Chapter Four

Financing and Utilization of Health Organizations

The socioeconomic impacts of expenditure on health place it among the most important outlets of social spending. This holds true for both public and private expenditure on health. Albeit being interrelated, as complements in some cases or substitutes in most cases, these two sources of spending on health have neither the same effectiveness nor the same impact on ameliorating the society's health conditions. Public health expenditure targets the provision of a public good that is essential for preserving and building up human capabilities of the society in general while private health expenditure usually targets the restoration of normal health status of certain individuals and groups.

The objective of this chapter is to review and assess social spending on health in Egypt and to tackle the question of how to maximize the social benefits of this spending by identifying ways to improve the efficiency and effectiveness of the existing health care network, with special emphasis on meeting the poor's needs in health services.

Structure and organization of health care providers

The present health care system is organized under three main legal structures. These cover Government, Public and Private Sectors. The flowchart depicts the components of the health care providers in Egypt.

Figure 4.1 presents the relative importance of the different health care organizations as indicated by their shares in beds. The rate of occupation, as well as the distribution, of bed facilities in Egypt raises some important questions:

* While the acceptance rate in bed facilities ranges between 32 percent and 45 percent; there is the question of an over-extension or an under-utilization of beds. Closely related to this is the question of future projection of new bed facilities.

* While beds are maldistributed within a range of 5:1 (between urban Cairo with 4.5 bed per 1000 population and Quena governorate with 0.8 bed per 1000 population), the question arises whether it is necessary to establish new bed facilities in such a way as to strike a balance in the distribution of beds between different governorates. Or should we consider the fact that some governorates are supported by the hospitalization possibilities in other nearby governorates?

* Noticing the absence of a national-level mechanism to ensure coordination of investments across all sectors (governmental, public & private), to what extent is a rationalization of health care services needed? And how to overcome the shortage of health facilities in needy local communities?

Utilization of health care services

The health service network in Egypt provides a wide range and variety of health care possibilities on the three levels: primary, secondary, and tertiary. The multi-institutional/organizational structure is also a prominent feature of this network and could be the basis for a high degree of responsiveness to the different socioeconomic conditions prevailing among the various social groups. How far could the extension of the health network, as well as its institutional and organizational structure, help in enhancing the health sector performance? A brief review of the utilization of health care services and the achievements of the health sector might provide an answer to this question.
While Egypt has one of the largest networks of health care facilities which cover almost 95 percent of the population, and is physically accessible to almost 90 percent of Egyptians, its social benefits are far less than proportionate to the material and human resources involved. It is difficult to trace the factors lying behind this shortfall without briefly reviewing the development of the Egyptian health care system.

The present health system has been gradually developed over the last fifty years in accordance with the increasing need for health care services and the increasing government involvement in providing more public goods and services to the population in general and the poor and low-income groups in particular.

Early in the development of the Egyptian health system, the Government, NGOs, and wealthy families provided health care services through facilities owned and managed by them. Both the Ministry of Health (MOH) and the Ministry of Social Affairs established hospitals and social health care centers to provide free health services for the public in general. NGOs, voluntary organizations, and wealthy families also established dispensaries and hospitals to provide health care at affordable cost or at no direct payment by the user.

In addition to these facilities, physicians provided ambulant care through their own private clinics and or existing hospitals, some of which were owned and managed by the physicians themselves. Traditional health care providers, some of whom were licensed by the MOH, also provided health care to many people who perceived them as more effective in some cases than modern medicine. The Daya, the Health Barbers and the Bonesetters were among these traditional health care providers.

Almost thirty-three years ago Egypt started to recognize the importance of providing insured health care to certain population categories. The government promulgated successive legislation, which lead to the establishment of the present Health Insurance Organization (HIO) in 1975 to cover government and private sector employees, with the intention to expanding its coverage to include the whole population. Other groups were gradually added, e.g. pensioners, widows, and, more recently in 1992, school pupils.

In 1964 the Government nationalized 13 private hospitals and established the first Curative Care Organization (CCO) to provide high quality medical care at affordable cost. Presently, there are four CCOs servicing the governorates of Cairo and Kalyobia, Alexandria and Kafr-El-Sheikh, Port Said, and Damietta. Each of the HIOs and CCOs is managed by a board of directors and chaired by the Minister of Health.

