Analysis Health System Research (HSR) Mamfe Central and central Ejagham

By

The Manyu Rural Development Project (MRDP)

In collaboration with

The Manyu Health Organisation (MHO)

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Summary

In October and November 1998 the Manyu Rural Development Project (MRDP) in cooperation with the Manyu Health Organisation (MHO) carried out a health system research (HSR) in Mamfe Central and central Ejagham. The objective was to identify the reasons for the assumed declined performance of the existing health system in Mamfe Central and central Ejagham to find solutions. Furthermore, the health-seeking behavior of the population was looked at and a great deal of the private health workers were identified and interviewed.

Conclusion:
The MRDP and MHO assume that the health status of the population of Mamfe Central and central Ejagham is declining due to poor performance of the existing health system. The population is under utilizing the Government and community health services in favor of the informal private health sector and the mission health centers. The Government can not assure the quality of care provided by the informal private sector due to a lack of control. The VHC's are the only structure actively taking care of the public health issues.

Recommendations:
To improve on the performance of the existing health system at district / intervention zone level it is recommended to the MRDP and the MHO to reinforce the community ran health services and possibly the privately / individually ran health services.

It is not in the capacity of the locally based project / organization MRDP / MHO to tackle the problems faced by the Government health services. Collaboration with the Government needs to be maintained and is essential to increase the health standard of the population.

List of abbreviations

NGO	:	Non-Governmental Organization.
MRDP	:	Manyu Rural Development Project.
SNV	:	Netherlands Development Organisation.
MHO	:	Manyu Health Organisation.
MOPH	:	Ministry of Public Health.
GTZ	:	German Association for Technical Assistance.
SWPSFH	:	South West Provincial Special Fund for Health.
MC / CE	:	Mamfe Central and central Ejagham.
PHC	:	Primary Health Care
HSR	:	Health System Research.
FGD	:	Focus Group Discussion.
COV	:	Chief of Village.
IVHC	:	Inter Village Health Committee.
VHC	:	Village Health Committee.
DMO	:	District Medical Officer.
COP	:	Chief of Post.
CHW	:	Community Health Worker.
TBA	:	Traditional Birth Attendant.
TH	:	Traditional Healer.
DV	:	Diviner.
PHW	:	Private Health Worker.
RN	:	Retired Nurse.
RM	:	Retired Midwife.
PH	:	Pharmacist.
PMS	:	Patent Medicine Seller.
DP	:	Drugs Pedler.
GHC	:	Government Health Center.
CHP	:	Community Health Post.
MHC	:	Mission Health Center.
MDH	:	Mamfe District Hospital.
MMH	:	Mamfe Military Hospital.
STD	:	Sexual Transmitted Diseases.
Gov.	:	Governmental.
N-G	:	Non-Governmental.
CFA	:	Communauté Française Africaine

List of defenitions

Health System Research:
The systematic collection, analysis and interpretation of data to answer a certain question or solve a problem in relation to the existing health system.

Inter Village Health Committee:
A committee responsible for the management and functioning of a Governmental health center situated in a certain 'health area' and trained by the Government.

Village Health Committee:
A committee responsible for (the prevention of) health problems affecting the village.

District Medical Officer:
The medical administrator and first responsible for health matters of a certain health district indicated by the Government.

Chief of Post:
The person in charge of a hospital, health center or health post.

Community Health Worker:
A health worker trained by the Government or a Non-Governmental Organisation based in the village (health post) to take care of existing health problems.

Traditional Birth Attendant:
A person (in most cases a women) taking of deliveries in the village in a traditional way. Generally for those who do not have access to health services (Gov. and N-G).

Traditional Healer:
Individuals who treat the most common diseases in the village according to the tradition of their ancestors.

Diviner:
A person who is believed to be capable of for telling coming events and / or to give information on past events.

Private Health Worker:
Each individual that treats sick people, legal or illegal and making profits, without being connected to the Governmental or Non-Governmental health services.

Patent Medicine Seller:
An unqualified person who sells drugs that pays taxes over his income and is a registered businessperson.

Drugs pedler:
An unqualified person who sells drugs generally in more then one village and often without paying taxes.

Table of contents

Table of contents (cond.)

Introduction

Background information

It is estimated that 35 % of the population in Manyu Division has access to the available health care structures. Manyu Division is divided into two health districts: Manyu Health District and Akwaya Health District. In both districts a Medical Divisional Officer is based. Manyu Division counts four hospitals of which the Mamfe Health District Hospital functions as a referral hospital. One hospital is based in Akwaya Health District. Manyu Division counts 19 health centers of which 2 are based in Akwaya Health District. 9 Out of the 19 health centers are run by the government, 5 are mission health centers and the community build / run 5 health posts. The main problems faced by the government in running 9 health centers and 2 hospitals in Manyu Health District are a lack of staff, transportation, equipment and good management. Also the health centers built and run by the community themselves are facing a lack of means and good management. Furthermore, it is assumed that many private health practitioners are operating in the division.

Assumptions and hypotheses

"It is assumed by the MRDP and MHO that the health status of the population of Mamfe Central and central Ejagham Manyu is declining due to poor performance of the existing health system and the low utilization of and the limited access to formal Governmental and N-G health services by the population of Mamfe Central and central Ejagham".

The following hypotheses are set:

1. Poor management of health services exists at national, provincial and district and village (community) level;

2. There is a lack of staff, drugs and equipment in Governmental and community health services;

3 Governmental and community health services are used inappropriately by the population of Manyu Division; and

4 The Government control on the quality of care given by the informal private sector is inappropriate.

Literature review

At Government level, national, provincial and district, hardly any information has been found about former research activities carried out in Mamfe Division. The only data found so far at Government level were the latest immunization program figures / results.

No additional information was found on the functioning of the present health system from national and international Non-Governmental Organizations (NGO's) like South West Provincial Special Fund for Health SWPSFH and German Association for Technical Assistance (GTZ) that are active in Manyu Division.

Objectives

General objective:

To identify the reasons for the declining performance of the existing health system in Mamfe Central and central Ejagham to find solutions.

Specific objective:

1. To determine the level of utilization of existing health services in Mamfe Central and central Ejagham.

2. To determine whether there are variations in the utilization of existing health services related to the season and type of people served.

3. To identify factors related to the health services offered that makes them either attractive or not attractive to the population.

4. To identify socioeconomic and cultural factors that may influence the population's utilization of health services.

5. To make recommendations to all parties concerned concerning what changes should be made, and how, to improve the utilization of health services.

6. To work with all parties concerned to develop a plan for implementing the recommendations.

Sub objectives:

1.1 To establish the pattern of utilization of health services according to the type of service.

2.1 To establish the pattern of utilization of health services in various seasons of the year.

2.2 To establish the pattern of utilization of health services according to the type of people served.

3.1 To describe the dedication to duty and professional competence of health personnel.

3.2 To determine the quality and quantity of facilities and equipment offered in the health services in relation to the health problems.

3.3 To verify whether increasing distances between home and the health facility reduces the level of utilization of the health services.

4.1 To compare the level of utilization of health services among various socioeconomic groups.

Methodology

Study type

The HSR research in Mamfe Central and central Ejagham is a descriptive study. The goal of the study is to provide useful information about the problems mentioned in the introduction.

Data collection techniques

The research was conducted with questionnaires. At a later stage, when activities will be defined based on the results of the HSR, focus group discussions (FGD) may be conducted to gain more in depth information about existing problems. The questionnaires of the HSR will be used to define the topic guide for these FGD.

Sampling

To investigate the usage and quality of health services in Mamfe Central and central Ejagham all the health services have been identified and investigated. Information was collected through the authorities at district and village level to identify the public and private sector.

For the data collection from the population in Mamfe Central and central Ejagham first six villages were selected as follows: The names of the villages were put on alphabetical order. It was decided that 6 out of 24 villages would be visited to conduct interviews with the population. It means that one out of four villages was selected. The starting number for the systematical selection of villages was selected ad random: 3.

As a result interviews have been conducted with the population in the following villages; Ayukaba, Egbekaw, Kembong, Mbatop, Ndekwai and Ossing. The population was selected at random. A bottle determined which street of a village was chosen to take part in the research. After which every x household was questioned (depending on the size of the population that was interviewed and the size of the village).

From each household the head of the household was asked to answer the questions in every even house. In the uneven houses the partner of the head of the household was asked to answer the questions. This to make sure that both women and men were included in the interviews.

Pre-test

A pre-test was conducted in Bachuo Akagbe outside the research area. All questionnaires were tried out, after which they had been adapted.

