URBAN HEALTH DELIVERY SYSTEM PROJECT

HEALTH SECTOR ASSESSMENT

HELWAN ZONE

Executive Summary

By
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Research Team

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for garbage collection. Furthermore, initiating improvements in the environment cannot be done piecemeal, due to the interdependence of the ecosystem. For instance, one cannot discuss the problem of stagnant water independently from the problem of drinking water and sewage disposal. Another example is that a power failure will also cause a sewage backup. One must consider the effects of industrial pollution on health in general as well as in geographical patterns demonstrating differential impact.

This study lays the basis for collaboration between environmental engineers and epidemiologists in answering this question. Although it is difficult to separate genetic, infectious, nutritional, and other factors from environmental ones in analyzing disease patterns, this study makes initial suggestions.

It makes recommendations on the basis of the assessment regarding appropriate service reorganization or technological implementation. (For instance, one problem noted is that local council service of garbage collection, for instance, does not extend to all areas).

6. ENVIRONMENTAL FACTORS IN COMMUNITY HEALTH

Helwan is in some ways typical of any Cairo community and is in other ways unique in that it lies on recently agricultural land and like other peripheral communities such as Choubra el Khema, its irrigation ditches have never been filled in, and have become open sewers. Many factories dispose their industrial wastes directly in the Nile or Khashab irrigation canal. Families are aware of the unhealthy environmental conditions and make such statements as "The canal invites mosquitos and flies which cause eye trouble to children". Helwan, as an highly industrialized area, has a high degree of air pollution. Mothers say that their children "inhale dust".

As such, Helwan is both a potential "average community" and a case study of the exacerbation of already debilitating environmental conditions by virtue of its peripheral, industrial status. It is evident that environmental conditions have a deleterious effect on health. One notes, example, the high percentage of acute and chronic bronchitis in the air-polluted, Helwan area. Other less tangible aspects of the urban conditions, like psychological pressures of crowding, must also be taken into account in assessing environmental-urban impact. The HSA considered municipal and private technologies (i.e. water, sewage, etc..) available and their appropriateness. It found that some environmental problems can be alleviated by infrastructure reorganization.

Environmental problems and solutions must be dealt with, however, holistically. For instance, domestic disposal of garbage may lack such essentials as covered containers. Narrow streets may necessitate small, animal-drawn carts

Table NO : H/4-5.7 District : Helwan

Group : Infrastructure

REFERRING SYSTEM IN THE URBAN HEALTH CENTERS

Items	Tora	Maasara	Basatin	Helwan	Set-Khadra
1. Official referral system	No	No	No	No	yes
2. Requesting for the referral system	No	No	No	on patient record	on patient record
3. Patient is referred to	any place	fixed hospital	fixed hospital	any place	fixed hospital
4. Receiving reports about referred cases	No	No	No	No	No

Source: Collected from Health Unit *Date: Dec., 1980 - Jan., 1981*

Table No. : H/4-5.5. District : Helwan

Group : MCH

MCH PERSONNEL'S OPINION ON HOW TO IMPROVE THE LEVEL OF SERVICES IN MCH CENTERS

Opinion \ Personnel Group	PERCENTAGE OF GROUP GIVING THE RESPONSE			
	Physicians, dentists, and pharmacists (N = 36)	Nurses & Assistant Midwives (N = 59)	Tomergias (N = 32)	Other Personnel (N = 161)
Increase supplies & equipment	77.8	47.5	37.5	33.3
Increase amount of drugs	52.8	23.7	15.6	26.5
Increase personnel	33.3	7	11.1	11.8
Improvement of buildings	41.7	18.6	18.8	38.2
Health education	25	3.3	3.1	-
Salaries	38.9	10.2	18.8	14.7

Table No : H/4-5.4 District : Helwan

Group : Infrastructure

OPERATING AND RECOVERY ROOMS

Items	Helwan General Hospital	El-Nasser General Hospital
I. OPERATING ROOM		
1. Number of operating room tables	8	3
2. Number of O.R. Rooms	4	3
3. Space floor area per O.R. Table	17.5 m^2	30 m^2
4. Red line (clean area)	not found	found
5. Autoclaves: (a) Number	3	9
(b) Test efficiency	frequently done	Never done
6. Responsible for sterilization	Nurse	Nurse
7. Operating instruments		
(a) quantity	adequate	adequate
(b) Quality	in bad condition	in good condition
8. O.R. clothes (a) quantity	adequate	inadequate
(b) quality	in bad condition	in bad condition
9. Availability of		
(1) Cast room	not present	present
(2) Cystescopy room	not present	present
10. O.R. register	not present	present
II. RECOVERY ROOM		
1. Number of beds	4	6
2. Availability of equipment and supplies	available	available
3. Patient records	not found	not found

Source: Collected from Health Unit. *Date: Dec. 1980*

Table No. : H/4-5.6. District : Helwan

Group : MCH

MCH PERSONNEL'S OPINION ON PROBLEMS FACING THEM

Opinion \ Personnel Group	Physicians (N = 36)	Nurses and Assistant Midwives (N = 59)	Tomergias and other personnel (N = 227)
Too much work	25	22	25.8
Interpersonal relations are not good	11.1	13.6	6.1
Working hours are not suitable	-	33.9	7.6
Facilities are not available	75	23.7	27.3
Clients are troublesome	58.3	23.7	34.8
No problem	19.4	18.6	39.4

Table NO. : H/4-5.3 District : Helwan

Group : Infrastructure

GENERAL STATISTICS AND UTILIZATION OF SERVICES

Items	District Clinics			Specialized Clinics			
	Helwan	Maadi	Tebin	Tropical	Venereal diseases	Chest	Rheumatic
1. Number of patients visiting clinic (1980)	3166	11524	5700	6111	15000	6641	51702
2. Ratio of physician per Nurse	1:1	1:3	1:2	No nurses	1:0.3	1:3	1:1.5
3. Cost of drugs dispensed in (1980) (L.E.)	580	2579	1698	356	1030	51900	No pharmacy

Source: Collected from Health Unit *Date : Jan. 1980 - Feb. 1980*

reasons for MCH problems indicated facilities and troubles with clients. (See H/4-5.6.).

These data suggest one reason for client dissatisfaction with MOH clinics. Providers consider clients troublesome and value equipment more than contact (via health education, etc..) with clients.

Keeping in mind the heavy load at Helwan General, it is of note that the urban health centers do not utilize a referral system (see table H/4-5.7.). Thus, patients at the general hospitals have either been dissatisfied with, or have by-passed, such clinics. The data presented in other sections of this Assessment suggest the need to diversify services at the primary care level. The restricted services of the urban health center, and the underutilized services in the case of some specialized clinics, require further attention.

The Infrastructure TFG found that of the 43 physicians questioned in the GUHC, 18 had served less than 5 years and 21, 5 to 10 years.

The nursing staff had longer experience. In specialized clinics, the percentage of physicians with less than five years (8 of 27) was lower than for the hospitals. It would seem that young M.D.S. end up serving in periphery and general facilities; indeed, the private sector noted that almost all of the new GP clinics in Helwan had been opened within the last 5 years.

beds), is clearly more favorable in Helwan General than El-Nasr, although--given the structure of MOH staffing--the service rendered is not necessarily in line with the ration.

Specialized clinics, by contrast, seem adequately staffed. One cannot say how many of the Helwan General Hospital patients could have been treated in district clinics (most probably could not have been in specialized) but it appears that given the absence of a referral apparatus, patients are not accustomed to going to lower levels of health services and proceed to diagnose themselves.

The question must be asked, how much of the system's problems stem from over-centralized client demand and how much from deficient facilities? When providers were questioned, over half of the Helwan General physicians and nurses indicated inadequate equipment while less than 4 percent of the physicians in the other two Helwan hospitals did. (Table H/4-5.4.) gives an idea of facility inadequacy.