In its endeavor to provide health services of better quality, the Ministry of Health established in some of its large hospitals an Economic Treatment Department to provide outpatient and inpatient medical services at nominal costs. The MOH estimated that this would secure finance to enhance the quality of government health services. More recently, and following the same rationale, the MOH introduced cost sharing in a number of its hospitals. Ten years ago the government established a new health service organization called the Teaching Hospitals and Health Institutions Organization (THIO) which is managed by a board chaired by the Minister of Health. This organization includes 15 hospitals with 4753 beds and two research institutes, namely the Nutrition Institute and Insects Research Institute. All hospitals affiliated to this organization are in Greater Cairo except for three in Lower Egypt and one in Upper Egypt. The rational behind this organization is to motivate Ministry of Health physicians who obtain academic degrees during their service career to achieve the same professional levels as their colleagues in medical schools and university hospitals. These hospitals provide good quality health care to all eligible patients at lower cost as well as for free for some patients who are unable to pay.
In general, the two largest health care providers, the Ministry of Health and Population (MOHP) services and university health services, are committed to serve all the population. The use of these services depends on peoples’ perception of their effectiveness, availability and their accessibility. Some other health service facilities are limited to certain groups, such as subscribers to the Health Insurance Organization (HIO), some ministries’ employees, syndicate members, and clients of private health insurance companies. Services provided by the Curative care Organization (CCO), private clinics and private hospitals are only accessible to those who can pay the full cost of services provided by these organizations. This is also true for services provided by traditional health providers, individual health practitioners, although many NGOs provide free health services to the poor.

**Achievements of the health sector and challenges**

Although the achievements of the health sector are significant, the challenges ahead are pervasive. Improvements in health indicators cover almost all aspects of health conditions. The basic health indicators have been steadily improving, despite a slow pace. These improvements are illustrated in table 4.1.

Environmental indicators are also improving. These include daily caloric supply per capita, progress towards a balanced diet, rate of access to piped water, rural urban disparities, and rates of access to health care and sanitation. Indicators of the use of family planning also show a steady increasing trend over the years.

As a result of improvements in health indicators, a new population pattern has emerged following a demographic transition characterized by a decline in birth rate, a decline in mortality rate among infants and children, and a decline in mortality rate among the oldest population segment. This new demographic pattern manifests itself mainly in the gradual decrease of the under-fifteen population ratio and the gradual increase of the above-sixty-five population ratio. The first ratio was 39 percent in 1950 and is now at 28 percent, and is expected to decrease to 25 percent in 2025, while the ratio of the above-sixty-five population which was 5 percent in 1960 is expected to be 11 percent in 2025.

**A challenging epidemiological transition**

Despite these achievements, it would be misleading to underestimate the challenges facing the health sector due to demographic, socioeconomic, and even health care factors.

<table>
<thead>
<tr>
<th>Indicators</th>
<th>Base year value</th>
<th>Comparison year value</th>
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<tr>
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<td><strong>year</strong></td>
<td><strong>value</strong></td>
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<tr>
<td><strong>Indicators:</strong></td>
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<td></td>
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<td>1996 28.7</td>
<td>1980</td>
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<tr>
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<td>1996 6.5</td>
<td>1980</td>
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<td>1995 93</td>
<td>1980</td>
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<tr>
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<td>88.1</td>
<td>1995 90</td>
<td>1980</td>
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<tr>
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<td>1995 89</td>
<td>1980</td>
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<td>12.4</td>
<td>1995 70</td>
<td>1980</td>
<td>12.4</td>
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<tr>
<td>Females who used ORT%</td>
<td>1989</td>
<td>62.4</td>
<td>1996 65.7</td>
<td>1989</td>
<td>62.4</td>
</tr>
<tr>
<td>Females who stopped Breast feeding %</td>
<td>1989</td>
<td>63.6</td>
<td>1996 67.9</td>
<td>1989</td>
<td>67.9</td>
</tr>
</tbody>
</table>

As a result of improvements in health indicators, a new population pattern has emerged
Almost all of these challenges are illustrated in different dimensions of the epidemiological transition in Egyptian society. This transition will be outlined under the following five headings.

