatives. Only 24% of the peasants ' associations included in the study provided remuneration.

Whether or not remuneration was provided seemed to depend upon the strength and economic level of the organization in question, as well as on the extent to which the community had been made aware of its responsibilities prior to the selection of a community member for the CHA training programme.

If CHAs are to function effectively, a supply of drugs of the right quality and quantity must be delivered at regular and appropriate intervals (11) as well as when the CHA begins work. The study showed that CHAs started their work immediately after training provided that drug supplies were available through the communities or from UNICEF or other agencies. In communities where drug supplies were initially provided by external agencies on the assumption that the community would take over the responsibility for drug supply, but were not replenished, the CHAs eventually stopped working. Even more serious is the fact that the CHAs who failed to start working did so because they were not supplied with drugs. Clearly, communities will have to be actively involved in ensuring a regular supply of drugs if they want to start or maintain a CHA programme.

Continuous, educative supervision is indispensable to CHA activities (12). Such supervision provides the CHA with reliable and valuable back-up and continuing education. It also strengthens his credibility in the community and status as a health worker and member of the health team. The study revealed that 40 out of 58 (69%) of the CHAs had been supervised by health units and 25 out of 58(43%) by their communites;
however, of the 36 CHAs still working at the time of this survey, five received no supervision at all. Supervision by communities has a direct relationship with whether or not support in the form of remuneration or drug supplies is provided (Table 5). The mere existence of supervisory activity by health institutions could be considered as a good start towards community supervision, even though, as mentioned earlier, it is not clear what "supervision, by the health unit actually comprises. Continuing education should be part of supervision, and of the 12 CHAs who had quit working, II (92%) had not received any further training or educacation.

As part of PHC the concept of community health agents represents efforts to bring equity to health care and offers many advantages in solving the lack of access of the population to basic elements of promotive, preventive, and treatment services. However, in this study, high drop-out rates, inadequate or no remuneration, absence of continuing education and drug supplies, lack of purposeful supervision and (in general) sustained support from communities are some of the major problems identified. These, no doubt, have affected the successful and sustained utilization of community health agents, and need to be corrected as soon as possible if the programme is to operate properly.

REFERENCES

1. Socialist Ethiopia, Ministry of Health. February, 1982. Country Report for Primary Health Care Workshop. p. 17. Nazareth, Ethiopia. Available in Ministry of Health files, Addis Ababa.
2. World Health Organization. 1978. Primary Health Care: Report of the International Conference on Primary Health Care Alma-Ata, USSR, 6-12 September, 1978. Jointly sponsored by the World Health Organization and the United Nations: Children's Fund. Health for All Series No.1. Geneva:WHO.
3. Ministry of Health. 1982. Country Report op.cit. pp. 16-23.
4. World Health Organization. Final Report of Joint WHO/UNICEF Inter-Country Workshop on Primary
Care. February, 1982, Nazareth, Ethiopia. Brazzaville:WHO.
5. Socialist Ethiopia, Ministry of Health. 1978. Curriculum of the Community Health Agent (Amharic).
Ministry of Health. P.O. Box 1234. Addis Ababa.
6. Socialist Ethiopia, Ministry of Health. 1980. Report of Assessment Teams.
(Arnharic.)Available in Ministry of Health files, Addis Ababa. 40 Ethiopian Journal of Health Development. Vol. I No.1. 1984
7. Ofusu-Amaah, V. 1983. National Expen.ence in the Use of Community Health Workers. A Review
of Current Issues and Problems. p. 28. WHO offset publication No.71. Geneva:World Health Organization. This reference covers all studies cited in this paragraph.
8. See Note 7. p. 12. for this and the preceding oentence.
9. African Medical Research and Education Foundation et at. July, 1982 Community-based Health
Care Workshop. Nairobi:AMREF.
10. See reference 7
11. See reference 7
12. See reference 7.