Questioning providers in GUHCs brought similar results for physicians (25 of 37 said facilities not adequate) although nurses were less prone to say so. In general, a majority of physicians in facilities find them inadequate while they are less likely to stress staff relations and rapport with the community. For example, the MCH provider survey indicated that the physicians were particularly concerned with supplies, and the building and not with health education. (See H/4-5.5.). Interestingly, only the nurses and assistant midwives were interested in increasing the number of personnel. In keeping with this trend, physicians questioned as to

Table No. : P/4-4.2 District : Tehran

Group : Private HOS

PRIVATE SECTOR CLIENTS PROVIDER/PLACE PREFERENCE IN PRENATAL/DELIVERY CARE

	% Of Hospital Clients (N = 26)	% Of Mostawsaf Clients (N = 93)		% Of Hospital Clients (N = 14)	% Of Mostawsaf Clients (N = 52)		% Of Hospital Clients (N = 24)	% Of Mostawsaf Clients (N = 79)
Provider Of Prenatal Care			Reason For Preference Of Daya			Place Of Delivery		
- Herself	27	75	- She is patient	29	35	- At neighbors	8	27
- Neighbors and ..... relatives	19	17	- She remains with ... me after delivery ..	29	15	- At home by daya	83	53
- Dayas	31	4	- She helps me better.	21	37	- At home by private .. physician	8	5
- Physician of ..... health unit	0	0	- She cares for me.... and, my home	14	-	- Government hospital .	4	5
- Hakima	19	-	- I can pay her	7	13	- Private polyclinic ..	6	11
- Private physician ..	4	2						
- Private mostawsaf ..	0	1						

Source : Field Survey. Date : Dec., 1980

Table No. : H/4-4.8 District : Helwan

Group : Private HCS

PRIVATE PHYSICIAN REPORT OF CLIENT RESORT/DIAGNOSIS

	Most Common Cause For Children Visit To Private Clinic % Responses (N = 35)	Most Common Cause For Woman's Visit To Private Clinic % Responses (N = 34)	Assumed Client Pathway To Physician % Responses (N = 43)
Gastroenteritis	45.7	-	Client comes.. directly to .. 62.7 physician
Bronchitis	25.7	-	
Alimentary tract diseases	11.4	61.7	Client tries to treat self first 25.5
Tonsilitis	8.5	-	
Other	8.5	11.7	
Pre-natal care	-	8.8	
Post-natal care	-	11.7	Client goes to other 11.6 physicians first
Gynecology	-	5.8	

Source : Field Survey Date: Dec., 1980

Table No. : M/4 - 4.7
Group : Socioeconomic

District : MALDAH

RELATION BETWEEN EDUCATIONAL LEVEL AND KNOWLEDGE, UTILIZATION & UTILIZATION BY FUNCTION OF MCH CENTERS

	Number In Category	% Of Category Who Know MCH	% Of Category Who utilize MCH	% Of Category by function & utilization of MCH							
				A	B	C	D	E	F	G	H
LITERATE MALES	350	70.6	56.0	4.3	8.3	5.1	4.6	53.1	3.4	3.4	3.6
MATRICS	261	69.7	55.5	3.0	6.5	18.6	4.9	51.3	3.8	3.8	2.3
READ AND WRITE	59	71.1	57.6	8.4	13.5	19.7	3.3	57.6	0.0	0.0	1.6
GRADUATE	15	80.0	60.0	0.0	6.6	0.0	0.0	60.0	6.6	6.6	0.0
POSTGRADUATE AND ABOVE	15	73.3	53.3	13.3	20.0	6.6	6.6	60.0	6.6	6.6	6.6

(A) Gynecological Care
(B) Prenatal Care
(C) Post Natal Care
(D) Birth Only
(E) Vaccination
(F) Food for Children
(G) Treatment for Children
(H) Contraceptives

Source: Field Survey

Date: 1980.

5. HEALTH CARE INFRASTRUCTURE

Assessment of MCDS in Helwan indicates uneven services utilization, inappropriate staff training, and inadequate equipment and facilities. It is clear that physical and human resources are not organized for optimal utilization.

Intersectoral organization and referral so as to assure utilization of all levels of health care and to establish reasonable catchment areas for facilities are needed. For example, there are three hospitals in Helwan. Helwan General Hospital has the largest press of patients with 155% occupancy , it also has the most diversified service including a substantial outpatient flow. (See tables H/4-5.1. - 3.) Helwan General Hospital offers both in - and out-patient radiology; in its out-patient department, it performs simple operations like abcess draining. At the same time that Helwan General Hospital has the least adequate equipment both quantitatively and qualitatively, it has by far the highest patient load.

One solution is to upgrade equipment and expand flow area out-and-in-patient area, kitchen, and waiting rooms in Helwan General. Another option might be to relocate some of Helwan General departments and outpatient facilities or to replicate the services more convincingly at a primary level so as to alleviate the strain on centralized facilities. The data clearly indicate that the hospital offers diversified services to a large patient load with minimal facilities. On the other hand, the physician ratio (1:2.8 beds) and nurse ratio (1:2.3

Table No. : P/4-4.5 Station : Rai

Group : MCH

MCH CLIENT REASONS FOR DISSATISFACTION WITH MOH FACILITIES

	Reason For Dissatisfaction With MCH % of Responses (N = 75)*	Reason For Partial Utilization Of MCH % of Responses (N = 84)	Hindrance To Utilization Of MOH Facilities % of Responses (N = 257)
- Waiting too long	33.3	-	19.0
- Personnel absent	10.7	-	-
- Personnel interaction with client	2.7	1.1	3.1
- Not receive expected examination	32	-	7.8
- Not receive expected drugs; medicine insufficient	21.3	-	16.7
- Prefer private physician	-	16.0	-
- Prefer another facility	-	26.1	-
- Prefer traditional healer	-	-	-
- Unsuitable clinic hours	-	19.0	-
- Unpaid services not good	-	29.7	11.3 (medicine ineffective)
- Services too far away	-	1.1	-
- Physician inaccessible	-	-	5.4
- Other	-	5.9	35.0

*N = Number of responses; clients may give more than one response.

Source : Field survey Date : Nov. 1980 - Feb. 1981.

Table No : H/4-4.4. District : Helwan

Group : Socio-economic

ATTITUDE TOWARDS HEALTH SERVICES

Question Items	Frequency	%
If your husband is ill where do you go ?		
- hospital	61	17.43
- A private doctor	283	80.86
- his work provides the treatment	6	1.71
Is that service ?		
- inside the area	284	81.14
- outside the area	66	18.86
If one of your children is ill where do you go ?		
- A hospital	187	53.43
- A private doctor	163	46.57
- Is that service ?		
- inside the area	283	80.86
- outside the area	67	18.87

Source : Field Survey *Date* : 1980.

Table No. : H/4-4.3

Group : Private MOS

DESTINATION FOR SEEKING HELP: PRIVATE HOSPITAL AND PRIVATE MOSTAWSAF CLIENTS

	First Destination for Seeking Help		First Destination with Minor Symptom(loss of Appetite)		First Destination with Grave Symptom (Inability to walk)	
	% Hospital clients (N = 24)*	% Mostawsaf clients (N = 83)	% Hospital clients (N = 20)	% Mostawsaf clients (N = 78)	% Hospital clients (N = 18)	% Mostawsaf clients (N = 62)
Self Help + neighbors	-	20.4	15.0	30.8	-	-
pharmacy	25.0	-	10.0	2.6	-	-
Traditional healer	4.2	3.6	-	-	-	-
Government health units	-	1.2	-	-	-	-
Government hospital	12.5	1.2	20.0	1.3	33.3	12.9
Private physician	4.2	3.6	-	10.3	11.1	19.4
Private mostawsaf	-	69.9	-	52.6	-	61.3
Private hospital	-	-	-	-	-	3.2
Health insurance	45.8	-	55.0	2.6	50.0	3.2
Curative organization	8.3	-	-	-	5.6	-

*N = Number of responses; clients may give more than one response

Source : Field Survey

Date : Dec. 1980 - Jan. 1981.

Table 80 : II/4-4.2 District : Helwan

Group : Epidemiology

DISTRIBUTION OF EXAMINED CHILDREN
BY DRUGS USED IN THE LAST WEEK

Prescribed by / Drug	Doctor		Pharmacist		Traditional, self prescribed	
	No.	%	No.	%	No.	%
None	362	69.5	465	90.5	387	74.3
Antipyretic	8	1.5	12	2.3	48	9.2
Tonics	3	0.6	-	-	2	0.4
Cough mix.	20	3.8	18	3.5	35	6.7
Penic., Sulph	-	-	-	-	1	0.2
Broad spect.	5	1.0	3	0.6	3	0.6
Antidiarrh.	9	1.7	5	1.0	9	1.7
Eye drops	-	-	1	0.2	-	-
Skin oint.	-	-	-	-	1	0.2
Antiallergic	3	0.6	-	-	1	0.2
Rehydration	-	-	-	-	-	-
Other	111	21.3	10	1.9	34	6.5
Total	521	100.0	514	100.0	521	100.0
Unknown	3		10		3	

Source : Field Survey Date : Nov. 1980-Feb. 1981

Table No. : V/A-1.8 Governorate : Gharbia

Input : Private HCS

PRIVATE SECTOR CLIENT REASON FOR DISSATISFACTION WITH GOVERNMENT SERVICES

	Problems Meeting Clients In Center. % Of Responses		Cause Of Non-Use Of Government Service % Of Responses	
	Hospital Clients (N = 33)*	Mostawsaf Clients (N = 97)	Hospital Clients (N = 7)	Mostawsaf Clients (N = 25)
- Waiting too long	30.3	22.7	-	-
- Personnel absent	18.2	4.1	-	-
- Staff neglect	24.4	-	17	4
- Carelessness in examination	-	18.6	-	-
- No drugs	6.1	10.3	-	-
- Insufficient quantity of drugs	18.2	16.5	-	-
- Preference for private doctor	-	-	-	20.0
- Unsuitable clinic hours	-	-	17.0	24.0
- Free examination is not good	-	-	42.9	36.0
- Services too far away	-	-	-	16.0
- Physician inaccessible	3.03	2.06	-	-
- Treat self	-	-	17.0	-

N* = number of responses; clients may give more than one response

Source : Field Survey

Date: Nov. 1980 - Feb. 1981.