**Disease pattern (morbidity)**

The regression of diseases, like diarrhea and acute respiratory infections (ARI), has resulted in a decline in the infant and child morbidity and mortality rates. But diseases of chronic nature have increased in number and in risk factors. These diseases include hypertension, cardiovascular diseases, cancer, obesity, diabetes, degenerative diseases (e.g. arthritis), chronic lung diseases, and cataracts.

On the other hand, urbanization leads to less schistosomiasis and parasitic diseases but to more exposure to factory related injuries and diseases, and an increase of injuries due to car accidents.

The wide utilization of immunization (EIP) has caused a decline of neonatal tetanus (by 67 percent) and a decline in measles morbidity and mortality. The same is true for poliomyelitis, tuberculosis, diphtheria, measles, and whooping cough. However, there are still two areas of weakness: (i) Mortality due to diarrhea, ARI, and immunization preventable diseases contributes to half of children's deaths, and (ii) prenatal problems and maternal mortality are still high, and need to be lowered.

**Disease risk factors**

The actual major risk factors in Egypt are related to diabetes, hypertension, obesity, and smoking. These risk factors are either preventable, if correct measures are adopted, or can be controlled by early detection (through screening of population periodically within a wide primary health care program) and early and sustained treatment with good follow up. The prevalence of risk factors among the Egyptian population is known to be:

* Diabetes; 10 percent of the population above 20 years old.
* Hypertension; 30 percent of the population above 20 years old.
* Obesity; 38 percent of the population above 20 years old.
* Smoking; 40 percent of the population above 30 years old.
* Illiteracy; 38.6 percent of the above-ten population.

These high risk factors, coupled with environmental degradation, the prevalence of poverty, and the gradual increase in the ratio of population over the age of sixty years, raise the probability of an increase in the prevalence of chronic ailments such as cancers, cardiovascular and chronic respiratory diseases. This will exert an extra-burden on financing health care, and resources should be allocated to cope with these new health problems.

**Mortality pattern**

Etiologically, the mortality pattern in Egypt is attributed to five groups of diseases; namely, infective and parasitic diseases, circulatory system diseases, respiratory system diseases, gastro-intestinal tract diseases, accidents, and violence and poisoning.

A general review of the 1970s and 1980s indicates an increase in cardiovascular diseases to become the leading death cause in Egypt (from 12 percent in 1970 to 43 percent of all deaths in 1990). Cardiovascular diseases are still the leading cause of death since 1990. The other face of the coin is a corresponding decline of gastro-intestinal diseases, which was the first cause of death in 1970 (30 percent of all deaths), to become the fifth cause of death (5 percent of all deaths) in 1990 and onward.

In spite of the significant decrease in infant and child respiratory deaths, the total number of deaths due to respiratory diseases shows only a minimal decrease (perhaps because of the ineffectiveness of anti-smoking measures and rising air pollution in urban centers; further, there is a need to check the prevalence of tuberculosis through a TB control program).

Accuracy of reporting on the causes of death should be investigated since available data denotes a reasonable accuracy on the causes of infant and child deaths due to diarrhea and respiratory diseases but there may be under-reporting for prenatal and neo-natal deaths in addition to injuries as a cause of death. Available data indicate that accidents, violence and poisoning are responsible of about 4.5 percent of total deaths while the corresponding ratio for
cancer is 4 percent. Schistosomiasis with its complications, as well as hepatitis B&C exhibit variable and changing patterns of totality since some of their complications are not yet clearly monitored.

**Family, women, infant and children health status**

**Family health status**

The health status of Egyptian families ranges from reasonable to poor with a number of shades falling in-between. This wide variation depends mainly on:

* The geographical location, that is urban or rural or upper and Lower Egypt.
* Socioeconomic factors as reflected in the classification of families into ultra-poor, poor, moderately poor, or non-poor.
* Family educational status especially that of mothers and children.
* Environmental and housing conditions.

These factors do not necessarily provide clear-cut distinctions of homogeneous health status, among groups, families, or individuals. Variations can still be detected within the same geographical area or within the same socioeconomic group. However, they are useful guidelines.

