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The Status of Maternal and Child Health in the Eastern Mediterranean and Adjacent Areas

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A Summary of the Questionaries
Completed by
Maternal and Child Health Experts in
various countries

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PART I

Mortality Rates and Causes of Mortality

From all reports there would appear to be a lack of accurate vital statistics throughout the region. However, certain surveys have been carried out, and certain projects have produced statistics that may be regarded as fairly accurate.

In this report the various survey statistics are considered as reasonably accurate, including the following:

1. Survey by Dr. Naqvi at Mit Halfa village, Egypt.
2. Survey of Marvdasht area, Shiraz, Iran, by Rockefeller Foundation and Ministry of Health
3. Figures for Tunis City, and the census in Kahialik d'Enfidaville, Tunisia.
4. Figures from Rabat, Marakesh and the survey of Jews in Casablanca, 1952.
5. Survey in Gondar Town and Kolla Duba, Ethiopia by Dr. Otto Jaeger.
6. Reports concerning Khartoum, Omdurman and Khartoum North, Sudan
7. Project PIKPA, Thessaly, Greece.

In the attached table the figure derived from these special surveys are tabulated, together with the figures given by national statistical bureaux for the whole of each country when available.

From this table it would appear that some of the national figures suffer from under-reporting of births and deaths. It would appear that the birth rate throughout the region varies from 20 to 69 births per thousand population. It appears to be lowest in Greece, Aden Colony and Cyprus, and highest in Morocco, Tunisia, Jordan and Egypt. This might indicate a racial difference. Aden is a special case as the colony has a large excess of males over females in the population; due to transient and immigrant labour.

It is also apparent in the local surveys that the birth rate is higher in the rural than in the urban areas. The highest figures are for rural areas in Egypt, and Iran, while such towns as Khartoum and Omdurman have relatively low figures.

With regard to maternal mortality, not all countries have produced figures, and there have been few surveys producing results in this field.

However it is noticeable that whereas central statistical bureaux give rates of below 5 per thousand, the various local surveys carried out give figures of 10, 35, 12.7, 10 to 20 etc per thousand. The exception is French Somalia, where the official figure is 23 per thousand. One can conclude from this that official returns for maternal mortality give a false picture, due to under reporting of maternal deaths.

With regard to the infant mortality rate, the figures given are more consistent. The national figuresvary from 52/thousand for Cyprus to 156 for Aden and 162 for Egypt. However, considering all available figures, both national and local, it would appear that figures between 110 and 150 per thousand are typical of the region as a whole.

In some of the local surveys lower figures are given for urban areas, e.g in Khartoum, Omdurman, Damascus, Gondar and Rabat. Furthermore, it would appear that in the Thessaly area of Greece, where PIKPA offers a comprehensive MCH service, the figure is well below the average for a largely rural area. On the other hand the infant mortality rates in Amman, Baghdad and Cairo remain high.

Information about child mortality (1-5 years) was available from only six countries. It was in all cases considerably below the infant mortality rate' it varied from a half to a quarter of the infant mortality rate, except in Tunis, where it was an eighth, and in Ethiopia where there was an epidemic of Pertussis in progress at the time of the survey, resulting in a high figure.

Regarding the cause of maternal death there was a wide general agreement. The chief causes of death were haemorrhage and obstructed labour. In most countries puerperal infections and toxaemias were a less common cause of fatalities and other conditions formed a relatively small percentage.

However in Pakistan and Syria, puerperal infection was rated as the most important cause of death, and in Lebanon and Cyprus toxaemias held the first place. In French Somalia deficiencies and avitaminoses were regarded as responsible for 18% of maternal deaths

In infancy the chief cause of death in nearly all countries was gastro-enteritis, with respiratory infections (pneumonia) taking the second place. An exception to this is Aden Colony, where the chief causes are under-feeding with infection, and improper bottle feeding; Aden is a colony with much poverty, together with relatively good curative and preventive services. In the Sudan, malaria wasgiven as the chief cause of death, and in Iraq also malaria was given together with pneumonia as the most fatal diseases of infancy.

In French Somaliland deficiencies and avitaminoses were considered to be second in importance to gastro-enteritis, and the same order was given also for Jordan.