Table No. : [illegible]

[illegible] : [illegible]/Private

District : Helwan

MCH/MOSTAWSAF CLIENT REASON FOR PRESENT VISIT TO MCH/MOSTAWSAF*

	% MCH Clients (151 Responses)	% Clients Mostawsaf (59 Responses)		% MCH Responses (162 Responses)		% MCH Clients (69 Responses)	% Clients Mostawsaf (38 Responses)
REASON FOR CHILD VISIT			CHILD COMPLAINT DURING PRESENT VISIT AND PREVIOUS MONTH**		REASON FOR MOTHER VISIT		
- Regular check up	12.6	22.0	- Cough	29.7	- Antenatal (1st visit)	63.8	2.6
- Vaccination	29.1	-	- Fever	23.5	- Antenatal (follow up)	8.7	-
- Child sick/treatment	55.6	64.4	- Common cold	11	- Family planning	10.1	2.6
- Follow up visit	2.7	5.7	- Diarrhea	9.8	- Mother sick/treatment	13.0	39.5
- Rehydration	0.0	3.4	- Gastroenteritis	3.7	- Receive nutritional support	4.4	-
			- Vomiting	3.7	- Follow up	-	10.5
			- Colic	1.9	- Check up	-	31.6
			- Ear discharge	3.1	- Other	-	5.3
			- Skin rash	1.9			
			- Skin infection	2.5			
			- Eye infection	1.2			
			- Other	1.2			

* Note that both mother and child may have a reason to visit, and that there may be more than one complaint per child.

** The study reflects seasonal variation as it was conducted during winter months when diarrhea and gastroenteritis are less common.

Source : Field Survey

Date : Nov. 1980 - Feb. 1981.

The daya is reported to cost more than a clinic delivery. MCH data indicate two pounds as the going rate; other reports indicate tips to clinic personnel in excess of two pounds and to TBA's in excess of five. It is not at all clear that choice of daya or clinic delivery is made on financial grounds.

very. 20% noted her care of client and household. Mostawsaf clients (see chart H/4-4.9.) indicated similar preferences. Such values also occur in TBA's self perceptions. In the Private Sector TFG interviews, the most often mentioned quality by the dayas as a prereguisite for success in their profession was patience, followed by experience, good relations, and cleanliness. TBA's patience means they do not induce labor; MCH personnel commonly press on the mother's abdomen to speed the delivery. Some husbands say they do not feel the presence of a daya during delivery and may wake up to find a new family member.

Half of the dayas interviewed by that group had good relations with the local health unit. It has been observed that the most common division of labor is for midwives to attend a delivery and leave the umbilical cord for the clinic attendant to cut when she attends the birth. The popular belief is that this ensures the issuance of a personal identity card.

The TBA's care is more comprehensive. She remains more important than the formal HCDS in prenatal care; the private sector hospital client survey indicated 60% as depending on the TBA for prenatal care. Even among the Mostawsaf clients, where only 5% indicated use of the daya for prenatal care (71% indicated self care), 47% said they were delivered by dayas. It is possible that they had abandoned the daya's comprehensive care as old fashioned, but not yet replaced her with private physicians. The Epidemiology group's data (chart H/4-4.10) indicate that only 11.4% of the 34.5% of the women using prenatal care do so at MCH centers, and 75% of the women deliver at home with a TBA.

my child coughs or sneezes ". (Sociocultural TFG report).

It also appears that there is a cultural/contextual influence on diagnosis and the decision to switch from self to professional treatment. The sociocultural survey indicates that parents do not pay special attention to swollen eyes, sinuses, lose of appetite or sleep, undersized height, delayed speech, and intestinal worms.

The short circuiting from self treatment to specialized facilities may be because the client is not attracted to primary care facilities or because he finds the informal sector more compatible with his needs. Important in this sector are "knowledgeable" individuals who, depending on circumstances, may be acquaintances, herbal pharmacists, midwives, employees in a pharmaceutical concern or modern pharmacy who know how to give injections, etc.. Such individuals appear to differentiate between mild and severe symptoms and refer clients to the formal health system when appropriate. It might behoove the primary care segment of the HCDS to emulate some of the qualities of the informal sector. If community leaders and knowledgeable traditional healers are involved in the area's primary care health facilities, and if clinic personnel are sensitive to community needs, steps can be taken in this direction.

The traditional birth attendant (TBA) is an instance where the informal sector provides a viable role model, and where there is tacit cooperation between both sectors.

Preference for a TBA or daya is both because of quality of personal service and because of institutional completeness. 40% of MCH clients indicating preference for a TBA cited her patience and 30% her remaining with the client after deli-

sort and 24% of the Montawsaf clients cited self help and neighbors.

But once the client is convinced of the professional help, he short circuits his search to bypass primary health care facilities. This is particularly true for children, as chart II/4-4.8. of private physician report of causes for clinic visits suggests. In the case of children where concern with health is high, gastroenteritis--which as a prominent problem should be handleable by a peripheral facility--is the number one reported cause of visit. On the other hand amongst women, who downplay their health by belief or necessity, the number one cause is not gynecological which can, but generally is not, be attended to in peripheral facilities; rather it is alimentary tract complaints.

Clients are quite astute in sorting out severity of complaint and determining when self help and when professional help is indicated. For instance, mothers surveyed by the sociocultural TFG considered fever, diarrhea, vomiting as symptoms requiring immediate professional care for their children. On the other hand they indicated treatment of mild symptoms like low grade fever, cough, colic, cold, and mild diarrhea as treatable at home. For women themselves, almost all symptoms (e.g. headache, fever, general weakness, vomiting, mild hemorrhaging)were considered mild; this is probably related to the low priority vis a vis women accorded women's health by society and indeed by women (who, rightly enough, see children as an important resource).

Children's symptoms are less likely to be treated by home remedies than women's; one woman put it: "I am so complexed, now after 4 of my children died that, I run to the doctor, even if I have to sell my clothes, if

consulted some health facility during that time period to treat a sick child. Indeed, since only 3.4% indicate that they visit the MCH clinic to treat their children anyway, the absence of recent MCH visits has little bearing on actual pediatric care. Clearly MCH visits are restricted to more "bureaucratic" affairs such as obtaining vaccinations (53% indicated this) or registering as pregnant (8% indicated prenatal care) in order to assure one's self of the right to demand MCH delivery services in the event that they are needed. These data indicate the criticalness of understanding client motivation in facility utilization. Other factors like geographic accessability (note the even spread from 1/4 to 1 kilometer) seem less critical. It suggests that even when utilized, the MCH clinic is providing the form (vaccination cards to avoid widely renowned fines; clinic pregnancy registration) and not the content of health care. Vaccinations and pregnancy identity cards could just as well be obtained at health offices (makateb Sihha).

4.4. THE FORMAL/INFORMAL INTERFACE

The Helwan HSA indicated that clients often go straight from self treatment to a pharmacist or private physician, depending on the seriousness of the symptoms. The reason for self treatment needs to be explored. Interestingly, only 25% of private physicians surveyed by the Private Sector TFG assumed that the client tried to treat himself before coming to them.

The client may consider his symptoms too trivial for treatment or may consult neighbors or the pharmacist. This health care management group's role is evident in the Private Sector's TFG survey where 50% of hospital clients stated that the pharmacist was their first re-

although neighbors, relatives, and "knowledgeable" women most likely are. Preference for dayas is also related to their role performance; for example, TBAS take care of household and ceremonial needs at the time of birth.

Interestingly, when the level of crowding is used as an indicator, the inverse relation between it and knowledge of the MCH clinic is more dramatic than in the case of the ownership indicator. (For instances, in the case of ownership levels at every level between 3.2 to 3.7 times as many respondents knew as did not know about MCH clinics; when the level of crowding indicator is used, everywhere from the same number to approximately 3.5 times as many knew as did not know about MCH clinics).

It is noteworthy that in the range 5 to 6 persons a room, about half the respondents know about MCH clinics (a relatively low percentage). It is only when crowding becomes less (2 to 3 a room) that three to four times as many respondents know about the MCH clinics. The importance of this indicator is only speculation to date.

Correlations with geographic origin intimated the anticipated diversified utilization by urban Cairenes. Urbanites cited knowledge of prenatal care and children's food more frequently. Rural migrants cited the "more traditional" birth-only role more often.

In general, the education and crowding indicators seem potentially most efficacious.

The socio-economic survey confirmed that information about MCH clinics was much more widespread than the conviction by clients that the MCH clinic had something to offer them. While 70% of the respondents knew about the clinic, only 44% of those had utilized the clinic in the last three months although it is safe to assume that they would have

levels there was a slightly large knowledge-utilization gap; that is, a slightly higher proportion of illiterates who knew about the MCH actually used it. Each level repeated the overall sample's high knowledge and utilization of vaccination services. Fines for those not vaccinated are an established item in childrearing repertoire. In knowledge of MCH services (not shown) illiterate persons mentioned treatment of children second while literate persons mentioned birth. This may be related to: (1) the continued use of TBA among illiterate persons, and (2) more reliance among illiterate persons on MCH centers for pediatric services.