**Women's health status**

(i) Genital mutilation is still significant among Egyptian females. It is estimated that in 1995, 35 percent of girls with secondary school education were circumcised, while this ratio increases to 89 percent of girls with only primary school education, and to more than 90 percent of illiterate girls.

(ii) The maternal mortality rate is as high as 174 per 100,000 live births. Three major causes are responsible for this high rate: ante-and-post parturition hemorrhages (60 percent), complications of hypertension (16 percent), and puerperal sepsis (13 percent). The impact of these causes can be reduced by intensifying regular pre-natal care and availing physicians, and or hospitalization at delivery time.

(iii) More than half of child-bearing women have reproductive tract symptoms; indeed, this is considered normal by many of them. But a sample survey (in Giza) has revealed that these symptoms are due to reproductive tract infection (22 percent), vaginal prolapse (64 percent), and other minor causes.

(iv) According to a 1992 survey, contraception for family planning is used by 57 percent of urban women, 38 percent of rural women, while 20 percent of the sample expressed an unmet need for family planning.

**Infant and child health status**

The main causes of morbidity and mortality among infants and children are respiratory infections and diarrhea. Early neo-natal deaths (i.e. before the 7th day) represent 38 percent of infant mortality deaths, usually due to asphyxia, hypothermia, genital sepsis, tetanus, pneumonia, birth trauma, and prematurity, aggravated by poor neo-natal home care (or inadequate health facility care) and inappropriate care seeking behaviors. The negative impact of these causes becomes more complicated when associated with poor maternal health and malnutrition, high risk fertility behavior, and under-weight at birth. Injuries are estimated to be a cause of 20% of deaths among children aged between one and four years. Infant and child mortality rate among families with non-educated parents is three times its level among families with educated (higher than secondary school) parents. In rural areas, this rate is twice its level in urban ones; the same difference applies to the comparison between Upper Egypt and Lower Egypt respectively.

**Injuries**

Injuries are also an important cause of disability and mortality in Egypt. According to a 1993 focal study in Ismailia, 2 percent of the population suffered an injury during the year before the study. The most common causes of injuries are traffic accidents (44 percent) and falling from a height (22 percent). About 80 percent of the accidents occur in the street and or at home while accidents at the work place are limited in number. Most accidents (60 percent) happen to people under 29 years of age. Abusive behavior is at the origin of 32 percent of total deaths in Ismailia; motor vehicles' accidents are responsible for 54 percent of these injuries.

The above review of the status of health in Egypt might be summed up in the following two remarks: First, for inhabitants of disadvantaged areas (rural as well as urban),

**Contraception for family planning is used by 57 percent of urban women, and 38 percent of rural women**
Despite the overall improvements in health indicators during the last decade, there are still a number of performance gaps in Egypt's health system which require more intensive and targeted efforts.

Second, those who live under better socioeconomic conditions, suffer primarily from chronic or degenerative diseases and have a different pattern of health problems. It is possible that with continuing socioeconomic transformation and development, this pattern may become more widespread given that chronic conditions such as cardiovascular diseases have become the leading cause of death (about 43 percent of all deaths) since 1990.

Despite the overall improvements in health indicators during the last decade, there are still a number of performance gaps in Egypt's health system which require more intensive and targeted efforts. These gaps may be briefly reviewed as follows:

**Reduction of poverty diseases:*** Poverty diseases present a real challenge to the health sector since they are caused and propagated by a variety of factors which include poor people's perception of the etiology (causes) of these diseases, as well as their sanitary and health care seeking behavior. The control of poverty diseases requires a concerted and coordinated intervention by the various partners in the health sector that is, the medical, public health, education, information and economic sectors. Unfortunately, most health interventions emphasize only the medical aspects and to a lesser extent on the health sanitary aspects. This results in unsustainable and incomplete interventions for the poor. Endemic diseases are more prevalent in rural areas, gastrointestinal diseases prevail both in rural areas and low income urban groups. Diarrhea diseases, anemia, and trachoma are still high in rural areas, and respiratory diseases, such as pneumonia and bronchitis, are major causes of death across Egypt. Chronic infections such as tuberculosis and parasitic diseases affect the poorest segments of the population and are spread by them. Bilhariasis schistosomiasis heamatobium is prevalent in the populations of Upper Egypt (7.3 percent), Sc. Mansion is widespread in Lower Egypt (20-53 percent). The extensive use of chemotherapy for aracontile has markedly reduced the prevalence of schistosomiasis but not its complications. Leprosy is relatively more spread in Upper Egypt, which has a lower health status than Lower Egypt.