1. General information / data.

1.1 The number of interviewees in different categories.

The number of conducted interviews;

-District Medical Officer (DMO)	**1**
-Chief of posts health centers / posts and hospitals	**13**
-Health staff health centers / posts and hospitals	**35**
-Private health workers (134)	
• Herbalists / traditional healers	**87**
• Diviners	**3**
• Traditional Birth Attendants (TBA's)	**4**
• Retired nurses	**6**
• Retired midwives	**5**
• Community Health Workers (CHW)	**2**
• Pharmacists	**1**
• Patent medicine sellers	**7**
• Drugs pedlers	**19**
-Chiefs of village	**21**
-Population	**60**
-VHC members	**62**
-IVHC members	**16**
Total	**343**

1.2 *Last obtained graduation, occupation and sex of the interviewed population.*

The intention was to interview as much women as men from the population during the research. The result was that 50% of the interviewees were men, 46.7% were women and in 3.3% of the cases it is unknown (the answer was missed). Asking for the level of education and occupation the following results will give an insight.

Occupation	**%**
Farmer	64.5
Trader	6.5
Retired	6.5
Housewive	6.5
Student	4.8
Electricien	3.2
Teacher	3.2
Laundry man	1.6
Civil servant	1.6
Technician	1.6
Total	**100**

Level of education	Total
No education	36.7
Primary school	11.7
Secondary school	48.3
High school	3.3
First degree	0
Masters	0
Others	0
Total	**100**

This basic information will have no impact on the results of the HSR. No conclusions will be based on this information.

2. The level of utilization of existing health services in Mamfe Central and central Ejagham.

2.1 The available health services in Mamfe Central and central Ejagham.

In 24 villages in Mamfe Central and central Ejagham (MC/CE) there are 2 hospitals, 3 government health centers, 3 mission health centers, 6 community health posts (two closed down) and 3 community pharmacies (SWPSFH). The total number of staff employed in 17 health facilities is 92 (see table 2.1.a). According to the information given by the Chiefs of Village (COV) and / or the Village Health Committees (VHC's) there are in between 271 and 531 private health workers operational in the same area. The majority of them are traditional healers: 70.4%, while 12.5% are "modern" individual health workers and 17.1% are medicine sellers (see table 2.1b). In the 24 villages 20 VHC's are existing

Two community health posts are closed down (Eshobi and Egbekaw), while two more community health posts / hospitals are under construction (Ossing and Ndekwai).
Furthermore, it is assumed that the Government is going to built a health center in Ayajuknip and that Mamfe hospital and Kembong health center are going to be reconstructed with the assistance of the German Financial Assistance.

The number of private health workers is an estimate. The lowest and the highest number of private workers mentioned per village by their chief or VHC member have been taken as an average number. This means that at least 271 private health workers and at most 531 private health workers are operational in Mamfe Central and central Ejagham.

The villages without health committee are Eshobi, Ewelle, Mbakang and Ogomoko. Mamfe, Kembong and Afap, have an Inter-VHC. The three places have a Government health center and are the center of health activities in there own Governmental "health area". The members of IVHC's have received training from the government unlike the VHC's.

Table 2.1.a **Data population / health facilities MC / CE**

Town / village	Size of the population	Health Centers / Posts / Hospitals	Dr	Nu + Mi	Others	Private Practitioners	VHC
1.Afap	1114	GHC	-	2	1	4-8	Yes + IVHC
2.Ajayundip	1091	CHP	-	3	-	8-16	Yes
3.Ayukaba	297	-				6-23	Yes
4.Bakwelle	528	CHP	-	2	-	9-13	Yes
5.Besong Abang	3696	MHC	-	4	2	12-16	Yes
6.Ebam	368	-				6-10	Yes
7.Egbekaw	643	CHP*	-	-	1	10	Yes
8.Eshobi	1400	CHP*	-	-	2	12	No
9.Ewelle	1087	-				Na.	No
10.Eyang Nchang	844	-				28-43	Yes
11.Kembong	4831	GHC	-	2	2	15-37	Yes + IVHC
12.Mamfe	17275	GHC, MHC, GH, MH	5	43	14	50	Yes + IVHC
13.Mbakang	518	MHC	-	1	4	Na.	No
14.Mbakem	503	CHP	-	2	-	12-18	Yes
15.Mbatop	397	-				15-40	Yes
16.Mfuni	1249	-				21	Yes
17.Mkpot	377	-				3	Yes
18.Nchang	2727	CHP	-	-	2	19-59	Yes
19.Ndekwai	1289	CHP°	-	-	-	4-64	Yes
20.Ntenako	1969	-				8-10	Yes
21.Ogomoko	855	-				1	No
22.Okoyong	1983	-				9-31	Yes
23.Ossing	2773	CHP/H°	-	-	-	9-30	Yes
24.Talangaye	501	-				10-16	Yes
Total	48.315	Hosp. 2 HC/P 10 HC/P*° 4	5	59	28	271-531	20

***CHP closed down recently.** **(See map 1)**
°CHP/H under reconstruction.

Additional

Out of the 134 interviewed private health workers 76.1% is not registered with the Government, while 23.9% is (see table 2.1.b). The main reasons mentioned by the interviewees are “no means to do so” and “I do not know the process of registration” (see question 1.1.5 first results).

Table 2.1.b Percentage of (non-) registered private practitioners.

Private health workers	**Registered**		
	Yes %	**No %**	**Total %**
Traditional healers	25.5	74.5	100
“Modern” health workers	15.4	84.6	100
Medicine sellers	22.2	77.8	100
Total	23.9	76.1	100

2.2 Size of the population.

The total number of inhabitants of the 24 villages included in the HSR is 48.315. The population was counted last in 1987. A formula has been applied to get a realistic estimate of the size of the population in 1998 (see table 2.1.a).

2.3 The utilization of health services.

2.3.1 Health services

In 1996 13,368 and in 1997 12,215 people were consulted by the Governmental health services. In the same years the Non-Governmental health services consulted 22,897 and 21,375 people. The 134 interviewed private health workers consulted (or sold their drugs to) 104,139 people in 1996 and 112,352 people in 1997 (see table 2.3.a). The figures of the private health workers are estimates. The number 134 is just less then 50% of the total minimum number of private health workers active in MC /CE. This does not mean that if you count 100% of the private health workers (minimum) the number of consultations will be multiplied automatically by two. The fact is that within these 134 private health workers nearly all the patent medicine sellers are included while they do nearly 40% of the “consultations”.

Besides the Governmental, Non-Governmental and known private health services there still seem to be another periphery of health workers. It is assumed that for example health center staff and unemployed qualified nurses (without work experience) are doing private consultations mainly in the larger places in the area.

Table 2.3.a **Percentage of consultations by different health services.**

Health service	1996	%	1997	%	Total	%
Governmental	13,368 (14,842*)	9.5	12,215 (13,322*)	8.4	25,583	8.9
Non-Governmental	22,897 (21,324*)	16.3	21,375 (19,516*)	14.6	44,272	15.5
Priv. Pract. °	104,139	74.2	112,352	77	216,491	75.6
Total	140,404	100	145,942	100	286,346	100

° **The figures of the interviewed private workers are calculated to avoid bias, since the total number of private workers is a rough estimate.**

* **These figures are given by the central medical administration of Manyu Division. Allthough they differ from the figures acquired from the health services itself it will not change the general picture of the usage of health facilities in the area.**

When comparing the Governmental and Non-Governmental health facilities we can differentiate the Government hospitals and health centers, the mission health centers and the community health posts. The figures for the Government health services remain the same: in 1996 13,368 consultations and in and in 1997 12,215 consultations. The mission health services consulted 21,284 people in 1996 and 19,271 people in 1997. The community health services consulted 1,613 in 1996 and 1,204 in 1997 (see table 2.3.b).

Table 2.3.b **Percentage of consultations different categories of hospitals and health centers / posts.**

Health service	1996	%	1997	%	Total	%
Governmental	13,368	36.9	12,215	36.4	25.583	36.6
Mission	21,284	58.7	20,171	60	41.455	59.3
Community	1,613	4.4	1,204	3.6	2.817	4
Total	36.265	100	33,590	100	69.855	99.9

Within the group of private practitioners we see that the traditional healers do 10.8%, the "modern" health workers 0.8% and the medicine sellers 88.4% of the consultations (see table 2.3.c). It is disputable whether selling drugs can be looked at the same way as consulting a patient. Nevertheless, it is generally believed that in many cases the population buys drugs without consulting a doctor and that he or she will follow the advice of a relative or friend or the drugs seller.
Secondly, 53.4% (1996) – 55.4% (1997) of the drugs are sold by drugs peddlers who go around the villages and are the only access to drugs for many people. In these cases it may be believed for sure that the clients did not consult a doctor first for economical and practical reasons and follow the advice of the drugs pedler. This gives the drug seller more responsibilities and a different status whether he or she is capable or not.

Table 2.3.c **Percentage of consultations different categories of private practitioners.**

Private Pract.	1996	%	1997	%	Total	%
Traditional healers	11,676	11.2	11,702	10.4	23,378	10.8
"Modern" health w	880	0.8	933	0.8	1,813	0.8
Medicine sellers	91,583	87.9	99,717	88.8	191,300	88.4
Total	104,139	99.9	112,352	100	216,491	100

In table 2.3.d we can see that the drugs peddlers have the biggest share in the market of consulting or selling drugs in this area.
Looking at the hospitals and health centers / posts, mission health centers seem to be favored by the population above the Governmental health centers, while the community health posts only take a marginal share (1%) of the market.
The traditional healers do take 8.2% but they are very high in number, which makes them less popular then assumed. For the "modern" health workers there is only a share of 0.6%, but they are limited in number.