The importance given to congenital malformations varied greatly, without any correlation with the infant mortality rate. It would be expected that if the mortality rate was low, the relative importance of the unpreventable diseases of infancy would be high and vice versa. This underlines the fallacy of drawing conclusions from reports based on impressions.

Neonatal tetanus was mentioned by surprisingly few countries. In Libya it was mentioned as holding the third place as a cause of infant deaths after enteritis and pneumonia. The only other country specifically mentioning tetanus was Iraq, although the Sudan gave third place to "convulsions".

It seems that the only positive conclusion that can be drawn regarding the deaths in infancy is that grastro-enteritis and pneumonia, of varying type in each case, are the predominant causes.

With regard to children from one to five years, the chief causes of death are still gastro-enteritis and pneumonia. However, in some countries pneumonia now takes the first place, and in others accidents and poisons are mentioned among the first three or four causes. Measles is frequently mentioned in this age group as a cause of fatal pneumonia, and some countries also mention typhoid and paratyphoid.

The causes of morbidity would appear not very different to the causes of mortality. However, among mothers, tuberculosis, malnutrition and diabetes are mentioned in addition, and among infants and children diseases of the sense organs, skin diseases and worms.

PART II

The Traditional Birth Attendant in the Eastern Mediterranean Area

The professional traditional birth attendant is found in most countries of the Eastern Mediterranean; an exception is Ethiopia, where the woman in labour is attended only by firends or relatives.

The status of the traditional midwife varies greatly from country to country and between the urban and rural areas within each country. By and large, her status is rather low in the towns and cities, but in the villages she is well thought of and frequently her voice is influential in village domestic affairs.

Her status in the community appears to depend partly on the functions she carries out. In some areas she is essentially a servant or home help; she plays no active part in the confinement, apart from giving moral support to the mother; her chief active functions are to care for the house, assist the mother with her toilet, wash the dirty linen and wash and bath the baby. She usually cuts and ties the umbilical cord. These are her functions in Libya, Morocco, Sudan and in Aden and perhaps in Arabia generally. In other areas she carries out a more active side in the labour, massaging the abdomen and perineum, performing simple manipulations or tractions, advising in pregnancy and the puerperium, and sometimes performing other community functions

such as giving injections, carrying out female circumcision, procuring abortions, arranging marriages and advising on sterility. This is the state of affairs in Egypt, Syria, Turkey, Tunisia, Iraq and Pakistan.

There seems little possibility of the indigenous midwife being replaced in the forseeable future in this area. As an exception one may mention Cyprus and the Sudan, where she is steadily being replaced by trained staff. In Greece a special state of affairs exists. Trained midwives are available in sufficient numbersto service in the plains, where communications are good, but in the mountains there are many isolated hamlets of 600 to 800 population, unable economically to support a professional midwife, and dependent on voluntary elderly women, who are untrained, but often intelligent. A commencement is being made in Greece with mule-borne mobile teams of doctor, health visitor and midwife, who will visit a circuit of some 30 villages once a month, see all antenatal and postnatal women and infants, and advise and support the local voluntary workers.

Other countries have the economic ability to replace the Daiah with trained midwives, but lack the training schools required to do so. Such countries are Iraq, Turkey and Aden Colony. In other countries such as Iran and Pakistan it is doubtful if the country could support economically the number of trained midwives that would be required to staff the rural areas.

The question arises as to how one could best make use of the services of the indigenous midwives in a comprehensive maternity scheme. The results of attempts to train the Daiah have been successful in some countries only. Such countries are Egypt, Jordan, Turkey, Iran, Lebanon, Iraq and to some extent Libya. Training methods so far used have been unsuccessful in countries where the Daiahs are illiterate and elderly, such as Morocco, French Somaliland, Aden and Pakistan.

Another approach which has had some success in the Qalyub project in Egypt, and in Tunisia, is for the indigenous attendant to act as assistant to a trained midwife. She can carry out the antenatal and postnatal care under supervision, and can act as home help in the family, thus increasing greatly the number of deliveries that the midwife can adequately cover.