**Health status of the vulnerable:*** The health status of mothers and children are a critical issue in Egypt. Sickness in Egypt still occurs heavily in the pre-productive years of life. Despite the enormous progress of the Child Survival Project and related activities, the infant mortality rate (IMR) still remains high and is relatively worse than most comparable Middle Eastern and North African Countries. Infantile diarrhea, measles, mumps, whooping cough, chicken pox and german measles still occur with moderate incidence and frequently in epidemic form.

**High rates of disabilities:*** Statistics show that the incidence of physical disabilities (due to reversible conditions, complications and inadequate or improper treatment of certain diseases) is still relatively high among infants, children and adults. Unfortunately, insufficient attention is paid to this area, as well as to preventable mental diseases. The social, psychological and economic impacts of disabilities hamper individual and societal development and lead to unnecessarily high levels of social and individual health expenditures, which could be largely avoided through adequate health and safety education, early detection, diagnosis and adequate treatment. Similarly, while traffic and industrial injuries are given reasonable attention, home accidents, injuries and poisoning, which mostly affect infants and children are given much less attention. In many cases families are not aware of the safety measures required to avoid home accidents and injuries. Their role and that of Primary Health Care units, in addition to ambulance services and emergency departments in secondary and tertiary care, are crucial in preventing many of the ensuing disabilities. However, during the last two years more attention have been given to traffic injuries; this has included improvements in ambulance services, the creation of one-day-care centers along highways, the introduction of helicopter services, and the improvement of road telecommunication services.
Financing and Utilization of Health Organizations

Social spending on health; sources and trends

The financial structure of health care facilities, as well as the services they provide, can be tackled at three levels: the primary sources of funds, the financing agencies (intermediaries), and the health providers' finance.

The primary sources of funds

National health expenditure is primarily financed through four sources; the government budget, donations (domestic and foreign donors), social insurance, and households. Figure (4.2) shows the percentage distribution of health expenditure funds among these four sources. While the government and social insurance percentage shares increased between the two years 1990 and 1995, those of domestic and foreign donors and household out-of-pocket decreased. However, the changes were limited to 1-2 percentage points in both directions.

Government health expenditure refers to the funds allocated, for this purpose, by the Ministry of Finance. The Ministry of Interior, which is in charge of police and prison health care, and the Ministry of Defense, which runs military health services, are not included in this analysis despite their increasing role in providing health services for civilians.

Successive rapid changes are occurring in financing the health care system, including the following:

* The students health insurance program (SHIP) has proceeded rapidly to cover eventually 16 million students. This creates a financial resource approaching one L.E. billion. It is now run by the H.I.O.
* A new project, which started in October 1997 extends the health insurance umbrella to infants and pre-school age children, eventually cover all under-six years old (until they join the SHIP project). It is expected that this will necessitate looking for additional source of finance.
* Changes occurring at the private level of health care are expected to push up the households' out-of-pocket health expenditure, as a result of extra-demands on health services and the rising cost of living.
* Although domestic and foreign donations are still channeled mainly to the government sector (where about 70 percent goes to MOHP and the rest to university and teaching hospitals, and, to a minor degree, to NGOs and private clinics), the Cost Recovery Program for Health (CRPH) may increasingly shift these donations towards the private health sector.

Flow of funds through intermediaries

Much of the funds mobilized from primary sources do not pass directly to the providers of health services (the final users); this is usually done through financial intermediaries.

Money received from MOF and donors is directed through the MOHP to its facilities at the central levels (organizations), and at the governorates level where it passes to local district level within each governorate. But some money may still pass directly from MOF to central organizations. Money coming from donors mainly to various governmental ministries, MOHP and MOIC, follow the same pathway as money coming from MOF. Money coming from MOF to MISA pass to NGOs, while money coming from MOF to other ministries pass to these ministries' facilities.