Regarding utilization, in general (the two highest levels are actually too small for meaningful comparison), prenatal and gynecological care becomes more important as educational level rises. Thus, while prenatal care is the second most often mentioned utilization in the overall sample, it drops to third in the two lowest education levels.

Correlations run against income levels provide no useful information given that 94% of the sample falls in the lowest category. In future surveys higher income levels will be included to allow comparison.

Correlations run against level of ownership revealed similar trends to those of educational levels. Low income levels ranked pediatric treatment after vaccination and high income levels, birth. Since ownership levels are economic, one could surmise that the lower levels cannot afford private physicians. On the other hand, their preference for TBA's is not necessarily "economic". Although it has been suggested that economically marginal clients resort to MCH deliveries as cheaper, it is not clear that this is always, true,

4.6.), gave similar responses, although long waits and unpleasant staff were more important for them. They understandably felt that free service is not as good as service by fee. Commonly in MCH clinics women will request that the physician write them a perscription min-barra (from outside, i.e. a private pharmacy) as they feel the clinic's medicine is useless.

It appears that the MCH centers are providing basic, but minimal services for their devotees. Interestingly, the frequency of service resembles the reported knowledge and utilization patterns of the socio-economic survey sample. In that survey, vaccination was the most often cited service followed by (an extremely poor second) prenatal care and delivery; in the MCH survey, 78% of the clients reported vaccination at MCH clinics and 50%, birth at home attended by clinic staff. (Remember that less than 10% of the socio-economic sample utilized MCH prenatal or birth services; thus although 38% of the MCH clients delivered attended by daya or friends, the 50% utilizing MCH services is relatively high).

By contrast, among mostawsaf respondents, not even vaccination was commonly done at MCH clinics; at least 50% of them used private hospitals and private mostawsafs.

4.3. CORRELATION OF DEMOGRAPHIC DATA WITH CLINIC UTILIZATION

A series of correlations between socio-economic, demographic characteristics and MCH knowledge and utilization were run. They were statistically insignificant but some generalizations can be made with an eye to future determination of socioeconomic variables salient to an understanding of health behaviour.

For instance, in the correlation run between education level and knowledge/utilization (table H/4-4.7.) all levels' knowledge was comparable. In higher

4.2. BYPASS OF NON MCH CLINICS

MCH clients questioned in Helwan indicated satisfaction with MCH services in most cases (from 95% in El-Massara to 78% in Marazek). However, it was hard for MCH researchers to question clients out of earshot of the staff, and in any case (if utilization rates are considered), potential but non-present clients voted with their feet to indicate dissatisfaction. As chart H/4-4.5. indicates, long waits was the most common complaint. The average client reported visit time was two hours. MCH clinics are open in the mornings when women are rushed to shop, clean, cook to prepare lunch for their husbands' arrival at 2:00 p.m., and wash to hang clothes out in time to dry. They must queue before 9:00 a.m. to avoid risking a "full house" (particularly if it is not the day for their child's age group) but often are not examined until 10:30 or 11:00 a.m. Women thus prefer the more convenient evening hours of private.voluntary organization (PVO) clinics.

The other two popular complaints (substandard exams or drugs) suggest clients' evaluation does not rest solely on convenience but includes analysis of technology and commodity. For example, MCH clients differentiate between two examination styles: (1) bil-ada (with a stethescope) and (2) bil-bō'u (by mouth, i.e. an oral disease history). The first style is associated with physician concern for patient and with direct contact through use of instruments (stethescope here; elsewhere, injection, etc...) Clients desiring this personal touch usually seek out private clinics. This concern is borne out in statements on hinderances to utilization of government health services where long waits and unpleasant staff (compiled) were less important than inferior medicine and examination.

Private sector clients who were questioned (see chart H/4-

sector surveys regarding dissatisfaction with government services indicate personnel attitude is less critical *per se* than client evaluation of examination and of drugs. (See tables No: H/4-4.5. and H/4-4.6.) The lack of trust in drugs' effectiveness is based on client observation that the same drug is prescribed for different illnesses and on their witnessing of on - site preparation of solutions, encouraging feelings that the medicine is "watered down".

Insights regarding paradigms of health care strategy have influenced the reformulation of the client questionnaire and the on-the-street spot check for South and West Cairo. In Helwan, the inclusion of forced choice in the private sector questionnaire and hypothetical resort situations in the socioeconomic questionnaire were beneficial. The intensive interview group will continue to probe the context of illness managing groups' choices to ascertain incluences not ascertained by the questionnaire. We now turn to consider MCH and private clients' evaluation of MCH services so as better understand the bypass phenomenon.

Regarding severity, it would appear (see chart H/4-4.3.) that there is a tendency to use self help and pharmacists in the case of a mild symptom and to use hospitals, private physicians, and private clinics in the case of a more grave symptom. At the same time there is a tendency for Mostawsaf clients to stick to their clinic even for mild symptoms; private sector researchers noted that Mostawsaf clients become accustomed to the clinic and utilize it for all complaints. Further, about half of the hospital clients would use the Health Insurance for any sort of complaint.

Regarding availability, several of the HSA components results suggest that availability or accessability of services is not as much a problem as quality. The MCH clinic respondents were spread evenly over a 1/4 to 1 kilometer distance from the clinic. Only 16% of Mostawsaf respondents in Massara indicated distance as a reason for nonutilization of government services, while only 1.1% of MCH respondents felt distance a problem. The socio-economic survey of health care resorts for husband and child (table H/4-4.4.) indicates availability of services within the area. The low incidence of work-provided treatment for the husband may be due to the high percentage of uninsured day laborers in the sample.

Intensive interviews by the socio-cultural group suggested that, rather than the accessability being the problem, that rough treatment by staff, recurrent staff negligence, and long waits for service have influenced clients' bypass of MCH facilities. At the same time, MCH and private

expected for antenatal care. However, since day of survey is not controlled, one can assume the antenatal figure was obtained on a Monday when women register as pregnants; indeed 63.6% are there for their first visit. When compared with mostawsaf clients (only 2.6% there for antenatal care) it appears even more probable that antenatal care means registration to MCH clients. Many women register at MCH centers to get their identity card, fearing that otherwise they will not be able to get a birth certificate, and never return to the clinic. As with vaccinations (where the fear is a fine), legalities more than health awareness draw people to MOH facilities. However this first visit does identify problem (diabetes, heart etc.) pregnancies. As for children, only 12,6% of MCH clients are comming for a preventive check up (as versus 22% of Mostawsaf). As for the 55.6% of MCH clients stating the diagnosis of a sick child, the figure is higher, of course, than the 5% of socio-economic respondents describing possible visits to the MCH clinic for child diagnosis.

4.1. HEALTH CARE STRATEGIES

By the completion of South and West Cairo surveys, HSA hopes to codify paradigms of health care resort in different instances of illness. Basically, clients treat themselves, perhaps asking a friend's opinion, then they consult a pharmacist; then they proceed directly to a private physician or voluntary society clinic. How quickly the steps are taken depends on the seriousness of the illness and the availability of service. The Epidemiology TFG found that 25% of examined children had been given self prescribed drugs in the last week; 30% had taken physician prescribed drugs, and 10%, pharmacist's, (see chart 4/4-4.2.). The role of the pharmacist is also remarkable; for example, half of the Tora pharmacy clients ask pharmacist advice before purchasing medicaments.

4. CLIENT HEALTH CARE STRATEGIES

The HSA in Helwan documented a substantial incidence of primary facility (particularly the MCH clinic) by-pass. As will become clear, while clients have information about clinic services, they do not use them because they find little or nothing there that could not be elsewhere with less time and humiliation; they, as do all consumers, evaluate examinations and medicine and find them lacking. The HSA did not find that the felt needs of the community are reflected in a primary health care delivery supported by a viable referral system. The HSA feels the establishment of same should have high priority.

The Assessment indicated a considerable gap between availability/knowledge and utilization of MCH clinics. Respondents told the Epidemiology TFG in 70% of the cases that they would go to a private clinic if their child was sick; only 3.6% indicated they would use the MCH facilities. 70% of the socio-economic respondents had heard of MCH clinics, but only 56% ever went. Even among those attending, there was no extensive utilization of the various services even though they were known. For example, 25% of the socio-economic respondents indicated awareness of MCH pediatric service, but only 5% of them indicated that they utilized them. To understand this phenomenon we will look at health care strategies and at client evaluations of MCH facilities.

A survey of MCH clients by reason for visit (See II/4-4.1.) indicates a higher proportion (72.5%) than would be

Table No. : H/4-3.2 District : Helwan

Group : Epidemiology

DISEASE AND NUTRITIONAL STATUS OF CHILDREN EXAMINED BY EPIDEMIOLOGY GROUP

AGE GROUP	FREQUENCY BY AGE GROUP									
	I < 3 months	II 3months+	III 6months+	IV 9months+	V <1 year (composite of I-IV)	VI 1 year+	VII 2 year+	VIII 3 year+	IV 4 year+	X 5 year+
Total Number in Sample (524)	15	26	30	19	90	91	81	101	77	84
DISEASE HISTORY OF PAST THREE MONTHS										
% with gastroenteritis					58	52	47	40	22	17
% with respiratory					58	47	51	56	48	41
% with tonsillitis					3	11	11	23	26	29
NUTRITIONAL STATUS*										
% As Measured By Weight/Age										
< 60% of requisite weight	-	3.8	-	-	1.1	2.3	2.5	1.1	-	1.3
(Normal) 90% + of requisite weight	91.7	73.1	80.0	63.2	75.9	53.5	62.1	69.1	73.0	78.5
% As Measured By Height/Age										
< 85% of requisite height	-	3.9	-	-	1.1	10.4	11.4	6.4	2.7	2.3
(Normal) 95% + of requisite height	83.3	76.9	76.7	47.4	71.3	41.9	27.9	43.6	62.2	65.8

*Only severely deficient and normal figures are given; the remaining cases were 60-90% of weight and 85-95% of height

Source : Field Survey Date : Nov. 1980 - Feb. 1981.