It seems clear that there is always a danger both to mother and child in the existence of the untrained indigenous midwife. There is less danger in countries where she plays no active part in the delivery than in those countries where she exerts traction, often very forceful (as in Pakistan), or injects ergometine or carries out intravaginal examinations without proper aseptic precautions. There is always danger to the baby if the cord is cut without sterile precautions, and tied and dressed with wool, mud or other contaminated material. There are few figures available; but in Greece in all areas septicaemia causes 2 1/2 times as many maternal deaths as all other causes, and there are 5 times as many maternal deaths in the rural areas where untrained women attend deliveries than in the towns where midwives are all qualified. There is a general agreement that tetanus

Birth Rate, Maternal Mortality Rate, Infant Mortality Rate and Child Mortality Rate (1-5 years) in Eastern Mediterranean

Country	Project or Dept.	Year	Area Urban Rural or Mixed	Birth Rate per thous.	M.M.Rate per thousand births	I.M. Rate First Year per thousand live births	Child M. Rate (1-5 years) per thousand children of that age
Aden Colony	Medical Dept.	1954	Urban	22.78	2.8	156	
Cyprus	Medical Dept.	1954	Mixed	27.04	0.72	51.97	14.03
Egypt	Min. of Health	1945	Mixed	-	3.2	127	-
	M.of H.	1947	Mixed	-	1.8	-	-
	M.of H.	1952	Mixed	45.1	1.0	162	-
	Cairo P. H. Dept.	1952	Urban	-	-	168	44.3
	Mit Halfa Survey	1955	Rural	69.-	-	133	-
	Sindibis Survey	1953	Rural	51	-	-	-
Ethiopia	Gondar town survey	1956	Urban	-	10	73.7	83
	Kolla Duba survey	1956	Rural	-	35	118.7	96

Country	Project or Dept.	Year	Area Urban Rural or Mixed	Birth Rate per Thousand	M.M. Rate per thousand Births	I.M. Rate First year per thousand live births	Child M. Rate (1-5 years) per thousand children of that age
Iran	M. of H.	1953	Mixed	19.4	-	-	-
	Teheran Area P.H. Dept.		Mixed	-	16.7	-	-
	MARVDASHT Survey		Rural	51.4	-	146	65
Iraq	MCH Centre Baghdad		Urban	40 (approx)	-	135.7	-
Jordan	M. of H.	1954	Mixed	37.9	-	-	-
	M. of H.	1955	Mixed	40.1	-	73	-
	MCH Centre Amman	1955 to 1956	Urban	-	-	122	-
French Somali-land	Medical Dept.		Mixed	34	23	125	68
Sudan	Khartoum PH Dept.		Urban	26.6	-	55.2	-
	Khartoum North		Urban	24.4	-	32.3	-
	Omdurman		Urban	29.6	-	41.4	-

Country	Project or Dept.	Year	Area Urban Rural or Mixed	Birth Rate per Thousand	M.M. Rate per Thousand Births	I.M. Rate First year per thousand live births	Child M. Rate (1-5 years) per thousand children of that age
Syria	M.of H.	1954	Mixed	-	1.25	70	-
	Nation wide survey by HVs		Mixed	-	10-20	150-200	-
	MCH Centre Damascus		Urban	-	-	30-40	-
Greece	M.of H.	1954	Mixed	18.36	0.158	-	-
	PIKPA Thessaly		Mixed	21.48	-	82.5	-
Morocco	M. of H.		Mixed	40(approx)	2-5	-	-
	Survey Jews Casablanca	1952	Urban	43	-	-	-
	Rabat		Urban		1.65	82	-
	Marakesh		Urban	-	5.2	95	-
Tunisia	Cent. Stat. Service	1955	Mixed	36	-	-	-
	Tunis	1952	Urban	-	-	155	-
	Tunis	1955		-	-	127	15

neonatorum is common throughout the Eastern Mediterranean area, although no figures are available. There are also reports that the indigenous midwives give incorrect advice on infant feeding, and it appears that in Aden they often advise against keeping the baby on the breast.

PART III

Maternal and Infant Nutrition

There is a great variety in the frequency degree and type of malnutrition throughout the area under consideration. There is little malnutrition found of any kind in Ethiopia, Cyprus and Lebanon; on the other hand in Libya, Somalia, Iran and above all in Pakistan malnutrition of various kinds is common among expectant and nursing mothers and small children, as well as to a lesser degree in the general population.