Table 2.3.d **% Of consultations in 1996 / 1997 per health service.**

Health service	% of consultations 1996 and 1997	
Governmental hospitals and health centers	8.9	
Mission health centers	14.5	
Community health posts	1	
Traditional healers	8.2	
"Modern" health workers	0.6	
Medicine sellers	66.8	PMS + Pharmacist ; 30.5 Drugs pedlers ; 36.3
Total	100	

2.3.2 The population

The population was asked whether one of the following three diseases occurred the last three months within their family: malaria, veneral diseases or skin diseases. In 81.7% of the cases the interviewees answered malaria, 0% said veneral diseases and 65% said skin diseases. Most likely the population did not like to talk about veneral diseases, since it is very common in the area while nobody admitted to have faced that problem. The following question was; "What did you do from the onset?". 31.8% Of the interviewees said that they visited a governmental health service, 27.3% said they visited a Non-Governmental health center / post and 38.6% said they visited a private practitioner first (see table 3.2e).

The community health post was visited in none of the cases. Out of 38.6% of the private practitioners 21.6% were drugs pedlers, 12.5% traditional healers, 3.4% were patent medicine sellers / pharmacist and 1.1% were "modern health workers. The traditional healers were all herbalists (no deviners or TBA's).

Comparing the number of consultations with the preference of the population we see that there is a discrepancy when we look at the usage of hospitals / health centers. From the consultations we can see that the health centers cover 11.7% of the market, while the population said in 31.8% of the cases that they will first visit a hospital / health center in case of the three mentioned diseases.

Secondly, from the consultations we can read that mission health centers are favorable to the Governmental health services, while the population tells us that they more often visit governmental health services then mission health centers. The possible cause of this biased information may lay in the fact that only 0.124% of the population was interviewed and that only six out of the 24 villages were included in the research concerning the population. The second cause of the biased information might be the geographical side of the villages were the population was interviewed. The villages Kembong, Ayukaba, and Mbatop are situated closer to Government health centers, Egbekaw and Ossing are situated on about the same distance from a Government health center as a mission health center, while only Ndekwai is situated closer to a mission health center.

Table 2.3.e **Initial visits by the population.**

Initial visit paid to	**%**
Government health center / hospital	31,8
Mission health center / hospital	27,3
Community health post	0
Deviners	0
Herbalists	12,5
Traditional Birth Attendants (TBA's)	0
Retired nurses	1,1
Retired midwives	0
Community Health Workers (CHW's)	0
Pharmacists	1,1
Patent medicine sellers	2,3
Drugs pedlers	21,6
Others	2,3

Asking the population what determined your choice 36.2% said the quality of care while 35.5% said cost / distance (the both are inter-related; the further the distance the higher the expenditure on transport; see question 1.3.4 first results). Although the population seems to look for quality of care the cost and distance also plays an important role in making a choice of health service. This confirmed the before mentioned assumption that the geographical side of the villages were the population was interviewed might be the cause of the biased information.

2.3.3 Additional.

Asking the COP of 14 health services what are the ten most common diseases you treat in your health service they answered:

Table 2.3.f

Diseases	**Tot**	**%**
1 Malaria	13	92.9
2 Respiratory tract inf.	11	78.6
3 Skin infections	11	78.6
4 Gastro-enteritis	10	71.4
5 STD's	6	42.9
6 Filariasis	6	42.9
7 Intestinal parasites	6	42.9
8 Rhuematism	5	35.7
9 Typhoid	3	21.4
10 Tuberculosis	3	21.4
11 Measels	3	21.4
12 Hypertension	3	21.4
13 Others	16	114.3
Total	**96**	

2.4 Conclusions

Mamfe Central and central Ejagham together is the densest populated area in Manyu Division. With a total population of approximately 48.000 inhabitants in 24 villages / towns they have access to 12 health care structures. Meanwhile two health care structures were closed down in recent years while two others are under construction.

Every two villages have one health care structure. One health care structure is serving 4.000 people on average.

Excluding Mamfe town there are 8 health care structures to serve 23 villages with approximately 30.000 inhabitants. This means that every three villages have one health care structure (a bit more). One health care structure is serving 4.000 people on average.

The 48.000 people have access to 5 medical doctors, which is an average of 1 doctor for 9.600 persons. It needs to be said that all medical doctors are based in Mamfe. The accessibility is not the same to everyone.

87 Other medical staff and assistants are working in the area. 57 Of them are based in Mamfe in 4 health care structures (>14 average), 30 others in 8 health care structures in the area (<4 average). Two of the health care structures in Mamfe are hospitals, that automatically needs more staff then the other structures (health centers / posts).

At least 271 private health workers are active in nearly all the villages. Out of all the active private health workers 134 were interviewed. In the analysis of the research these will be considered “the existing ones”.

There are three IVHC connected to the three Government health centers in three different health areas. In 20 out of 24 villages there is a VHC.

It can be said that the basically needed health care structures, excluded the private practitioners, are available in MC /CE to provide the population with as well preventative as curative health care. The Government runs a district referral hospital, a military hospital and 3 health centers with IVHC’s. Secondly, 3 mission health centers, 4 community health posts and 20 VHC’s are operating in the same area.

Looking at the level of utilization of health services we can conclude that the mission health centers are more popular then the Governmental health centers and the Governmental health centers more popular then the community health posts for whatever reason. Nevertheless, the private health workers take the biggest share of the “market” (>75%) especially the drugs sellers. A few remarks need to be made to this:

- Drugs sellers are looked at as consultants. This can be questioned, but it is generally known that the people will try to solve their (minor?) health problems first of all through private practitioners including the drug sellers. They will follow their advice and will allow them to give them injections for example.
- The 75% are based on the 134 interviewed private practitioners. Theoretically it means, following the information of the first result, that the number of consultations carried out by them could by 2-4 times more then discussed.

The following questions are to be answered in the following chapters and discussed in chapter 6:

- What determines the difference of usage between Governmental, mission and community health centers / posts?
- What circumstances and reasons make the private practitioners more popular then the recognized health care services, while the number of these recognized health care services seems to sufficient?

3. Utilization of existing health services related to the season and type of people served.

3.1 Availability of transport facilities.

Asking the opinion of the population about the quality of roads and whether this influences their choice of health service the following answers were given;

The accessibility of roads.

Dry season	**%**	**Rainy season**	**%**	**Total**
Accessible	55	Accessible	0	27.5
Accessible but difficult	43.3	Accessible but difficult	63.3	53.3
Inaccessible	1.7	Inaccessible	36.7	19.2
Total	**100**		**100**	**100**

The influence on choice of health service.

Yes, because (46.7%)	**%**
Difficult to travel	64.3
Transport is more expensive	28.6
Others	7.1
Total	**100**

72.5% Of the population say that the roads are difficult to access or not accessible at all during the year. In 46.7% of the cases it is said that this influences the choice of health service because transport is expensive or not available at all. Especially in the rainy season (8 months a year) it is difficult to travel (high prices, no cars available, time consuming).

3.2 The engagement in farming activities.

In MC / CE 96.7% of the interviewees are engaged in farming activities, while 3.3% is not. The population is highly occupied the whole year but especially in the months March and April, while in December the activities are slow. In 100% of the cases the population said that being more or less occupied by the farming activities it does not influence their use of health services. They consider their health to be important (see questions first results 2.2.1-2.2.3).

3.3 Sex.

It has been asked to the existing health services how many female / male patients they consulted in 1996 and 1997. Only the Governmental health services could answer that question in nearly all cases. The mission health centers, the community health posts and

the private practitioners could not. No conclusions can be with drawn from this question (see first results question 2.3.1).

3.4 Age.

It has been asked to the existing health services how many children (different age groups), young adults, adults and elderly patients they consulted in 1996 and 1997. The Governmental health services could answer that question in nearly all cases. The mission health centers had the information available except for the elderly people and they were using different age categories then the Government. The community health posts also had the information available, while the private practitioners did not keep these records except the retired nurses and midwifes. After all the information is difficult to analyze since it is incomplete and different age categories were used (see first results question 2.4.1).

3.5 Conclusions

Nearly 50% of the interviewees say that the condition of the roads is of influence in their choice of health service. The difficulties they face to travel, the availability of transport and the increased prices of transport during the rainy season (bad roads) will make them use a different health service then preferred. Logically it can be said that they first will look for a health service nearby to solve their health problems.

The farming activities (96.7% of the population is involved) do not influence the choice of health service. Being more or less occupied will not change the belief of the importance of good health.

No conclusions can be drawn from “sex” and “ age” since the data is not complete or difficult to analyze (see 3.3 / 3.4).

It can be said that the season (rainy or dry) does influence the usage of health services (the type of). Questions to be asked and discussed in chapter 6:

- In case of any seasonal influence, where do the people prefer to go to while facing a health problem?
- What is the impact on the health status of the population in MC /CE if they are not able to go to their preferred type of health service?