Table NO : H/4-3.1 District : Helwan

Group : Epidemiology

MORTALITY STATISTICS FOR CHILDREN BELOW 5YEARS (1975-1980).

Year / Rate (per 1,000)	1975	1976	1977	1978	1979	1980
Infant mortality rate	101.3	103.2	115.0	96.4	95.7	93.7
Neonatal mortality rate	28.8	29.1	26.0	24.06	23.5	21.3
% Neonatel death	28.4	28.2	23.3	25.5	24.6	22.8
% postneonatal death	71.6	71.8	76.7	74.5	75.6	77.2
1-4yr.mortality rate	-	10.2	14.1	8.7	12.1	8.0
Still Birth	5.6	3.8	3.2	4.5	5.7	5.6
Mother mortality rate	-	-	-	-	-	1.08

Source : MCH records *Date : Nov.1980-Feb.1981*

Disease records from Helwan MCH centers for 1979 and 1980, indicate that malnutrition was the most common diagnosis (20 percent plus potential factor in other diagnoses), followed by respiratory problems (25 percent) and gastro-interitis (19 percent). Clinical examination revealed Protein-Energy Malnutrition (P.E.M.) by weight/age in approximately 20 percent of infants aged 6 to 8 months and in 47 percent by the second year, after which it tapered off. (See table H/4-3.2.). The second and third years, being the transitory dietary period, are most problematic. Albiet mild, the cases confirm the stormy nature of the postneonatal period. Although a cross-sectional survey would not reflect the true magnitude of acute disease, the survey detected, for example that there was tonsillitis (19,7 percent); lymphaderitis (6.1 percent); upper respiratory infection; eye, skin, and scalp infection (4.2 percent); and scalp furuntosis (2.1 percent).

Among mothers, nutrition problems of obesity (44 percent); anemia (according to WHO standards, 71% of nonpregnant, 66% of lactating nonpregnant, and 56% of pregnant); lesions suggestive of B_2 deficiency; chest diseases (7%); chronic eye diseases (7%); sugar in urine (7%); and parasitic infection (giardia, 7.3% ; amoebic, 8.9% ; oxyzis, 4.4%) were found.

These epidemiological findings, in keeping with other surveys, highlight the role of adverse environmental conditions and inadequate nutritional sources in the poor health status of mothers and children in low income areas. They, along with the previously discussed topics, contribute to a demographic profile.

(migrants have brought their wives; in the fifties and early sixties, an uneven sex ratio in Cairo indicated presence of migrants who had not yet brought their wives), and the average family size is six. Illiteracy is higher among women than men (approximately 35% versus 20%). Approximately 30% of men and 22% of women can read and write, while approximately 6% of men and 1% of women have been educated above middle level.

Certain characteristics reported for the Helwan sample (350) can be safely assumed to hold true to some extent for similar population groups in low income areas of Cairo. Most (93%) have been married once, the majority (70%) for three to twelve years. The majority (69%) rent and the majority (74%) occupy only one room. By definition this room will have multiple uses; indeed, a common pattern is for a family to occupy one room in which they cook, sleep, bathe (often behind a temporary partition such as an open wardrobe door), and entertain.

Electricity is available, but some homes (20%) do not have it because they cannot pay for the electric meter (although wiring into a friend's meter is not uncommon) or because of landlord or personal wishes. Media sources extend to almost everyone; while only sixty percent own televisions (and seventy-five percent radios), most evenings find neighbors piling into the lucky homes for choice viewings. That media plays a more important role in health education than do clinics is evident in the family planning section of the survey; there, of the 96% who had heard of family planning, 56% indicated media as their source while family planning centers were not much stronger a source (25%) than friends, relatives, and neighbors (23%). Expectedly, the incidence of electric refrigerators (15%) is low. Daily shopping to obtain fresh produce and to avoid large good stocks subject to borrowing and envy

means one can often do better without a refrigerator; once endowed with a refrigerator, one is besieged by requests for ice and must choose between enmity and endlessly supplying the immediate environs with ice water. On the other hand, 56% of the sample had butagas stoves with ovens to supplement cooking traditionally done on a primus stove.

Baseline demographic data obtained in South and West Cairo will be compared with that of Helwan to see to what extent the above characteristics hold true. At that point a basic demographic profile will be developed.

There are results which can be assumed neither as generalizable nor as Helwan-specific. One is source of family income. The Helwan sample indicated husband as breadwinner in 94% of the families and both husband and wife in only 1.7%. Data on other districts of Cairo suggest a higher incidence of women providing income. Helwan's low incidence may be due to: (a) under reporting of women's economic activity because it occurs in the informal economic sector, (b) a high incidence of rural migrants (over 50%) who tend to be less employable, (c) a conservative tendency of Upper Egyptians regarding women.

Another less predictable variable is area infrastructure. In Helwan, fifty-four percent of the households had no running water. They either brought from a public tap, by hose from a nearby house, or from a water truck.

There is no sewage system in W.C.'s (65% of which reported as private) and connected to a septic tank (bakabort) which is generally not cleaned sufficiently often.

PROGRAM

PLANNED PROGRAM SUMMARY SHEET

CP 84-05 (8-82)

TITLE	FUNDING SOURCE	AG, RD & N	HEALTH	PROPOSED OBLIGATION (in thousands of dollars)	
PVO Community and Enterprise Development	SDF			FY 83 2042	LIFE OF PROJECT FUNDING 12,000
NUMBER 685-0260 GRANT [X] LOAN [ ] NEW [X] CONTINUING [ ]	POPULATION	ED & HR	SEL ACT	INITIAL OBLIGATION FY83	ESTIMATED FINAL OBLIGATION FY 86 / ESTIMATED COMPLETION DATE OF PROJECT FY88

Purpose: To support village organizations and small rural enterprises to generate their own development.

Project Description: Recent Government of Senegal (GOS) policy described in its economic reform plan has placed a high priority on using community and village organizations and on broadening the role of private enterprises in agricultural production, processing, and marketing. During the last several years, AID has supported several successful projects with American and Senegalese PVOs and with Peace Corps Volunteers (PCVs). Drawing on PVOs and Peace Corps Volunteers, this will (1) enable local organizations to increase agricultural production, regenerate land and wood supplies, and increase usable energy and (2) enable small, agriculturally-related enterprises to expand and proliferate. PVO's , assisted by PCV's,will provide training and organizational development to community organizations and assist them with financing to carry out vegetable production, woodlots, reforestation and soil regeneration, community enterprises, and other activities to increase production. In promoting small enterprises, the project will enable small agro-enterprises to expand and proliferate by improving the provision of credit, management, and technical assistance to these enterprises.

Relationship of Project to A.I.D. Country Strategy: In pursuit of the goal of food security in Senegal, A.I.D. will work through two sorts of organizations. Since 1975, A.I.D. resources have been channelled primarily through the rural development agencies, semi-autonomous organizations with large responsibilities for agricultural production in the various regions. Following a comprehensive evaluation of the A.I.D. program in 1980, however, A.I.D. determined that it must open an alternative track to reach small farmers more directly, in order to help them increase harvests and returns from markets. This project will develop the PVOs'expertise and provide them the financial resources to increase agricultural production by establishing or strenghtening indigenous village organizations and small rural enterprises. Project activities will be implemented alongside present A.I.D. projects in Sine Saloum, but will not be the responsibility of the RDAs. The project will enable the agricultural decentralization and credit reforms, which the mission is supporting through non-project assistance, to be implemented at the village level in Sine Saloum.

Host Country and Other Donors: Both foreign and indigenous PVOs provide important resources for development in Senegal and are funded from many different sources. GOS support of these activities has been open and encouraging. CARITAS has intervened in the rural sector for a number of years. NOVIB, a Dutch PVO, is working on rural integrated development projects. Two French PVOs, Volontaires du Progress, the French equivalent of Peace Corps, and SOS Sahel International are working in extension, health and rural energy activities. One of the better-known Senegalese PVOs, OFADEC, assists the extension, forestry, and village training sectors.

Beneficiaries: The direct beneficiaries will be personnel of U.S. and indigenous private voluntary organizations who will improve their ability to extend services and mobilize local people for development projects. The ultimate beneficiaries however, will be the farmers, village organizations, and small enterprises in Sine Saloum who receive assistance from the PVOs to increase their production activities.