Far the most important deficiency disease of mothers and children throughout the region is iron deficiency anaemia. In most countriesit is an important cause of morbidity in pregnancy, during lactation and in children from the first year of life onward. It is frequently reported as important in the child of school age, and in Egypt, Libya, Morocco and Cyprus is important even in the first year of life, starting around the fifth or sixth month. In Aden Colony, where the Arab, Indian Hindu and Somali cultures coexist, there is a striking difference in the incidence of anaemia in pregnancy in the three races. It is given as 60% in the Indian Hindu women, 30% in the Somalis and 20% among the Arab population. The same difference is observed during lactation, to a lesser extent. Only in Ethiopia and the Lebanon is no mention made of anaemia as a cause of ill health.

After anaemia the most commonly reported form of malnutrition would appear to be that caused by a lack of calories, or of calories together with protein. This is manifested as wasting, weaknessor fatigue in pregnancy, as loss of weight and failure of milk supply during lactation, as marasmus, failure to gain weight or oedema in the nurseling and as stunting or delayed development in the child. Frank Kwashiorkor was reported from Tunisia, Morocco, French Somalia and Syria.

Among the specific avitaminoses mentioned, rickets appears to be the most frequent. It occurs in Aden among girls in purdah, in Egypt where it is common (30 - 35% at one year of age), in Syria, Jordan, Turkey, Tunisia, Morocco, Pakistan and Iraq. It is a disease mostly of the 1 - 5 years old group, but also is reported in older children. Osteomalacia is a serious problem in pregnancy in Pakistan, and affects 2% of the Indian multiparae in Aden. It also occurs among pregnant women in Morocco, Tunisia, Syria and Egypt.

Scurvy is less common than rickets in the area. It occurs during pregnancy in Somalia, and in Syria it is common in both mothers and infants, and in Pakistan among babies at the breast. It also occurs in the Sudan, in Iran and in French Somalia.

Deficiencies of the Vitamin B complex are less common. Pellagra is found during pregnancy in Syria, Egypt and in a mild form (mouth and tongue) in French Somalia. It is also found in Egypt and Syria among children of school age. In Pakistan beri-beri and pellagra are found in the general population.

Milder forms of vitamin B deficiency are not uncommon. A survey of adult rural population of Iran revealed numerous mild symptoms of deficiency of members of the vitamin B complex. Neuritis in pregnancy and lactation was reported from Syria.

Vitamin A deficiency seems to be most marked in Pakistan. Here Keratomalacia is reported in the general population. It is also reported from Turkey, but chiefly in the eastern part of the country and along the Black Sea Coast.

A general poly-avitaminosis is reported as occurring in many of the countries, and dental caries is widespread among pregnant and nursing mothers and school children. Calcium deficiency is also a danger in the region. It is reported from Jordan, and Syria, but is probably more widely spread than this.

Feeding Habits in the Region

Infant feeding - As a general principle mothers attempt to feed their infants at the breast for 2 years. In some countries, the aim is to feed the boys at the breast for two years and the girls for at least a year and a half.

However, the achievement, as shown by the records of infant welfare centres, seldom reaches this aim. In only one country, Ethiopia are 100% of children still breast feed at the end of one year. In Ethiopia (Gondar) 87% are still breast fed at their second, and 54% at their third birth anniversary. For Sudan, Morocco and Turkey it was stated that most babies are breast fed to two years of age, but no figures were given. However, figures for Libya from the MCH centre at Suk el Giuma, are similar to those for Ethiopia, 99% breast fed at one year and 90% at two years of age.

Apart from Ethiopia and Libya, the breast-feeding figures are less good, Jordan the next best, showing 80% breast fed at one year, and 20% at two years and Aden Colony giving the worst figures of only 2% breast fed at the end of one year, Cyprus also showed only 25% breast fed at the end of one year, and none at the end of 2 years.

As regards the age at which semi-solid supplements are first added to the diet, there was shown a tendency in some culturesfor them to be added too late. In Aden a typical age was 10 months, in Egypt they were added at 6 months in the towns, and sometimes not till after 12 months in rural areas. This was also true of Libya, Jordan, Iraq, Ethiopia and French Somaliland. Pakistan gave

nine months and Somalia eight months as typical ages for supplementation.