4. Factors related to the health services that makes them either attractive or not attractive to the population.

4.1 The dedication of health service workers.

To determine the dedication of health workers the opinion of the health staff / personnel of the Governmental and Non-Governmental health centers / posts / hospitals was asked about the presence of health workers during working hours. 44.2% Of all the interviewees said that the health staff is present 90-100% of the time they are supposed to, 48.1% said 80-90% and 5.8% said below 80% (see table 4, question 1).

There is a clear difference between the opinion of the health personnel classifying the presence of health personnel during working hours if you compare the answers of Governmental health staff and Non-Governmental health staff. While the Governmental health staff scores themselves highest in the second category 80-90% (70.4%), the Non-Governmental health staff scores themselves highest in the first category 90-100%, 64% (see table 4).

Looking at the attitude of health workers indicated by the population the Government health workers score 28.3% in the category 'friendly', the Non-Governmental health workers 85% and the private health workers 54.2% (see table 4, question 1-2).

4.2 Availability of health workers

In general the opinion of the population is in line with the opinion of the health service workers looking at the number of health workers available to serve the patient. As well the population as the health workers say that the number of health workers in Governmental health services is less adequate compared to the number of health workers in Non-Governmental health services. Respectively 38.3% of the population and 11.1% of the Governmental health workers think that the number of health workers in the Governmental health services is 'more then' or 'just enough'. In the Non-Governmental health services 69.9% of the population and 76.9% of the Non-Governmental health workers believes that the number of health workers is 'more then' or 'just enough'(see table 4, question 3).

Looking at the average number of health workers available in the health centers / posts in both sectors we see that the number in the Non-Governmental sector is lower compared to the Governmental sector (question 1.1.3 first results / excluding the hospitals who have a relative high number of staff / personnel and are only run by the Government). If you compare the Governmental sector with the mission health centers the difference is 2 health personnel per 3 health centers in favor of the mission health centers.

Looking at the total number of consultations carried out by the two different categories (excluding hospitals) you see that the Governmental sector consulted 17.230 patients and

the Non-Governmental sector 44.272 in 1996/97. The average number of patients consulted per health worker is for the Governmental sector 1,230 and for the Non-Governmental sector 1,770. When comparing the Governmental sector with the mission health centers we see that the average number of consultations per health worker for the Governmental sector remains the same 1,230 and for the mission health centers we find an average number of 2,591 (41.455 consultations).

Conclusively we can say that although the population as well the health workers say / experience that the Non-Governmental sector is better staffed then the Governmental sector, in practice the situation looks different. The average number of health workers in the Governmental sector (4.7) is higher then in the Non-Governmental sector (3.6) when comparing the health center / post staff. When comparing the Governmental sector with only the mission health centers we see that the mission health centers are better staffed on average (12.5% difference) but that they consult 31.7% more patients. The last fact means that the workload for the mission health center staff is bigger then the workload of the Government staff.

The discrepancy might be caused by different factors;

- The population interviewed never mentioned to visit a community health post in case any disease occurs. Their opinion about the Non-Governmental sector might have been focused on the mission health centers while it is seen that the mission health centers are better-staffed then community health centers.
- The available number of staff per health center might be biased by the presence (or absence) of health workers during working hours. The presence during working hours is scored lower by the Government health workers and might give them the idea that they are under staffed.
- Better working conditions for mission health center staff (see table 4, question 6-10) might increase the efficiency of the health workers which reduces their workload compared to Governmental health staff. For that reason it might look like that the mission health centers are better staffed.

4.3 The quality of care given by health workers.

The only question asked to measure the quality of care provided by the health workers was; ”Can you score the individual capabilities of your staff?” The question was asked to the Chiefs of Posts (COP) of all health centers / posts and hospitals and all the private health workers. This means that the performances of the COP’s are not included and that the results are a subjective and limited indication about the quality of care given by the health workers.

Hardly any difference can be seen between the Governmental and Non-Governmental sector when scoring the capabilities of their staff. Both say that nearly 60% is performing good, nearly 35% is performing average and less then 7% is performing below average.
Looking at the private practitioners they say more then 80% is performing good (see table 4 question 4). A lot of private practitioners had to score them self since they work on an

individualistic base. Since these answers are likely to be less objective they do have less value.

4.4 Waiting time.

The population has been asked about the time that they have to wait before health staff attends to them when visiting the health service. They say that less time is wasted if you visit a private health worker. 86.7% Of the population said that they wait less then 5 minutes. Looking at the Non-Governmental sector 53.3% said less then 5 minutes while 41.7% said more then 5 minutes. 46.7% Of the population is waiting less then 5 minutes when visiting a traditional healer and while visiting a Government health service 16.7% of the people said they have to wait less then 5 minutes. 80% Of the population said they have to wait 5 minutes or more visiting the same Government health service (see table 4, question 5).

4.5 Opening hours

When we look at the opening hours of different health services (question 3.6.1 first results) we see that the main activities in health centers / posts and hospitals take place on working days, from Monday till Friday. Nevertheless it seems that health staff is also working at any time of the day in case of emergencies. In case of the Government health centers Kembong and Afap the responsible staff is working through out the day and the whole week. The mission health centers in Mbakang and Mamfe work only three days a week. We may conclude that generally the health centers / posts and hospitals are not operational after 4 PM on working days and on Saturdays and Sundays to consult minor cases. When we look at the private practitioners we see that nearly 70% of them is available at any time of the day every day. Another 6.7% are working from morning till nighttime (see question 3.6.1 first results).

4.6 Available basic facilities.

Table 4.b Available basic facilities per health service.

Health serv. / Item	Government health center / hospital (5)	Mission health center (3)	Community health post (6)	Retired nurses (6)	Retired midwives (5)
Bed pans	5*	7	2	Na.	2
Beds	52*	20	7	3	10
Mattresses	42*	9	10	0	4
Baby cot	26*	14	7	0	4
Tables	16*	24	3	5	6
Chairs	28*	>25	8	7	10
Delivery bed	5*	4	4	0	0
Tap	13*	6	1	0	0
Screens	2*	5	0	0	0
Cupboard	5*	18	3	0	5
Refrigerator	3	3	0	0	0
Benches	6	>20	7	7	9

*** Unspecified numbers available in Mamfe District Hospital, not included.**

* The highest score, which means the best-equipped health service, per item.

When we look at the basic facilities we can see that the mission health centers are best equipped in 6 out of 11 examples. For the government we can see that they are best equipped in 5 out of 11 examples. It has to be taken into consideration that out of 5 Government facilities 2 are hospitals. It means that the number of available facilities is influenced by a bigger need for basic facilities, like the need for beds, mattresses etc. The average number of facilities per health service determines the highest score. Generally we can say that the mission health services are better equipped then Government health services who subsequently are better equipped then the community health posts and the private health workers.

4.7 Available medical equipment.

Table 4.c Available medical facilities per health service.

Health service / Item	Government health center / hospital (5)	Mission health center (3)	Community health post (6)	Retired nurses (6)	Retired midwives (5)
Sphygmomanometer	12	5	1	2	5
Stethoscope	12	11	1	3	5
Thermometer	14*	20	7	7	7
Kidney dishes	11*	15	2	0	12
Microscope	3	5	0	2	0
Sterilizer	3	6	0	1	0
Foetuscope	5*	5	2	0	4
Catheters	4*	>100	0	0	1
Pulsameter	*	2	0	0	0
Forceps	23*	>10 / many	4	13	19
Scale	4	3	1	1	3
Centrifuge	3	3	0	0	0
Baby scale	6	5	4	0	1
Delivery kit	2	1	0	0	0
X-ray	0	0	0	0	0
Dental equipment	0	0	0	0	0
Ambu bag	0	2	0	0	0
Gloves	**A** 2:5	A 3:3	A 2:6	Na.	1:6
Circumcision set	0	1	0	0	0

- **Unspecified numbers available in Mamfe District Hospital, not included.**

* The highest score, which means the best-equipped health service, per item.

A Available (example: 2:5 = available in 2 out of 5 health services).

When we look at the medical facilities we can see that the mission health centers are best equipped in 16 out of 17 examples. For the government we can see that they are best equipped in 1 out of 17 examples. The average number of facilities per health service determines the highest score. Generally we can say that the mission health services are much better equipped then Government health services that subsequently are better equipped then the community health posts and the private health workers.

4.8 Availability and cost of drugs ("modern" health services).

Table 4.d Average price per tablet per health service in Frs. CFA.