3. DEMOGRAPHIC PROFILE

The target population of this study is all females within the reproductive age (15-45) with infants of 0-5 years from among lower working class urbanites and lower grade employees. These represent potential beneficiaries of the M.C.H.'s. The definition "lower income" was operationalized in the Helwan study as families with a monthly income of less than fifty pounds. Obtaining accurate income data is of course problematic, but (according to the figures reported) the study sample tended to be extremely low income, with 90% of surveyed males indicating a monthly income of less than ten pounds. The HSA team plans to include higher income groups in the next survey to allow comparisons among income groups in health seeking behavior. The team has noted that level of income may not be a sure indicator of health care activity. More research and analysis must be done to determine the influence of low-income on health care seeking behavior; although the vast majority of households "reported" an income below ten pounds (making them marginal), only 60% had ever utilized the free government MCH clinic. If future studies reveal that marginal and low income groups resort to private physicians with equal regularity, the necessity of providing feasible (i.e. utilized) primary services at minimal cost to alleviate the strain on marginal household budgets will become painfully clear. To fully appreciate this impact, household budget information will be considered in South and West Cairo. The Helwan socio-cultural survey indicated that families do not set aside money for health or treatment and may use the last piaster in the house and then borrow to meet health expenditures.

As for other basic population characteristics, in Helwan there is a high dependency ratio, an equal sex ratio

REVISED HSA ORGANIZATION CHART

(February 1982)

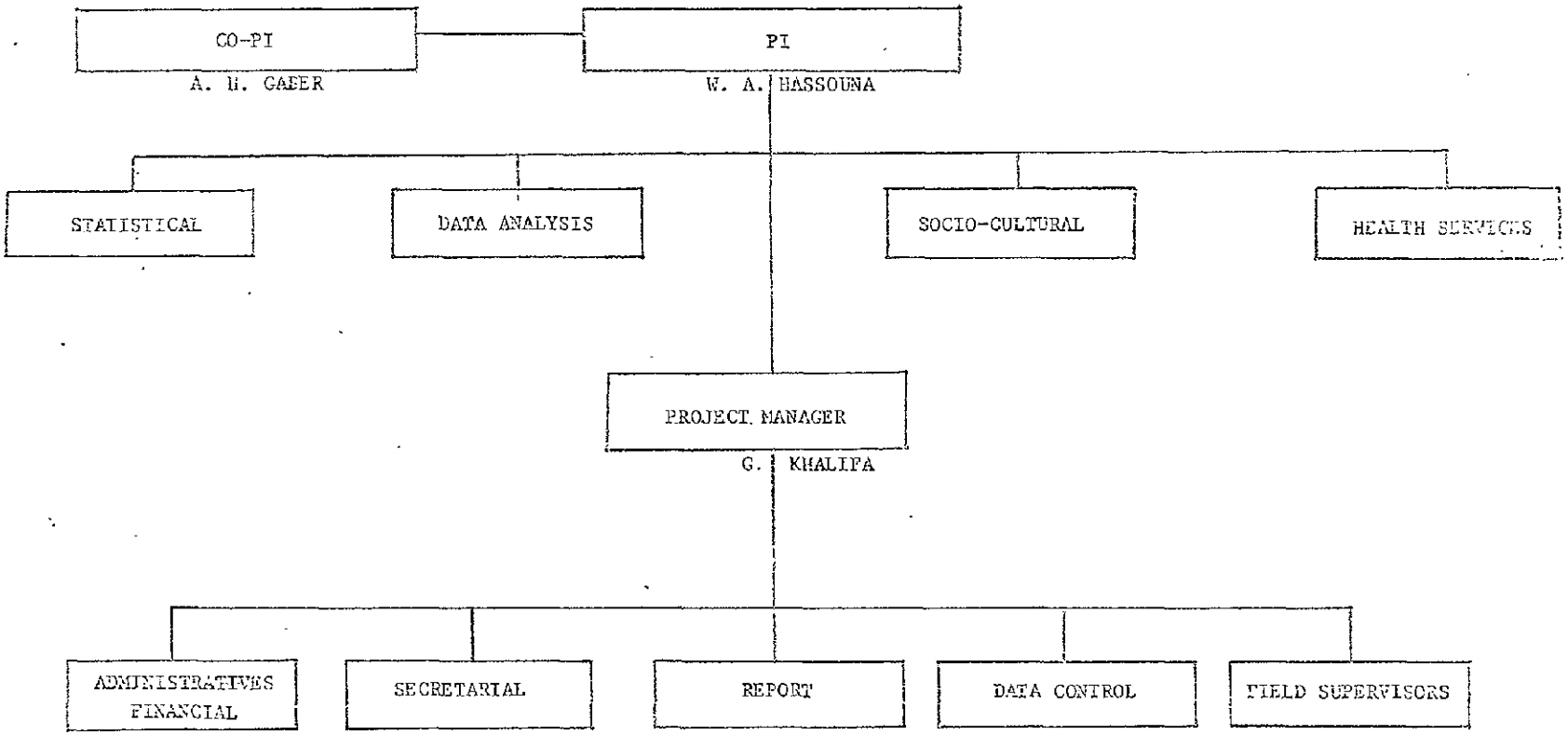

Figure II/4-2.2.

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ECTOR/HSRC, responsible for the execution of the above mentioned objectives of the assessment, is an Egyptian based team whose members are doctors, nurses, sociologists, anthropologists, economists, engineers and system analysts.

The experience gained during the assessment is to be transferred to MOH in a formula to effect change from within, leading to the development and strengthening of the functions of health services and planning, as on-going activities in the UHDSP, Greater Cairo and MOH.

This monograph offers a very brief condensation of the six Helwan data compilation monographs' analysis in an attempt to present the major observations "in a nutshell".

HEALTH SECTOR ASSESSMENT

Principal Investigator : Dr. W. A. HASSOUNA

Co-princial Investigator : Dr. A. H. GABER

The Urban Health Delivery System Project represents a comprehensive demonstration activity intended to address the key areas in the Cairo urban health system requiring improvement. An assessment of the health sector is therefore of paramount importance and is undertaken to fulfill the following objectives:

1. Demonstration of the principles of sectoral health planning with the ultimate goal of providing formulated suggested guidelines for health planning in urban areas in Egypt, together with methods for institutionalization of the planning process.

2. Provision of accurate information on the health status of a sample of the population in the UHDSP area, along with other data describing the demographic socio-economic and socio-cultural characteristics of the community.

3. Provision of accurate information on the existing health care delivery system in the area, including the private health sector.

4. Provision of data for the health related urban and environmental characteristics.

ACKNOWLEDGEMENT

The principal investigators wish to extend their gratitude to each and every one of the large group of people associated with this study. Throughout the assessment all team leaders, task force group leaders, researchers and data collectors participated wholeheartedly in the work entrusted to them.

The able assistance of HSA consultant Dr. Evelyn Early was the major force bringing this summary into existence. The HSA team is indebted to her for her productive participation.

TABLE OF CONTENTS

1. INTRODUCTION

The HSA is conceptualized by the HSR/INP as implementation of a model of HSR based on multidisciplinary team collaboration in research formulation and implementation, on the assumption that an assessment of a HCDS must be an holistic appraisal of the interrelation amongst CONSUMER, INFRASTRUCTURE, and SETTING. The health sector which provides service sensitive to community needs and environment context will be appealing to consumers and will be utilized. Obviously, the most sophisticated medical installations which are either inappropriate for community needs (epidemiological, environmental, sociological, etc..) and/or staffed by providers who cannot sustain communication with clients will not provide satisfactory health service. On the other hand, competent staff and eager clients interacting within an overcrowded or unsuitable health infrastructure will likewise not result in appropriate "health services".

Accordingly, this summary of the Helwan HSA is structured to give a methodological summary (See section 2), a demographic profile of the two sample Helwan communities (section 3), followed by sections on each of the three elements which impact on the success of health services: client health care strategy, which ideally is congruent with available services (section 4); the HCDS infrastructure which ideally has coordinated sectors and appropriately trained staff (section 5); and environment which ideally provides a support system and setting encouraging good health.

The Helwan HSA indicated that none of the three elements are anywhere near the ideal. The HSA mandate is to report the health status of low income groups, with the target group defined as women of child-bearing age with

children under six and their use of (as well as the status of) the HCDS so as to develop intervention recommendations and to institutionalize a Health Information System. MOH and ECTOR signed a contract agreement in May 1980. Three zones were selected for study in Cairo: Helwan, South Cairo, and West Cairo. ECTOR's HSRC presented a plan of action in August 1980, which was modified in November 1980 on the basis of a pilot study. This report is a summary of the major findings of the Helwan portion of the HSA.

In keeping with its mandate, the HSRG aimed in its analysis of the Helwan data to:

1- Identify demographic, utilization, institutional and environment information relevant to MOH determination of health policies and innovation in HCDS; (this theme informs sections 3- 6).

2- Evaluate research instruments with an eye to parsimonious elicitation of the variables which are critical to the establishment of a data base to be used by MOH in HCDS policy determination and innovation. (Preliminary observations on a demographic profile are made in section 3. Preliminary suggestions are made regarding critical factors in significant correlation differences in health seeking behavior.)