On the other hand, in Tunisia the babies are given millet and chick-pea preparations from one month of age or even earlier. In Ethiopia (Gondar) a special situation exists. Although semi-solid foods are given late, some clarified butter is traditionally fed to babies from birth.

Concerning the earliest semi-solid foods given to babies one cannot summarize. It depends largely on the staple foods of each country. However in general the first foods given are pure carbohydrates (cereal or potatoes), made up in cow's, goat's or camel's milk if the family can afford it, otherwise in water or weak tea. Pulses are used by the poor for supplementation only in Egypt (beans), Greece (dried vegetables), Tunisia (chick pea); in Aden some bananas are given, and in Jordan bean and meat or vegetable soups. Clearly it is important for the baby to receive food from the family table as early as possible in these countries.

Regarding foods supposed to be unsuitable, or especially suitable for pregnant or nursing mothers, or for children, very little was brought to light by the questionaries. Foods to be avoided in pregnancy are eggs (Egypt), onions, cinnamon and ginger (Syria), fatty foods and sweetmeats (Tunisia), eggs, egg plant and mangoes (Pakistan), camel meat and chillies (Sudan). In Pakistan fish and milk must not be taken together for fear of abortion. In Somalia honey is avoided in pregnancy as it may lead to abortion, but in Jordan it is especially recommended. In some races of Somalis the pregnant mother takes nothing but milk.

In several countries it is traditional for the pregnant woman to have whatever she fancies; if she is thwarted in this, the food that she was refused may appear as a birth-mark on the baby's skin (Syria). This superstition is well known also in Western countries.

In many countries the pregnant mother gets extra foods, eggs, chicken, fruit, syrups and pastes.

During lactation usually alcohol and spiced foods are forbidden to the mother, also cold foods such as cucumber and salted fish (Jordan, Iraq). There are various foods considered especially suitable during lactation in different countries. Almonds are often favoured as a glactogogue (Aden, Syria, Pakistan). Fenugreek is popular in Egypt, Tunisia and the Sudan, and sesame oil in Somalia. In Morocco sheep's testicles are given and cinnamon and manna (a sweetmeat) in Syria. In Egypt the mother receives a chicken each day for the first 7 days after delivery; in Iran she is forbidden to drink water for the first few days.

There are few prejudices regarding the feeding of children. Usually they are not given alcohol, tea, coffee or in Ethiopia raw meat while young. In Syria they are denied "heavy foods" such as beans and lentils. Often there is tendency not to give eggs and meat for the first year or two. Clearly, there is room here for education.

PART IV

Policies of MCH Services regarding Technical and Staffing Aspects of Maternal and Child Health

Advice regarding Milk and Infant Feeding given at MCH Centres

Policies regarding the optimum duration of breast feeding vary considerably. There are those who recommend weaning at 6-9 months, and those that advise feeding at the breast for 18 months to 2 years if possible. In the former group fall Aden Colony, Lebanon, Morocco, Cyprus, French and Italian Somaliland, Pakistan and Iraq, while in the latter fall Egypt, Iran, Tunisia, Ethiopia, and Libya. Other questionaries gave equivocal answers, such as "for 8 months, if milk will be available afterwards, for 18 months otherwise". Greece, Turkey, Tunisia, Sudan and Iran recommended breast feeding for about a year. Clearly, there is no agreement in the region about this and there are few maternal and child health departments that strongly recommend at least two full years at the breast.

Regarding the day of life on which breast feeding should commence, it is clear that most countries recommend putting the baby to the breast on the first day of life. Seven countries preferred the second day, while Greece and the Sudan were prepared to leave the baby until the third day.

Most countries considered that vitamin concentrates and iron preparations should be given starting between the 3rd and 6th months. Generally, countries did not prescribe iron unless there was a specific indication, but only French Somalia did not recommend either as a routine measure.

There was general agreement that semi-solid foods should be added between the 4th and 6th month, and that when once a child has been weaned, he should have the same food as the rest of the family, but with the spices omitted if they are much used.

The question regarding whole and dried skimmed milk was intended to elicit information as to whether its use was likely to reduce the period of breast feeding. If such milk is supplied free when infants are not getting any or enough breast milk, but is not supplied to the mother who is feeding her children successfully, an economic motive has been produced for taking the baby early off the breast. In fact, nearly all countries reported that such milk was not normally supplied to an infant in the first year of life.