Average price in CFA	Gov't health cent. / hospital	Mission health center	Comm. health post	Retired midwives	Retired nurses	Drugs peddler	Patent medicine seller
Paracetamol	10	20	11	10	10	11	10
Aspirin	10	20	16	10	9	12	11
Chloroquin	10	23	13	10	12	10	10
Quinine sulphate	30	Na.	Na.	20	Na.	53	25
Amoxicillin 250/500	55 / 100	…/ 87	50 / 100	50 / 100	50 / 100	50 / 100	44 / 96
Bactrim	37	43	50	40	45	45	48
Vermox	29	39	28	39	50	28	34
Folic Acid	7	17	12	13	10	10	11
Chloramphenecol	32	40	75	30	38	41	34
Fulcin	50	67	Na.	100	Na.	217	83
Metronidazol	Na.	50	Na.	35	40	36	38
Indocid	Na.	40	Na.	25	15	13	10

The most common sold drugs were selected to compare their costs charged by different health services. In six out of 12 cases the mission health center is most expensive. The community health post and the drug peddlers are most expensive in two out of 12 cases and the Government health services and the retired nurses in one out of 12 cases.

It can be said that the mission health centers are most expensive in relation to the prices of drugs although the private practitioners also using high prices in some cases. The mission health centers are best supplied with drugs together with the retired nurses and the medicine sellers but the list is only containing a few drugs from the 'essential drugs list'. The overview is not complete, the conclusions incorrect (drug availability). Especially in relation of prices of drugs it gives an impression of the differences.

4.9 The cost of health services.

Talking about cost of health service we should think about not only the cost of drugs but also consultation fees to be paid. The latter was not specifically investigated.

It was asked to the health service staff and the population to score the cost of health services per category. Remarkably the Government health workers score a higher percentages in the category 'expensive' then the Non-Government health workers, although the also score a higher percentage in the category 'cheap'. The private practitioners generally believe that they are cheap. Looking at the population we can see that they consider the Non-Governmental health services to be more expensive then the Government health services. At the same time the majority of the population considers

the private practitioners to be expensive in contradiction with the private practitioners believe. The Governmental and Non-Governmental health services are believed to be more expensive then the private practitioners (see table 4).

4.10 The (tracking) distance from house to health service.

Most of the interviewed population (40.9%) believe they live between 5-10 km from the nearest health center / post or hospital while 31.7% lives within a distance of 5 km from the nearest health center / post or hospital. 25.8% Said they live 10 or more kilometer from the nearest health center / post or hospital. The traditional healers and the other private health workers are easier to access. 58.3% Says to live within a distance of 5 km from the traditional healers while 73.3% says the same thing about the other private health workers (see table 4).

4.11 The level of training, functioning and influence of the Inter Village Health Committees (IVHC) and Village Health Committees (VHC).

4.11.1 The IVHC's and VHC's.

Table 4.d Overview questions and answers IVHC's and VHC's.

Questions	Inter Village Health Committee	Village Health Committee
1. What are your main tasks?	1.Keep clean the compounds 2.Digging and inspection of toilets 3.Management of the health center	1.Keep clean the compounds 2.Digging and inspection of toilets 3.Control quality of food/restaurants
2. Did you receive training?	Yes; 43.8% No; 56.3%	Yes; 24.2% No; 75.8%
3. Did you achievements your goals in 1996 and 1997?	Yes; 62.5% No; 25%	Yes; 80.6% No; 19.4%
4. What were the main problems faced by the (I)VHC?	1.Management of the committee 2.Aggressive attitude population towards IVHC 3.Long travel distances / no means of transport	1.Low cooperation community 2.Low motivation VHC members 3.Lack of finance
5. What were the main results of your activities?	1.The rate of diseases has reduced 2.Increased usage of health facility 3.Improved hygienically situation	1.The village is kept clean 2. The rate of diseases has reduced 3.Construction of toilets
6. How many hours did you spend on (I)VHC activities?	<8 68.8% 8-16 25 % >16 6.3%	<8 83.9% 8-16 8.1% >16 8.1%
7. Did this hinder you in fulfilling your daily activities?	18.8%; Farming more lucrative	6.5%; Other work to do
8. Does the population appreciate your (yes; IVHC 100% / VHC 93.5%)? Why do you think so?	1.Population is inquisitive 2.They are aware of our activities 3.The population expresses it verbally	1.Expressed by the population 2.Most people respond to activities 3.The village is kept clean

Comparing the IVHC with the VHC the main difference in tasks is the responsibility of the IVHC for the management of the (Government) health center. To be prepared for this task (and others) they received training from the Government unlike the VHC.

The IVHC and the VHC think generally that they have functioned reasonably well in 1996/97 although the VHC scores higher in the achievements of goals.

Also the main problems faced by the two committees seem to be related, management problems, low cooperation or aggression shown by the population and lack of finances which can be possibly translated into lack of transport facilities and / or means.

Nevertheless both say that generally the hygienically situation of the village(s) has improved and the rate of diseases has reduced. The IVHC stated that the usage of health centers by the population also increased.

Both the majority of the IVHC and the VHC members spend less then one working day on their activities. The minority of them said that the activities are a hindrance to perform other activities like farming which are more lucrative.

The IVHC as well as the VHC believes strongly that the population is appreciating the work they are doing.

4.11.2 The population and health service personnel.

Table 4.f Overview questions and answers population and health personnel.

Question	Population	Health service personnel
1. Heart about (I)VHC?	Yes 78.3% No 21.7%	Yes 73.7% No 26.3%
2. What do they do?	1.Keep clean the environment 2.Control sanitation system 3.Supervise food sellers	1.Management assistance health cent. 2.Keep clean the environment 3.Health education activities
3. Do you appreciate it?	Yes 95.7% No 0%	Yes 96.4% No 3.6%
4. Why?	1.Decrease rate of diseases 2.The village is kept clean 3.Give good moral to the population	1.Decrease rate of diseases through health education activities 2.Health center staff welcomes / needs assistance 3.Health center runs smoothly

Around 75% of the population as well the health service workers know about the existence of the (I)VHC's. They are aware of their tasks and do appreciate their activities. They think that the presence and functioning of the (I)VHC's influences the hygienic living conditions positively and that the rate of diseases is reducing in the villages. The presence of the IVHC is necessary to make sure that the health centers are running smoothly.

4.12 Conclusions.

The (non-) attractive factors related to health services were scheduled as follows:

Table 4.g Advantages and disadvantages different health services.

	Advantages	**Disadvantages**
1. Government health services.	-High % of good and average performance health personnel. -Flexible working hours. -Basic facilities sufficient, but less sufficient then mission health services. -Less expensive.	-Lowest % of health workers present during working hours. -High % of reserved or indifferent attitude health workers. -Long waiting time compared to N-G health services. - Medical facilities insufficient, especially when comparing it to mission health services. -Distance is far compared to the private health workers.
2. N-G health services.	-Highest % of health workers present during working hours. -Friendly attitude health workers. -High % of good and average performance health personnel. -Short waiting time compared to Gov't health services. -Basic facilities sufficient in mission health services. -Medical facilities sufficient in mission health services.	-Strict opening hours, limited availability of service. -Basic facilities insufficient in community health posts. -Medical facilities insufficient in community health services. -Expensive. -Distance is far compared to the private health workers.
3. Traditional healers.	-High % of good performance.* -Short waiting time. -Flexible working hours. -Friendly attitude.	-Basic facilities insufficient. -Medical facilities insufficient. -Situated nearby.
4. Private health workers.	-High % of good performance.* -Short waiting time. -Flexible working hours. -Friendly attitude.	-Basic facilities insufficient. -Medical facilities insufficient. -They are expensive. -Situated nearby.

- **Scored by the private health worker him / her self.**

Looking at the Primary Health Care (PHC) principles that health care has to be acceptable, accessible, affordable and available we can draw conclusions shown in the next table:

Table 4.g Advantages and disadvantages different health services.

	Acceptable	**Accessible**	**Affordable**	**Available**
1. Government health services.	Yes.	*Distance:* Limited. *Service provided:* Limited.	Limited.	*Opening hours:* Yes. *Facilities:* Limited.
2. N-G health services:				
2.1 Mission health centers.	Yes.	*Distance:* Limited. *Service provided* : Yes.	Limited.	*Opening hours:* Limited. *Facilities*: Yes.
2.2 Community health posts	Yes.	*Distance:* Limited. *Service provided* : Limited.	Limited.	*Opening hours:* Yes. *Facilities*: Limited
3. Traditional healers.	Yes.	*Distance:* Yes. *Service provided*: Limited.	Limited.	*Opening hours:* Yes *Facilities:* No.
4. Private health workers.	Yes.	*Distance:* Yes. *Service provided:* Limited.	Limited.	*Opening hours:* Yes *Facilities:* No.

Acceptability:

We can see that the community accepts all four mentioned types of health service. Looking at table **2.3.d** (the health services) 67.4% of the consultations are conducted by the private health workers, 15.5% by the N-G health services, 8.9% by the Government health services and 8.2% by the traditional healers. Looking at table **2.3.e** (the population) 31.8% of the initial visits are paid to the Government health services, 27.3% to the N-G health services, 26.1% to the private health workers and 12.5% to the traditional healers.

Accessibility:

a) Related to distance:

Looking where the different health services are situated we now that not all the villages have a health center / post (see table 2.1.a) while especially the traditional healers but also private health workers is more widespread through the area. Nevertheless many health structures are existing in MC/CE, although they are some how concentrated in the urban area, Mamfe.

b) Related to services provided:

We can say that only the services provided by the mission health centers are sufficient to call it (easy) accessible to the population. We have to think of the quality of care, attitude and availability of health personnel and waiting time.