Social insurance funding consists of money received mainly from the employers (firms), the Social Insurance Organization (SIO), and a small percentage from households. These resources pass through the SIO and the PIO to HIO, which plays a double role as a provider and a financier, that is it uses its revenue to finance services provided by itself.

The bulk of household health funding (out-of-pocket expenditure on health) passes directly to the private sector health care providers (57 percent of health finance)
which consists of NGOs (1 percent), private clinics and hospitals (23 percent), pharmacies (30 percent), and other for profit providers (3 percent). Only a small portion (less than 5 percent) passes to governmental organizations, mainly, in descending order, to university hospitals, CCO hospitals, HIO services, MOH facilities “economic health services”, and to THIO.

Health spending by business firms amounts to less than 2 percent of total national health expenditure. Half of this ratio goes to the governmental health sector; mainly to the CCO and marginally to university hospitals and the HIO. The other half finds its way to private sector clinics, pharmacies, and hospitals.

Health spending through private insurance and syndicates (less than 1 percent of total national health spending) is channeled mainly (80 percent) to private sector clinics, hospitals, and pharmacies, while the remaining 20 percent goes mainly to the CCO and the university hospitals.

About 1/1000 of total health spending comes from foreign NGOs and is pumped directly to local NGOs which receive about 2/1000 of total health spending from MISA and about 3/1000 of total health spending from official foreign donors.

Money received by HIO (35 percent of governmental health spending) comes from SIO, PIO, MOH, with a small ratio from households and a minimal part from firms. The bulk of HIO’s receipts comes from SIO and PIO, but 25 percent of the amounts provided by these two organizations is deducted, before the funds reach HIO, as administrative costs. This practice should be stopped or reduced to a symbolic deduction.

**Health providers finance**

Health providers are the front line in health services delivery and the last to receive health funds from different sources after these pass through intermediaries, except for the bulk of household health spending which passes directly to these providers’ level.

Health providers’ percentage shares of total health spending vary largely from one type of provider to another. Available data for the period 1991-1995 reveal that, on the average, pharmacies appropriated the largest share (30 percent) followed by the MOHP facilities (19 percent), private clinics (15 percent), HIO (about 9 percent), university hospitals (about 9 percent), private hospitals (5 percent), while each of the THIO, CCO, other public facilities, and modern private facilities received 2 percent. Administrative costs, cut by SIO and PIO, amounted to about 2 percent; whereas the NGOs, the specialized health agencies, and the traditional healers obtained 1 percent, 1 percent, and less than 0.5 percent respectively.

The three main sources of health spending in Egypt are the government, the households, and the Health Insurance Organization (HIO). Together, they account for more than 95 percent of total expenditure on health in 1990/91 and 98 percent in 1995/96, as indicated in figure (4.2).

**Government expenditure on health**

While the Government owns and manages the largest network of health care facilities (almost 70 percent of the total) its expenditure represents only 29 percent of total expenditure on health. In 1996/97, expenditure of the MOH amounted to 60.5 percent of total government health spending, while HIO spent 31.1 percent.

During the period 1981/82-1987/88 the MOH budget showed downward annual fluctuations. This changed to an upward increasing trend during the 1990s (See Figure 4.3). However, real per capita MOH expenditure amounted to only L.E 10.5 in 1989/90 and increased to L.E 12.5 in 1994/95. This is very low in view of the large curative and preventive health care package provided by the MOH.
The share of MOH expenditure to total government expenditure declined from 2.8 percent to 1.8 percent during the period 1981/82-1992/93. Concomitant with the social sector's restructuring, this share increased to 2.2 percent in 1995/96.

In contrast with the fluctuations in financial indicators of MOH expenditure, public investment in the health sector showed a trend of continuous increase over the period 1982/82-1994/95. It is estimated that the beneficiaries of the HIO contributed to this investment by about L.E. 90 million while the more affluent beneficiaries of the private health insurance organization contributed by only L.E. 10 million.