The HSA shows that the three factors of CLIENT, INFRASTRUCTURE, and SETTING currently impact in deleterious ways on health services in Helwan.

THE BYPASS PHENOMENON

Client utilization patterns indicate that after a fair amount of self treatment, consumers proceed directly to private clinics/physicians. Self treatment per se is not undesirable, if it is well informed and due to choice rather than lack of resources. Indeed, the socio-cultural TFG's interviewees were accustomed to drawing the line between self care and professional and considered children's fever, enteritis, vomiting, measles and polio as critical symptoms requiring immediate professional help. Nevertheless, bypass of MOH primary facilities indicate either:

1- that low income clients have no faith in peripheral facilities and choose to spend money on private facilities rather than MOH ones intended for low income population, or

2- that low income clients are not convinced of the usefulness of primary facilities (because too much energy is expended for too little service, etc..) and continue self treatment for symptoms which should be examined/referred at a clinic level, until the clients feel the condition is severe enough to demand resort to centralized, specialized hospitals (or a reputable general hospital), bypassing both MOH and private clinic (probably unaffordable) facilities.

THE AILING INFRASTRUCTURE

The HSA results affirm that in general, in keeping with such bypass, primary care centers and specialized clinics (e.g. tropical diseases) are adequately staffed and under-utilized while general hospitals (and GUHC) are over-utilized (and thus inadequate). No institutionalized referral system exists, and so it is small wonder that patients who feel they need specialized care diagnose themselves and proceed, say, to an internist rather

than to a primary care facility. (They may end up proceeding from specialist to specialist). The HSA found an overall staff dissatisfaction with equipment and upkeep which appears justified.

DEBILITATING ENVIRONMENT

The HSA confirmed the pollution problem as well as inadequacy, or absence, of water and sewage systems. Helwan's position as peripheral, industrial and recently agricultural, exacerbates the problem. Household surveys indicated the majority had no running water, and depended on cesspools for sewage. Residents questioned about negative influences on health readily referred to open sewers and dusty air.

RECOMMENDATIONS

Based on its analysis of the Helwan data, the HSRC has three major suggestions regarding the status of the health sector.

1- The need for "communitization" of health services so that they reflect the felt needs of the community.
2- The need for more manageable intersectoral organization.
3- The need for a viable referral system based on diagnosis at the primary level of care.

Attractiveness, not accessability, of primary care is the issue; one of the study's major conclusions is that peripheral services must be reorganized to offer the client more. As section (4) clarifies, the main service MCH centers presently provide is vaccination. Although prenatal and pediatric care are theoretically two of the major MCH services, even MCH clients do not use them. Reorganized MCH centers might offer more specialized pediatric, ENT, dermatological and gynecological services. This would be fitting as the bulk of the low income population is well versed in medical specialities; the Private Sector TFG noted that even GP's add notice of specialities to their office placards.

The mostawsaf provides an example of community voluntary association or syndicate initiated health projects which reflect popular opinion regarding the form of health services needed. They are established when people within the "hay" (vicinity) feel the need for such a service and proceed to constitute an organization under the protectorate of the Ministry of Social Affairs. Usually these charitable organizations offer other services besides a mostawsaf, such as burial of the poor, nurseries, sewing courses for girls, etc... Given the higher utilization rate of such facilities there is clearly something to be learned from their constitution and operation which might well be adopted by MOH ... facilities.

Clearly MCH centers must offer more, whether emphasizing greater community participation; establishing fees for service; re-scheduling hours of the MCH center's services; offering more specialized services; scheduling an "open clinic"; providing viable referral system; or establiching an evaluation system which offers incentives for an outstanding MCH center. The By-Pass phenomenon results in part from lack of popular participation. One way to increase such participation is to activate the at-present dormant structure in the MCH centers which provides for community representatives on the MCH board of managers. This would necessitate a change in the present domination of management decision-making by the medical staff. Conversely, the providers of health care need to demonstrate the impact their services can have on the health needs of the community. Workshops at the MCH centers to train health professionals and community members in collective self management of health care are one possibility. Another possibility is for the MCH center to broaden its scope of activities to assume a structure similar to a neighborhood community center or club. This strategy would have the advantage of strengthening public participation to establish a "sense of community" among the urban poor; many traditional institutions that performed that function are no longer extant. A third possibility, mentioned earlier, is for MCH centers to offer more specialized services.

The research in South and West Cairo will continue to identify the institutional and social factors impeding the provision of effective health care among Cairo's urban poor.

2. METHODOLOGY

2.1. HSR GOALS

The HSA utilized a variety of techniques so as to benefit from existing research and to do a complete analysis of health and environmental statuses, services available, and utilization of same. It surveyed MOH and other documents, including two previous research projects in Helwan. It conducted field surveys to supplement recorded data. For instance, only a fraction of private physician clinics were present on the registers. Furthermore, clinic facility data are impossible to obtain without actual observation. Fields surveys were conducted of health care providers and clients. The latter were also approached using a non structured, open ended interview technique, which produced information useful in revising the questionnaires for the second phase of research.

The HSA, based on interdisciplinary collaboration, was formulated with the contribution of physicians, nurses, social workers, social scientists, engineers, computer specialists, policy analysists, plus individuals who are specialized in more than one of the above and/or who have long experience in public health and planning.

The Helwan Assessment was based on the work of three teams and nine subgroups (Table H/4-2.1). This allowed generation of questionnaires taking into account the various disciplines, approaches and concentrating on all aspects of CLIENTS, INFRASTRUCTURE, and ENVIRONMENT. Although this resulted in some overlap of information and some lack of congruence among subgroup data, whatever problems this created in data analysis were partially compensated for in completeness of data and coverage of aspects which might otherwise have gone unexplored.

2.2. REVISED METHODOLOGY BASED ON THE HELWAN EXPERIENCE

Based on the Helwan experience, the HSRG has reorganized its research in South and West Cairo. Continuing to address itself to the key question: "Who goes to what source for what reason to receive what service, at what cost?", the revised HSA methodology is one step closer to demonstrating the principles of, and formulating the guidelines for, systematic health sector planning for use in urban areas in Egypt. The key methodological findings are discussed in the June 1981 Revised Plan of Action, but in short the methodology to be implemented in South and West Cairo will:

1- restructure the 11 groups (Table H/4-2.1) to create a unified team (with client, infrastructure/provider, street survey and environmental groups whose leaders supervise both in the field and in questionnaire quality control) advised by statistical samplying and data coding/analysis experts. The study will focus on two geographic contours. (See Figure H/4-2.2 for new HSA structure.)

2- revise the questionnaires so that there is one client questionnaire and one provider questionnaire, in addition to technological, environmental and costing finance surveys, an in-depth sociocultural study, and an on-the-street-survey.

3- encourage participation in the research and solution-development process on the part of providers and intended beneficiaries.

This revised methodology is based on the experience of Helwan. There, the great degree of overlap of services and providers suggested the need for a consolidated questionnaire, and for special attention to the formal : informal sector interface. (See section 4.4. below). Helwan results also indicated a great deal of self treatment and bypass of MOH facilities; accordingly, it was deemed appropriate to solicit health resort information via client survey, via in-depth interview, and via

a new instrument of an on-the-street-spot-check. It was also decided to include higher income groups (both in survey and in the on-the-street-spot-check) to provide a frame of comparison for health care strategies. As will be seen in section (4) below, one pattern indicated by the Helwan HSA which bears corroboration through study of various income levels is the presence of a two-pronged approach to health:

1- marginal income clients who treat themselves until criticalness of symptoms "drives" them to general hospitals;
2- low income clients who routinely spend money to consult private clinics or physicians.

It was felt that more information was also needed on household budget in the revised HSA survey to begin to answer questions of health care budget/resort. Another lesson of Helwan was that medical examinations and laboratory tests revealed results similar to other recent surveys and, thus, since they were time consuming and expensive, should be dropped. As section (3) discusses, critical demographic characteristics have yet to be established, but once they are, the socioeconomic client questionnaire could be shortened to include those correlating with health behavior. This is, of course, in keeping with the ultimate goal of parsomony in HSR.

With these lessons in mind, we turn to a description of the methodology of the Helwan HSA.

2.3. METHODOLOGY OF HELWAN HSA

During the Helwan Survey, the HSRG divided into Community, HCDS, and Urban-Environment teams which were subdivided into nine task force groups (TFGs). Separate Health Information System, and Political Analysis and Development teams were established. Each of the 9 TFGs conducted

its own surveys. The organization of the HSRC's HSA Team (in Helwan) is shown in Figure H/4-2.1. Here we discuss briefly their sample pools and questionnaires.

A variety of techniques was used in the HSA to insure the most comprehensive possible assessment. While MOH records were consulted for infrastructural information, they were supplemented by field surveys (including phone book searches and interviews). While household survey questionnaires were utilized, these were supplemented by intensive, open-ended interviews which have in past HSRG work (see Health Coverage Study, 1981) indicated the inadequacy of survey data. Clinical examinations were supplemented by interviews and consultation of health records.