The Government health services seem to face problems talking about the motivation of personnel (attitude and presence during working hours of personnel and long waiting time). Nevertheless, the quality of care provided is considered to be adequate.

The quality of care, attitude and availability of health personnel and waiting time of community health services are not criticized negatively.

The traditional healers and private health workers have the advantage of short waiting time and their friendly attitude.

Affordability:

It can be concluded that the mission health centers are most expensive. The other types of services can be called neither expensive nor cheap. Different opinions exist among the population and the workers themselves. Looking at the view of the population the majority of them consider in all categories the health service to be expensive.

Availability:

a) Related to opening hours:

Looking at the opening hours we can conclude that the most of the Government health services and private health workers have flexible opening hours. Within the N-G health services especially the mission health services show limited availability in relation to opening hours.

b) Related to facilities:

Within the mission health services the basic and medical facilities can be called sufficient unlike the community health services where there is a big shortage. Within the Government health services especially the medical facilities are not sufficient. For the private health workers we can say their basic and medical facilities are insufficient.

In the aforethought conclusions nothing has been said yet about the (I)VHC's. The VHC's are playing an important role in preventative health care (instead of curative), since the existing health services in general do not carry out out-reach activities (except vaccination campaigns). VHC's are existing in 20 out of 24 villages and most people are aware of their existence and appreciate their work. For this reason it is strongly recommended to reinforce this existing structure.

The questions to be discussed in chapter 6 are as follows:

- What is needed in different health services to make them more accessible?
- What is needed in different health services to increase their availability?
- What is needed in different health services to make them less expensive?
- What can be done to reinforce the functioning and structure of VHC's?

5. The socio-economic and cultural factors that may influence the population's utilization of health services.

5.1 The income generating capabilities of the health services.

5.1.1 The Government health services.

Looking at the Government health services we first notice that not all the data is available referring to Mamfe district hospital '96 and Afap health center '96 / '97. Furthermore we can see that, except Mamfe military hospital, the Government health centers and hospital are making profits at their own level. This means that they should be able to sustain themselves. The profits vary from 1,800,000 CFA (Mamfe hospital) to 13,500 CFA (Kembong health center). See first results question 4.1.1-4.1.2.

5.1.2 The Non-Governmental health services.

Looking at the Non-Governmental health services also not all the data is available referring to Besong Abang health center and the community health posts in Mbakem, Ajayukndip ('97) and Nchang. The Mamfe mission health center has an income of 23,000,000 CFA ('96), which is nearly 10 times as much as Mamfe hospital ('97). There is also a significant different between the income of Government health centers and community health posts (see first results questions 4.1.1/4.1.2) in favor of Government health centers. All the health centers and health posts are making profit as well, which also means that they should be able to sustain themselves at their own level.

5.1.3 The private practitioners.

The income of the private practitioners is an estimate since most of them are not keeping records. In many cases it was asked, "How much do you earn a day, a week or a month?" after which the answer was multiplied by the correct number to calculate the year income.

Table 5.1.a Generated income per group of private practitioners.

Income x 1.000 CFA / **Private practitioner**		**Income 1996**	**Average Income 1996**	**Income 1997**	**Average Income 1997**	**Total**
Herbalists	(66)	6,231.3	94.4	6,921.3	104.9	13,152.6
Deviners	(3)	2,376	792	2,314	771.3	4,690
Traditional Birth Attendants	(4)	0	0	0	0	0
Retired nurses	(6)	280	46.7	235	39.2	515
Retired midwives	(4)	370	92.5	480	120	850
Community Health Workers	(2)	0	0	0	0	0
Pharmacist	(1)	Na	Na	416	416	416
Patent medicine sellers	(5)	12,864	2,572.8	9,264	1,852.8	22,128
Drugs pedlers	(15)	3,770	251.3	3,663	244.2	7,433
Total	**(106)**	25,891.3	**427.7**	23,293.3	**394.3**	**49,184.6**

Out of 134 private practitioners 106 has said they generated an income. The total amount of CFA earned by these private practitioners in two years time is 49,184,600 CFA. Looking only at the drug sellers we see that they earned nearly 30,000,000 CFA, which is 60% of the total amount. The traditional healers earned nearly 18,000,000 CFA, which is about 37%. Then the private "modern health workers" earned nearly 1,400,000 CFA, which is only about 3% of the total amount (see table 5.1.a).

Looking at the average amount of money earned per 'kind' of private practitioner we see that the patent medicine sellers (PMS) have the highest average income. The diviners earn second best on average (this earnings are actually based on the income of one single successful diviner). The diviners are respectively followed by the pharmacist ('97), the drugs peddlers, the retired midwives, the herbalists, the retired nurses and the CHW's / TBA's.

From those who make profit the income of the retired midwives and the herbalists has gone up in '97. The income of the PMS, diviners, drugs peddlers and retired nurses has gone down in '97. From the available data nothing can be said about the pharmacist, but the person in charge is complaining that his business has gone down the recent years.

5.1.4 The (I)VHC's.

Out of 23 (I)VHC's complete data are available of 13 (I)VHC's. In 6 out of 13 cases the income / expenditure is 0.0. In the remaining 7 cases we can see that in 2 cases the balance is 0.0. In the other cases the balance was positive varying from 3,500 CFA (Ntenako '97) to 465,000 CFA (Mbakem '96). See first results question 4.1.1-4.1.2.

5.2 Compensation of (I)VHC`s members.

Table 5.1.a Percentage of compensation of (I)VHC members.

IVHC:	Transport money	Light enter-tainment	Nothing	**VHC:**	2.500 CFA a year	Light enter-tainment	Nothing
	31.8%	36.4%	31.8%		1.6%	3.2%	95.2%

The IVHC's are better compensated then the VHC members. Nearly 70% of the IVHC-members is receiving transport money or 'light entertainment', while only less then 5% of the VHC receive any compensation like 'light entertainment'.

5.3 The management of funds.

The population was asked to score the accountability of the different health services;

Table 5.1.a The accountability of health services scored by the population.

	Good %	Reasonable %	Poor %	I do not know %	Total %
Gov't health services	25	26.7	35	13.3	**100**
Private health centers/posts	68.3	20	1.7	10	**100**
Traditional healers	23.3	10	8.3	58.3	**99.9**
Private health workers	23.3	30	21.7	25	**100**
Total	**35**	**21.7**	**16.7**	**26.7**	**100.1**

Looking at the different categories we see that most people have confidence in the accountability of private health centers / posts (68.3%), while about 25% has confidence in the accountability of the other health services. Secondly, a big part of the population has no confidence in the accountability of the Government health services (35%) and the private health workers (21.7%). Then, the majority of the people do not know how to score the accountability of the traditional healers.

35% Has confidence in the accountability of the existing health care system and 16.7% not at all.

5.4 The economic viability of the population.

The population has been asked to score the level of their income and whether this is suitable to take care of the health problems existing within their family.

66.7% Of the population said the level of their income is low, 26.7% said it is average and 6.7% said it is high. Then 61.7% said the level of income is suitable to take care of the families health needs, while 38.3 said it is not (see first results, question 4.4.1 / 4.4.2).

5.4 Conclusions

Most of the health services are capable of generating an income and make profits. It is assumed that for that reason they can maintain their work at their own level. Nevertheless it is unclear how the generated income is spent and whether efforts are made to improve on their performance / facilities by investing money (like maintenance of buildings and training of staff for example).

The VHC's hardly receive any kind of compensation for the work they carry out. It might be one of the reasons why the low motivation of VHC members is mentioned as a problem faced by the VHC's.

The population expressed to have most confidence in the accountability of the N-G health services, followed respectively by the traditional healers, the private workers and the Government health services.

Although the majority of the population is saying their income is low 2/3 can take care of the health problems within their families.

Questions to be discussed in the next chapter:

- Will it be profitable to both community and health service to introduce another system of financing health care like the tax or insurance system?
- Are profits used to invest in the development of the health service and if not how can the money be used to do so for the different types of health service?
- Can a VHC still be profitable and functional if they receive incentives for he work carried out by the members?

5. Discussion

The following questions have been raised after analyzing the different chapters:

What determines the difference of usage between Governmental, mission and community health centers / posts?

The mission health centers are preferred respectively to the Government health services and community health services looking at the total number of consultations. Looking at the initial visits paid by the population when facing health problems they preferred the Government health services to the mission health services. Possible reasons for this biased information have been mentioned before (chapter 2). The difference will be caused by the difference in accessibility and availability of health care within the different health services like mentioned in chapter 4. When the population can afford it to travel while looking for "quality" health care they will attend to the health service that provides the best facilities and services. The mission health services score highest on these aspects, while the Government health services are providing better facilities then community health services.

What circumstances and reasons make the informal private practitioners more popular then the recognized health care services, while the number of these recognized health care services seems to sufficient?