The Government and public health organizations direct a large share of their expenditure on health to ensure the availability of adequate and qualified health human resources, effective health and medical technology in various health care organizations acting on the primary, secondary and tertiary health care levels. Since the bulk of curative services are rendered through rural, district, and national hospitals and specialized centers, expenditure on curative services represents the highest percentage of government health care expenditure (57.9 percent), while primary health care appropriates only 21.2 percent followed by population and family planning services and preventive health care services which received together 2.8 percent (classified as investment) of the total MOHP expenditure in 1996/97. It is important to mention that wages and salaries constitute 61.4 percent of the total MOH budget leaving only 38.6 percent for supplies.

**Insurance health care services**

In 1995, the total number of beneficiaries utilizing the health services of HIO reached 4.9 million citizens; 51 percent of them were government employees covered by Law 32, and 39 percent were public and private sector workers covered by Law 79, and the rest were widows and pensioners. In 1993, HIO coverage was dramatically expanded to include school children. The health care services of HIO are delivered only to its members and not to their families. The beneficiaries of HIO consist of government employees and public sector workers (24.9 percent), pensioners and widows (3.2 percent), and school students (71.9 percent). HIO health expenditure represents the second largest health care expenditure after MOH, MOHE, and other ministries. Eighty five percent of HIO revenues are premiums paid by its members to the Social Insurance Organization (SIO) and the Pension Insurance Organization (PIO). Sales of health care services, fees, co-payments and government transfers provide the rest of these revenues (15 percent).

The gap between HIO's expenditures and revenues has been widening in recent years and reached LE.220 million in 1995/96. Meanwhile, a preliminary evaluation, carried out by the Ministry of Planning, of the progress in the students’ health insurance project indicated that aggregate expenditure lagged behind available funds. This resulted in unexpected deficit amounting to 80 percent of the planned expenditure.

**Table 4.2: Budget categories of Health Organization (L.E. million)**

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**Figure 4.4: Real per capita expenditure of Ministry of Health**

In 1990/91, CAPMAS estimated the household expenditure on health care at the value of L.E.2304 million. This was equivalent to 55 percent of total expenditure on health care (and 2.1 percent of GDP). In addition, it was estimated that approximately LE.90 million was contributed by employees and other beneficiaries to the HIO in the form of
The burden of health expenditure has increased even for the poor, who are assumed to be covered by free health service.

According to this survey per capita expenditure was estimated at LE.39 in rural areas and LE.62 in urban areas. These seem to be underestimated figures. Health care insured services are paid through the HIO, and to a small extent through private insurance companies used by public sector organizations and small group of well to do individuals. This means that per capita health expenditure should really be around LE.110. In fact, data prove that the households’ expenditure on health care services is larger than Government health expenditure; hence, the notion of free health services for all people is far from being applied.

**Categories of health care expenditure**

Household expenditure is mainly on pharmaceutical drugs (about 56 percent), followed by outpatient care (about 36 percent) and, finally, by inpatient services, i.e. hospitalization (less than 10 percent). This pattern of health expenditure reflects peoples preferences based on their economic abilities, the nature of the prevailing disease picture and the expected accessibility as well as health returns on expenditure on these categories of interventions (associated risk). The high expenditure on drugs reflects the strong belief in the role of drugs in health care, the easy access to drugs (without prescriptions in most cases), the relative cheapness of many pharmaceutical drugs compared to prices in neighboring countries. Expenditure on outpatient health services reflects the traditional negative attitude towards risks attached to hospital services, relative easy access to outpatient services, high direct cost of hospital services especially in private investment hospitals, and the hidden indirect costs of hospitalization even in the so called “free hospitals”, in addition to the cost of temporary broken family stability and the expected lost income.

**Assessment of social spending on health**

The assessment of social spending on health can be done with reference to two major criteria; equity, and efficiency.

**Equity**

The 1995/96 Household Expenditure Survey indicates that average health expenditure of the low-income group was far lower than that of the middle and high-income strata. The richest households’ average spending on health services is as high as 5 to 6 times that of the low-income households. However, the percentage share of health expenditure in total household expenditure is higher for the lowest income decile (4.9 percent) than for the higher decile (3.8 percent); indicating a relatively higher burden of health expenditure on the low-income group of population.