Throughout the planning stage, inter-TFG cooperation allowed the coordination of aims. For example, the Socioeconomic TFG included questions of other groups in its household survey to avoid numerous household visits. Client surveys were to some extent standardized.

The HSA was concentrated in two low income administrative districts (shiakhas) of Massara and Tora (also known as Kotsika). (See Figure H/4-2.3.). These two areas fit the Environmental TFG's request for two areas with disparate environmental conditions, as the first is closer to industrial sources of pollution. (To date no environmental-linked factor differentiating socioeconomic results has been isolated). Al-Massara was primarily agrarian till 1952, with a few families manufacturing the famous Massara tile and some migrants working in the British military camp Solta (1939-40) and a cement factory. In 1952 it began receiving migrant workers as a result of the establishment of Al-Harb, telephone, and

Tora Cement factories. Tora's original inhabitants' main occupation was quarrying; today repair garages for quarry trucks and a starch and glucose factory provide other jobs. In the demographic profile section (3) we will consider how representative these workers are.

TFG 1 (Socioeconomic) administered the socioeconomic survey, the only one conducted in households. It included questions suggested by the Epidemiology, MCH, Environmental, and Urban TFGs.

A sample schedule was administered to 2,5000 subjects from whom a random sample of 350 (290 for Al-Massara and 60 for Kotsika) meeting target criteria was chosen. (This is one-third of the 1,000 sample to be drawn from three zones in all). The questionnaire had 77 questions: 12 demographic; 3 on migration; 35 on space utilization, water, sewage, and garbage; 15 on pregnancy history, including infant death information; 6 on family planning; 4 on MCH knowledge and utilization; 2 on infant feeding.

TFG 2 (Sociocultural) completed the sociocultural survey in 75 households, each of which was visited a minimum of 3 times by researchers trained in participant observation. The sample was drawn from articulate members of the socioeconomic survey. It represents a variety of occupations and incomes. About one-third of the men are factory workers; another third are skilled and semiskilled workers (mechanics, welders, plumbers, fitters); and another third are services and white collar (tailor, restaurant, police, clerk). Four women work outside the home, three as TBAs and one as a sales person who brings goods from Port Said. The average monthly income is approximately 30 pounds --considerably

above the socioeconomic survey average. It is clear that the Helwan survey did not get accurate approximation of income. This is a recurrent problem in research; other indicators (e.g. level of education, number of rooms) must be used in tandem with income. Although open ended, the interviews also covered standard topics like family decision making about health, and attitudes toward formal and informal health systems.

TFG 3 (Epidemiology) conducted a survey (medical history including three month disease history, clinical examination, lab. analysis) of 300 mothers and 524 children from among the 350 household socioeconomic sample.

TFG 4 (Infrastructure) considered all of the MOH facilities except the MCH centers. The six varieties are presented in table H/4-2.1. The GUHCs include MCH, school health, health bureau, and medical-surgical units. The District Clinics and Rural Health Units include medical surgical, OB-GYN, and pediatric units. TFG4 conducted a field survey of the various services' facilities and providers. For example, their hospital survey included 185 questions on staffing, facility condition, available service, and patient flow. Their manpower survey ascertained training, position rotation, opinion of equipment, etc..

TFG 5 (MCH) ran surveys of equipment, manpower attendance, job description, and director ranking. It also ran a provider and client survey.

TFG 6 (Private Sector) focused on all private facilities as presented in table H/4-2.2. Private physician clinics are defined as medical establishments providing out patient service by one general practitioner or non specialist licensed in medical practice. Private physician

hospitals are defined as a general or specialized institution that provides inpatient accommodation. Mostawsaf (private district polyclinic) is defined as a polyclinic run by a nonprofit organization -- here, a benevolent, benevolent religious, or syndicate organization. (One exception was one owned by a physician). The Curative Organization has one hospital (Mubarra) in Helwan. The Organization is a commission directly under the Minister of Health; its clients are either private or company employees who pay nominal fees. Pharmacies are defined as dispensaries or shops where medical goods are sold through pharmacist or other health care personnel. Private MCH centers are clinics which belong to similar organizations as the mostawsafs, but in addition to MCH health care have social services like nurseries and sewing courses; they are registered in the Ministry of Social Affairs. The Health Insurance Organization has one hospital, Nasser, in Helwan. Traditional healers include the TBA, herbalist, health barber, bone setter and zar organizer. Table H/4-2.2 lists the approximate number of private facilities in Helwan, and the number of institutions and institution clients surveyed from each kind of facility. Thus, for example, when reference is made (in section (4) below) to "hospital clients" the sample is 12 from Mubarra and 12 from Nasser; when reference is made to "mostawsaf clients" the sample is 79 clients, who are drawn from 7 mostawsafs representing all of the 4 categories except syndicate. The numbers under institutional provider indicate staff interviews. Obviously the sets are small; however, consideration of patterns they reveal has been fruitful for reformulation of this client questionnaire. One notes that no clients in private physician clinics or private physician hospitals were interviewed. To gain such interviews was a sensitive prospect and not

attempted. Obviously, if one had comparable client data for the private facilities it would be a useful frame of reference. There is not enough data at present to assume that different kinds of facilities -say, MOH centers, mostawsaf, and private physicians clinics--serve three "different" groups of clients.

TFG 7 (Costing and Financing) depended on visits to health service financing agencies (general budget, government, General Health Organization and Curative Organization); discussion with Ministry of Finance, Cairo Medical Governorate, and Helwan Medical Department, and examination of records all the way down to the clinic level.

TFG 8 (Environmental) conducted environmental surveys of water, air, sewage, vermin and used the household information on the same from the socioeconomic group.

TFG 9 (Urban) consulted previous studies, including a metered water service and a housing community upgrading project done recently in Helwan. They also used statistics from the Organization for Public Transportation in Cairo survey. They revised available maps to highlight the study area.

The PAD team (Policy Analysis and Development) assembled published data relevant to professed policies and instrumentation of policies by MOH. Their report summarizes MOH policies from 1952, current MOH organization structure, relevant laws and decrees, and resource allocation of MOH.

The HIS team (Health Information System) was responsible for monitoring formulation of data collection instruments and design of the information system used to process the

same. Based on their experiences in the Helwan HSA, they were able to provide suggestions for MOH recording systems.

We turn now to a summary of the major findings of these 11 groups in the Helwan Area. The reader should be cautioned that figures are usually given in percentages to allow for comparison of disparate-sized informant pools, but that since the pool is often quite small, percentages may be misleading.

There are demographic characteristics unique in Helwan, which must be explored individually for each area studied. Helwan, on Cairo's southern periphery, has an incidence (34%) of Upper Egypt migrants second only to those born in Cairo (43%). It appears that most of the migration is a result of wives joining husbands already employed in Cairo. The occupational distribution of Helwan is doubtlessly affected by the presence of several major factories. The preponderate category is skilled worker, which has three times as many members as unskilled workers.

Finally, epidemiological traits form part of the profile. In general, children in such areas suffer cyclically from gastrointestinal problems by summer and respiratory infections by winter. When questioned, women complained of headache, dizziness, hemorrhage, fever, and exhaustion during pregnancy.

Infant mortality over the past six years ranged between 93.7-111.5/1,000. The sociocultural sample of 75 families included 36 cases of infant deaths from 3 days to 2 years. Neonatal mortality is low relatively, (see table H/4-3.1.) indicating that the most dangerous period is the postneonatal where adverse environment conditions threaten infants more than biological causes.

Data in the HSA confirm the hypothesis found elsewhere that gastroenteritis is a major threat to children's health. In Egypt it, followed by respiratory infection, is a main cause of high infant mortality. Physicians questioned by the private sector TFG indicate (16 of 35) gastroenteritis as the main cause for children's visits, with bronchitis running a close second.

Table No. : H/4 - 2.2
Group : Private Health Sector

District : HELLAN

PRIVATE FACILITIES SURVEYED

KIND OF FACILITY	NAME IN ARABIC	APPROXIMATE NUMBER IN HELLAN	NUMBER IN SAMPLE	
			Clients	Institutions
(A) Private Physician Clinic	Aiyada Khassa	306	0	45
(B) Private Physician's Hospital	Mustashfa Khassa	16	0	6
(C) Mostawsaf (Polyclinic) (Private)	Mostawsaf	39	79	13
a) Benevolent organization	a) Gamaiyya Khayriyya	-	-	4
b) Religious organization	b) Gamaiyya Khayriyya Diniyya	-	-	5
c) Syndicate	c) Naqaba	-	-	3
d) N.D. owned	d) Khassa	-	-	1
(D) Curative organization Hospitals	Mustashfa Al-Mu'assassa Al-Alagiyya	1	12	(Mubarra) 1
(E) Pharmacies	- Saedaliyya.	96	-	28
(F) Private MCH	- Aiyada (Ra'iyya wa Tafula 'Khassa)	-	-	20
(G) NGO Hospitals	- Mustashfa Ta'min Sahhi.	1	12	(Nasser) 1
(H) Traditional Healers		-	-	14
- TBA	Daya			
- Herbalist	Attar			
- Health Barber	Khalak el siha			
- Bone setter	Mogabar			
- Zar organizer	Qodia zar			