We can see from the income generated and the consultations conducted by the different health services that the population mostly uses the private practitioners to solve their health problems. They are preferred too respectively the formal N-G health services and Government health services. When questioning the population they answered that they first will attend to Government health services in most cases, to be followed by the mission health centers, the drug peddlers and the herbalists. Possible reasons for this biased information have been mentioned before (chapter 2).
Availability and accessibility will most probably determine the popularity of these private practitioners. They have flexible working hours, are situated nearby and are generally looked at as being friendly. Although the population also mentioned quality is an important criteria when seeking assistance in case any health problem occurs the distance and cost might be more important in many cases. The private practitioners are not considered to be cheap but travelling to health center / post will increase the expenditure remarkably. Furthermore, the roads are not easy to access especially in the rainy season and cars might not be available (and if they are more expensive). Looking for assistance nearby and thus attending to private practitioners might be the explanation why the population says it can take care of their health problems although they face financial constraints.

In case of any seasonal influence, where do the people go to while facing a health problem?

This question is answered in the aforementioned question. One reason most of the people are going to private health workers is the accessibility and the related expenditure.

What is the impact on the health status of the population in MC /CE if they are not able to go to their preferred type of health service?

During the conduction of interviews most people said that they would prefer to go to a health center / post / hospital in case any health problem occurs. This is not always achievable as explained before. It has not been measured what the impact is for the population when these health services are not affordable available and / or accessible. Nevertheless, it is generally believed that people without access to these services are worse of in cases as for example severe malaria and complicated deliveries. In these and more cases the population will possibly face dead because of the non- affordability, availability and / or accessibility of health services.

What is needed in different health services to make them more accessible?

Distance.
The problem of distance in MC/CE is closely related to the condition of the roads and the availability of transport during the rainy season. Like mentioned before the distances as such are reasonable since many health care structures are existing. The health care structures are also spread out over the region. The durable improvement on the roads might be a solution but is probably difficult to achieve. The other solution might be to increase the number of health facilities or to reinforce the existing ones to tackle the existing problems.

Service provided.
Quality of service provided seems to be related to the management systems and capacity of the health service. The mission health centers are proving that good services can be provided. But even with less financial capacity within the existing system of "payment for service" used in the region more can be achieved through proper management. Non of the health services are cheap (including the private practitioners) which means people are prepared to pay for good health care. If you can generate income from services provided and the finances are managed proper and investments are done staff can be motivated to provide good health care (service).

What is needed in different health services to increase their availability?

Opening hours.
Looking at the opening hours we see that those who provide the most sufficient health care have limited opening hours, the mission health centers, unlike most of the other health services. A discussion can be started with those responsible on the reasons for this situation and whether any amendments can be made.

Facilities.
A shortage of basic and medical facilities is seen mainly in Government and community health services. If shortage is caused by mismanagement of material a more serious problem is existing which will be difficult to solve. If not proposals can be made for those facing shortages to acquire assistance. It will depend on the management system whether these investments can last on the long term. A system needs to be devised to maintain and renew the equipment when necessary.

Worth mentioning is that in MC/CE Mamfe District Hospital and Kembong health center will be renovated and equipped with the assistance of the German Financial Assistance this year (1999).

Furthermore, shortage of facilities is also affecting the retired nurses and midwives. Most of them are based in Mamfe. It is disputable whether assisting them will be of extra value taking into consideration that many health care structures are existing in Mamfe. Secondly, more then 90% are not registered with the Government.

What is needed in different health services to make them less expensive?

See the following questions.

What can be done to reinforce the functioning and structure of VHC's?

The importance of the VHC's is indisputable since it is the only structure providing preventative health care in a very practical way and on a continuous base. Out-reach activities are hardly carried out by nor the Governmental neither the N-G health services (including the private practitioners). Looking at the problems they face revising their management system and provision of training concerning public health and health education might considerably increase their impact.

Will it be profitable to both community and health service to introduce another system of financing health care like the tax or insurance system?

The payment for service system seems to effective in the area. When formal health care facilities are available and accessible the population is willing to pay for it. To introduce the tax or insurance system might be difficult. Will it be introduced at Government / district or community level? If at community level what are the conditions and requirements of the Government? The subject needs further investigation and study before a possible answer can be given to these questions.

Are profits used to invest in the development of the health service and if not how can the money be used to do so for the different types of health service?

No study has been done on the usage of generated income. It is assumed that first of all supplies will be renewed and staff paid (N-G health services) with the generated income.

It is unclear whether investments are done like sending staff for training and reconstruction of building for instance. Before getting involved in any health care structure at project level more information will be needed on their accountability and transparency.

Can a VHC still be profitable and functional if their members receive incentives for the work carried out?

Not receiving incentives seems to be a constraint to the well functioning of the VHC's. Especially when it will cost money to the members to carry out activities. At least a clear idea should be created and discussed on how to compensate the members of the VHC's to stimulate and motivate them to carry out their activities. Nevertheless, paying incentives might be a constraint at the same time to the functioning of the VHC's since their financial means are limited. More study needs to be done to find a solution to this problem.

6. Conclusions

When drawing the final conclusions of the HSR in MC/CE we have to look back at the conclusions of different chapters and the discussion. Within the conclusions observations and information gathered during interviews that is not processed in the results are taken into account. The conclusions, observations and other information acquired will give an answer to the question whether the following hypotheses are true or not.

6.1 Hypotheses one: Poor management of health services exists at national, provincial and district and village level.

It can be concluded that the Public Health Services are managed poorly at national provincial, district and village level. The conclusion is based on the following results, information and observations:

The research;
- Lack of equipment in Government health centers and hospitals.
- Low motivation of staff in Government health services.
- Low attendance staff during working hours.
- Long waiting time in Government health services.

Observations during the research;
- Nearly no supervision activities at provincial and district level.
- No maintenance activities on buildings and equipment at district level.

Information acquired during interviews at district level;
- Lack of transport facilities within the Government health services at district level.
- Nearly no out-reach activities at district level.
- Lack of finance to the Public Health Services from national level.

Assumptions;
- Part of the Government health workers is doing private (health care) business during working hours.

6.2 Hypotheses two: There is a lack of staff, drugs and equipment in Governmental and community health services.

It can be concluded that there is a lack of equipment at the level of Governmental health services. Secondly, at community health service level there is a lack of equipment and drugs.

The research;
- The lack of staff at Governmental level in general seems to be a misinterpretation. When comparing the Government staff to the mission health center staff it is shown that the workload (n° of consultations per health worker) of Government

staff is much less. Secondly, the idea can be influenced by the fact that Government staff is often absent during working hours.

- The drugs in the Government health services are supplied by the South West Provincial Special Fund for Health (SWPSFH). Under normal circumstances the Public Health Services will not face shortages. Nevertheless, it is believed by the population that the mission health centers are better supplied with drugs then the Government health services.
- Lack of equipment is shown in the first results of the research.
- Most of the community health services face a lack of equipment as shown by the first results of the research.
- The staff at community level is available to work at their own level in the community health services and seem to be very determined if their conditions would improve.
- After the withdrawal of GTZ and Manyamen hospital for example who gave technical assistance to the community health posts in the recent past, shortage of drugs is a fact. Not in all cases it is clear what the cause was of this problem.

6.3 Hypotheses three: Governmental and community health services are used inappropriately by the population of Manyu Division.

The conclusion is that Government and community and health services are used inappropriate by the population (inappropriate = is making limited use of).

The research:

- Percentage of n° of consultations Government health services: 8.9%.
- Percentage of n° of consultations community health services: 1%.

6.4 Hypotheses four: The Government control on the quality of care given by the informal private sector is inappropriate.

It can be concluded that the Government control on quality of care given by the private practitioners is inappropriate based on the following results:

Results research;

- Private practitioners are doing 75.6% of the consultations.
- 76.1% Of these private practitioners are not registered with the Government.

Final conclusions.

1 Generally it can be said the existing health system is performing poorly with the exception of the mission health centers, due to a lack of proper management and a lack of basic and medical facilities.

2 The population underutilized the Governmental and community health services in 1996 and 1997 and prefers to make use of the mission health centers and the informal private health sector.

3 The population has limited access to the formal Government and N-G health services due to seasonal influences like the bad condition of the roads and increased prices of transport in the rainy season.

4 The Government can not assure quality of care by the informal private health sector due to a lack of control.

5 The VHC's is the only structure active on public health care issues (preventative health care) and reaches most of the villages in the area.

The MRDP and MHO assume that the health status of the population of Mamfe Central and central Ejagham is declining due to these aforethought conclusions.

7. Recommendations.

The recommendations made must give an answer to the question how to stop the assumed decline of the health standard of the population in MC/CE. Recommendations will be made to all the different actors in the existing health system after which general recommendations will be made in relation to the functioning of the existing health system. The recommendations will be related to the capacity and objectives of the MRDP and the MHO.

7.1 The formal Governmental and Non-Governmental health services.

7.1.1 The public health services.

Assistance to the public health services should take place at national or provincial level. The district level seems to be affected by a lack of finance, which results in a lack of equipment (transport facilities and basic / medical equipment health services) and a lack of maintenance activities. This results in low motivation of staff and poor management of the health services. It is not within the capacity of the MRDP and the MHO to influence this process. For that reason no interventions should take place at this level.