The Older Child - Emotional and Psychological Development

Regarding special facilities for the older child, it seems that few exist in the region. There are some play-centres or kindergartens or jardins d'enfants in Cyprus, Greece, Egypt and Aden Colony, whereas some private organizations have entered this field in Lebanon and Tunisia. Jordan is planning to develop some child guidance centres based on the Mental Hospital at Bethlehem, which will also provide in-patient facilities for children.

Staffing the Maternal and Child Health Services

There is general agreement in the region that what is needed in rural health is a multipurpose female worker, who should act as midwife, nurse and health visitor together with a visiting general practitioner. Opinions as to the number of population that can be served by such a worker vary according to the nature of the terrain, facility of communications, density of the population etc. Typical figures given are: Cyprus two to three thousand in the hills, three to four thousand in the plains' Somalia and Tunisia three thousand; Egypt and Lebanon, five thousand. On the other hand the Sudan plans for teams of three, one midwife, one health visitor and one medical assistant, each team to be responsible for 15,000 population. Turkey also is planning to institute teams consisting of arural midwife and sanitarian.

It is clear that the countries of the area are in most cases far from achieving these goals. Morocco for example has one of any kind of health worker for 60,000 rural population. Iran is planning to have in seven years time, one health visitor and one sanitarian aide for 25,000 population.

In towns, owing to the greater accessibility of the population, each worker can care for a greater number of people. On the other hand greater specialisation of workers is desireable. The midwife, health visitor and home nurse can be separate individuals, and there is a demand for specialisation also among doctors-paediatricians, social paediatricians, obstetricians, gynaecologists etc. It seems that in several countries the needs of the towns for health staff have already been met to a large degree, e.g. in Morocco and Greece, whereas in general, the position in the towns is much better than in rural areas.

Serious difficulties in the recruitment of female staff are reported from all countries in the area except Jordan, Turkey, Somalia and Egypt. Lebanon and Morocco say that the only difficulties in recruitment are budgetary.

In other countriesthe chief difficulty in recruitment is the lack of girls with sufficient education to undergo even an auxiliary training course. Next is the unwillingness of parents to allow their children to work, and the low status of nursing as a profession. Then there is the problem of early marriage, and the unwillingness to allow married women to work. Lastly the placement problem - recruitment to the towns may be relatively easy, but recruitment to work in a village may be impossible.

The problem of placement of girls in rural areas is equally widespread. Social traditions do not allow agirl to live away from her family, whereas the educational level in villages is often too low to allow of local recruitment. Work in villages is also unpopular owing to poor living conditions, lack of amusements, lack of opportunities for promotion, lack of official support, and lack of opportunity for good fees for private practice

Many remedies were suggested for this difficulty in rural placement. The most popular was the provision of good living quarters in the villages, where all female professional staff could live together - teachers, social workers etc. as well as health personnel. It was often suggested that rural workers should get additional pay above those in towns. Other suggestions were the granting of frequent leaves and refresher courses, the provision of transport to town, and the supply of radios to rural workers.

PART V

Indigenous Systems of Medicine and Customs Concerned with Maternal and Child Health

There would appear to be no systematised indigenous sytems of medicine in the area covered except in Pakistan. In Pakistan there are two systems, the Ayurvedic and the Unani systems.

The Ayurvedic system of medicine caters for the Hindus, and is part of the widespread India system of indigenous medicine. There are colleges where it is taught, and practitioners licenced by these colleges. Little information was given about it, but it would appear to be concerned chiefly with herbal remedies. This system of medicine has undoubtedly exerted an influence on Western medicine, by the introduction of many drugs down the ages. The most modern example of this was the introduction to the world of the anti-pressor active principle of the plant Rawolfia Serpentina.

The Unanic system would not appear to be taught systematically, but to be traditional. It also is concerned with herbal remedies, and caters for the Moslem Pakistanis. Its practitioners are known as Hakims.

Apart from the report of afew witch doctors of no importance in Ethiopia, there would appear to be no systematic indigenous medicine in the other countries.

However, throughout the Arab world the traditional healing methods of the Bedouin are practised. These can be classified into (1) the Cautery, (2) Herbal remedies, (3) Charms.