7.1.2 The mission health centers.

The mission health centers in the area seem to be well managed. Shortages of equipment, drugs and staff are not existing. The only limitation is the availability. Investigation should be carried out to identify the reasons of this limitation and to give suggestions on how to increase the availability.

7.1.3 The community health posts.

To increase the availability and accessibility of basic curative health care it is recommended to the MRDP and the MHO to improve on the functioning of the community health posts. This will include (re-) construction of buildings, equipment of health posts, supply of drugs, (additional) training of staff and carry out supervision activities. Looking at the location, their functioning in the past and their available capacity it is recommended to reinforce Mbakem, Bakwelle and Eshobi health post. Nchang health post is situated closely to the well functioning Presbyterian health center Besong Abang and Ebegkaw health post is situated close to the available health facilities in Mamfe town. In Ayajukndip it is assumed that a Government health center will be build in the near future.

7.1.4 The village health committees.

Like mentioned before the VHC's is the only structure active on public health care issues (preventative health care) and reaches most of the villages in the area. For that reason they should be encouraged to continue their activities and improve on their performance. It is recommended to the MRDP and the MHO to provide training on public health care issues (preventative health care) and management skills.

7.2 The informal private health care sector / the private practitioners.

7.1.1 The herbalists.

The herbalists are large in number. Only a few of them consult a high number of patients but on average they consult 0.3 patient a day. For the majority there is no demand from the population. For that reason it is not recommended to the MRDP and the MHO to intervene in the work of the herbalists. Also because the MRDP and the MHO do not have the capacity to asses and when necessary to improve on the quality of care provided by the herbalists.

7.1.2 The diviners.

The diviners are low in number: 3. One of them consults a high number of patients. It is not recommended to the MRDP and the MHO to intervene in the work of the diviners because the MRDP and the MHO do not have the capacity to asses and when necessary to improve on the quality of care provided by them.

7.1.3 The traditional birth attendants.

Assistance in training and registration of TBA's needs to be considered. The possible additional value and quality of work performed by the TBA's has not been identified but for those to deliver with limited access to health centers / post / hospitals it can be of importance. Before proposing interventions more research needs to be done.

7.1.4 The retired nurses.

The retired nurses are low in number: 6. 50% Is based in Mamfe town where many health facilities are available. They consult 1.3 patient a day (1997) on average. Assisting them will have very little impact on the health standard of the population of the area and is thus not recommended.

7.1.5 The retired midwives.

The retired nurses are low in number: 5. 60% Is based in Mamfe town where many health facilities are available. They consult 1.1 patient a day (1997) on average. Assisting them will have very little impact on the health standard of the population of the area and is thus not recommended.

7.1.6 The community health workers.

The retired nurses are low in number: 2. They consult 0.2 patient a day (1997) on average. Assisting them will have very little impact on the health standard of the population of the area and is thus not recommended.

7.1.7 The pharmacist.

In the whole area there is only one qualified pharmacist (or drug seller) based in Mamfe. He consults about a thousand patients a year (1997). The pharmacist is about to retire. No recommendations to be made.

7.1.8 The patent medicine sellers.

7 Patent medicine sellers have been interviewed. A few were left out in Mamfe town. Only 2 exist outside Mamfe. They consult or supply drugs to 17.2 patients (1997) a day on average. It is recommended to find out whether the drugs sold are genuine and whether the PMS as individuals have the capacity to inform the population well on the usage of their sold drugs. Furthermore it need to be identified whether the PMS are practicing any other activities then the selling of drugs. A policy needs to be developed at Government level (with the assistance of MRDP / MHO?) to clarify the position of the PMS. If they are accepted as legalized drug sellers training could be provided by the MRDP and MHO.

7.1.9 The drug peddlers.

19 drug peddlers have been identified and interviewed. Most of them are active in the villages. They consult or supply drugs to nearly 8 patients (1997) a day on average. It is recommended to find out whether the drugs sold are genuine and whether the drug peddlers as individuals have the capacity to inform the population well on the usage of their sold drugs. Furthermore it need to be identified whether the drug peddlers are practicing any other activities then the selling of drugs. A policy needs to be developed at Government level (with the assistance of MRDP / MHO?) to clarify the position of the drug peddlers. If they are accepted as legalized drug sellers training could be provided by the MRDP and MHO.

To legalize the drug sellers after training and registration is recommended because they are the only health service that does reach the most disadvantaged in the villages who do not have access to formal health services. There is a clear demand from the population shown by the number of consultations. Drug peddlers can be compared to community health workers active in different health posts if they would receive training and proof to be capable to perform well. The access to quality drugs prescribed in the right manner might increase the health standard of the population in MC/CE. The training of drug peddlers is within the capacity of the MRDP and the MHO.

7.2 General recommendations

To improve on the performance of the existing health system at district / intervention zone level it is recommended to the MRDP and the MHO to reinforce the community ran health services and possibly the privately / individually ran health services.

It is not in the capacity of the locally based project / organization MRDP / MHO to tackle the problems faced by the Government health services. An additional system can be created to assist the Government in tackling the health problems faced by the community. Collaboration with the Government needs to be maintained and is essential to increase the health standard of the population, like conducting vaccination campaigns and carrying out supervisory activities.

It is recommended to discuss on how drugs can be made available to the entire population in a responsible way and if (trained) drug peddlers can play a role in such a system.

Annex 1

Preliminary report Health System Research (HSR) Mamfe Central and central Ejagham

General

The researcher and four research assistants carried out the health system research in Mamfe Central and central Ejagham. The researcher took part in conducting questionnaires the first two weeks (7 days) of the four-week research. Three assistants went to the field 21 days, one assistant 17 days to collect information. During 12 days of the research the team members went to the selected villages together. The other 9 days the team was split up into two groups. During his presence the researcher was responsible for the quality control on the spot. During the other 14 days one or two of the team members was / were appointed to do the quality control. The collected data was cross-checked by the researcher in the office. The researcher started the processing of collected data after his seven days of fieldwork.

The research has been partly financed by the Netherlands Development Organisation (SNV). The researcher was paid 50% of his salary (employed by the SNV for 50%) and one research assistant (employed by the SNV) was paid a full salary. No money is available yet to pay the three other research assistants and to complete the salary of the researcher who are employed by the Manyu Health Organisation (local Non-Governmental Organisation (NGO), operational since September 1997). Furthermore, the SNV paid for the questionnaires and the logistical needs.

Technical preparations

A two-day training session was conducted to prepare the research team on how to conduct interviews. The following topics were discussed:
-Introduction HSR
-Various forms of data collection techniques and need for data collection.
-Appraisal of Manyu HSR questionnaires
-Record review and information expected.
-Bias in data collection.
-Ethical issues in data collection and how to prevent them.
-Entry and establishment of good working relations with respondents.
-General review of questionnaires used in the HSR for Manyu (pre-test).

The pre-test was conducted in Bachuo Akagbe. This village was chosen because of its health facilities, the distance and being situated outside the intervention zone. Interviews were conducted with;
-The chief of post's (COP) of the (Governmental and Non-Governmental) health centers / post's and hospitals;
-The available health staff of the health centers / posts and hospitals;
-The (Inter) Village Health Committees ((I)VHC's);

-Private health workers; and
-The population.

All the team members took part is this two-day pre-test. The pre-test has been evaluated within the team after which the questionnaires were revised where necessary.
Now revisions were made on the research procedures.

Fieldwork

The sampling of the people to be interviewed happened the way we had planned it.
Nearly all the wanted information was collected except some record review information from health centers / posts and hospitals and private health workers and VHC's in relation to their budget and their exact number of consultations (different categories). In general all the participants were cooperative. The less cooperative individuals did not stop us from collecting the wanted information (except the above mentioned cases).

The number of conducted interviews;

-District Medical Officer (DMO)	**1**
-Chief of posts health centers / posts and hospitals	**13**
-Health staff health centers / posts and hospitals	**35**
-Private health workers (134)	
• Herbalists / traditional healers	**87**
• Diviners	**3**
• Traditional Birth Attendants (TBA's)	**4**
• Retired nurses	**6**
• Retired midwives	**5**
• Community Health Workers (CHW)	**2**
• Pharmacists	**1**
• Patent medicine sellers	**7**
• Drugs peddlers	**19**
-Chiefs of village	**21**
-Population	**60**
-VHC members	**62**
-IVHC members	**16**
Total	**343**

The data collection tools / questionnaires were adequate. They provided the wanted information. The work plan was strictly followed. Nevertheless, the research took two more days than planned to collect all the wanted information. During the fieldwork the team members had enough time to collect their data. The quality of work could be ensured in relation to the quantity of the manpower.

Technical support

The research was carried out under the responsibility and supervision of the researcher. Before the research started he received input from his direct supervisor in relation to the HSR proposal and developing questionnaires. The support was sufficient, although the final