The Cautery is probably of very ancient lineage among the Bedouin. It is still in common use throughout Arabia, is used amongst the Bedouin of Syria and Jordan, but is tending to die out, and is still in use in Tunisia. There are different shaped pieces of metal for cauterizing for various purposes. It may be used for any disease, including (as a case in point) the cauterization of the eyeballs of a baby with microphthalmia (in South Arabia). Sometimes the cautery is applied along certain nerve pathways (Tunisia), or to form a chronic abscess over the site of pain as a form of counter-irritation.

Herbal remedies seem to be less important. They are described as grandmother's herbal remedies in Morocco, and as dying out in Somalia. Nevertheless, they are still prescribed as an alternative to charms by holy men and healers.

Charms are usually sayings from the Koran written out by a holy man. They may be worn, (round the neck or over the site of the pain) or eaten, or soaked in water and the infusion drunk.

The practitioners in the Arab countries, apart from the indigenous midwives already discussed, are frequently barbers and hairdressers. These may apply the cautery, or may carry out bleeding cupping, bone-setting, orthopaedic treatment (exercises) or injections. They are often the chief practitioners of male circumcision as the daiah often is of female circumcision.

The other form of practitioner is more specifically religious in origin, and deals in charms, and to a lesser extent in herbal remedies. He is the Marabout of Tunisia, the Fakih of Libya, the Sheikh of Egypt, the Fiki of the Sudan and is common throughout the Arab world.

The successes of these practitioners would appear to be due to counter-irritation (the cautery), or to suggestion in psycho-neurotic or psycho-somatic disease; in the latter cases successes are often reported. All agreed that nothing would be gained by training such practitioners.

Regarding customs bearing on childbirth, the most widespread would appear to be the immuring of the mother and baby in the bedroom for 40 days after the birth of the child, lest movement from the bed should cause the milk to dry up. Both are therefore deprived of light and air, and of medical advice during this period. In some countries it is customary for female visitorsto crowd the tiny apartment at all hours, encouraging the spread of infection, especially tuberculosis.

Many other local customs were reported from various countries. Fever may be cured by covering the head of the patient with the warm corpse of an eviscerated pigeon (Tunisia). A woman must give birth on a bed of fine sand (Libya). Preganant women must be shielded from the cry of the night owl(Sudan). Visitors who have seen the new moon, or attended a funeral must not see a woman at delivery the same day (Sudan). In Ethiopia (Gondar area) nearly all boys and girls are circumcised and deprived of their canine teeth and uvula by some unqualified person during infancy. Clearly there is a large mass of folk lore to be collected in the region.

More widespread, in fact almost universal, is the belief that prolonged breast feeding delays further pregnancy. Almost universal is the wearing of amulets and charms for good luck, and the visiting of holy places at marriage or during pregnancy. Sometimes if there is no pregnancy within a year of marriage, a divorce is customary (Iraq). A pregnancy each year may be regarded by the wife as an insurance against being divorced. Early marriage is also very common. In an enquiry in Ethiopia (Gondar), in fact 26% of married women were married at between 5 and 8 years old, 25% at 9 or 10 years of age, 15% at 11 or 12 and 13% at 13 or 14 years. In other countries early marriage is less marked, 12-15 years being common as the marriageable age.

PART VI

The Health Demands of the Public

Perhaps the most important factor to be considered in the development of health services is the existence of a popular demand for them. Such a demand must be met, and in meeting it the basis for health education may be laid.

Almost universally in the region, the popular demand is for domiciliary midwifery, gynaecological consultation and treatment, and paediatric care. As one would expect it is care for the actual delivery that is required, rather than ante or post-natal advice, and curative services for women and children.

However, in certain countries there is already a demand for preventive services in addition. Such countries are Syria (but not Lebanon), Egypt, Turkey, Tunisia, Morocco, Ethiopia, Iraq and Sudan. In Greece and to some extent Cyprus, ante-natal and post-natal care is also wanted, but there is no general demand for preventive or social medicine. In Libya, there is some slight demand for post-natal care.

It is clear therefore that the health services must offer midwifery and curative services, and use these as a basis for creating a demand for social and preventive medicine in this field.