Moreover, data of the above mentioned survey show an increasing share of expenditure on health services in total household expenditure. In urban areas, the share of health expenditure in total expenditure of low-income groups rose from 1.8 percent in 1981/82 to 3.3 percent in 1990/91 and to 4.7 percent in 1995/96. During this period, the same share increased from 1.8 percent to 3.5 percent in rural areas. Obviously, the burden of health expenditure has increased even for the poor, who are assumed to be covered by free health service.

The previous analysis implies that the poor households also pay for health services even when they resort to governmental health care organizations for inpatient as well as outpatient services. On average, a poor person pays LE. 121 in a governmental health facility for inpatient services over a year. Data from the Health Expenditure Survey of 1994/95 show that drugs are the main component of health expenditure for inpatient services of MOH facilities with free beds. No wonder then that high costs were the reason for dissatisfaction for 83 percent of the lower-income groups who used governmental hospitals for outpatient, and 67 percent of those using inpatient health services. In fact, 62 percent among the poor respondents cited cost as the reason for not entering a hospital, when they needed to. Cost is indeed a considerable barrier for the poor to receive needed inpatient care.
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Efficiency potentials of the health sector

The health sector has been characterized by many efficiency potentials. Extensive coverage of the Egyptian population enables the system to deliver its services to almost all the population within reasonable distances from various communities (between three and five kilometers). This vast infrastructure provides primary health care services at its periphery supported by secondary health services at district levels and topped by tertiary care services at the governorate level and highly specialized tertiary care at the national and regional levels. Services at the primary health care level can provide preventive, promotive, curative and some rehabilitation services to 85 percent of their users at a very low cost per unit of service. The rest of cases could be referred to secondary, tertiary or highly specialized health care services. During epidemics or national surveys or vaccination for certain diseases the peripheral units of the system play a crucial role in rapid and effective implementation. The role of these peripheral units in control of diarrhea diseases, the child survival project, immunization and vaccination programs as well as control other endemic diseases cannot be overemphasized.

The Pyramidal multi level system could be efficiently employed on the basis of a well designed, and firmly applied, single entry at the PHC level with referral channels between the various health care levels of the system. The proper functioning of this design can bring efficiency to the health system, since it provides necessary health care services at various cost levels which correspond to the medical needs of each case; i.e. level of health manpower, required technology for investigations and intervention, intensive care, and surgical operations, etc.

The translation of the efficiency potentials into effective measures and actions will certainly help increase, accelerate and diversify the Egyptian health sector achievements.

Targeting

Closely related to the question of equity is targeting. As mentioned earlier, government health facilities (MOHP & MOHE) which provide the highest percentage of beds and outpatient services are extensively used by all income classes. The highest accessibility levels are, as expected, enjoyed by the lowest income category, where 78 percent of the last visit were to government health facilities. More significant documentation of this is demonstrated, however, by the fact that 56 percent of the last visit of the high-income class were to governmental facilities. Detailed analysis shows that urban hospitals (district and governorate hospitals), followed by teaching hospitals, have the highest utilization rates, while health units (centers) in urban and rural areas have relatively very low utilization rates. This could be explained by a variety of reasons including location of most of hospital facilities in urban areas, the relatively high quality of service providers, as well as the level of medical technology available for both inpatient departments and outpatient clinics of these facilities.

Higher income households prefer private health service facilities as a second resort after Government health facilities. These facilities include private clinics, hospitals, pharmacies, and health services provided by certain companies and syndicates. It is interesting to note that only 7.7 percent of the last visit of the poor were to private health care facilities, while 13.7 percent and 27.8 percent of the last visit of the middle and higher income groups respectively, were to these facilities (See Table 4.3).

<table>
<thead>
<tr>
<th>Health facilities</th>
<th>Expenditure level</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Low</td>
</tr>
<tr>
<td>Government</td>
<td>77.8</td>
</tr>
<tr>
<td>Public</td>
<td>12.8</td>
</tr>
<tr>
<td>private</td>
<td>7.7</td>
</tr>
<tr>
<td>Other</td>
<td>1.7</td>
</tr>
</tbody>
</table>

Table 4.3 : Last visit by income group (%)
Inefficiency areas in the Egyptian health sector

The main inefficiency areas in the Egyptian health sector originate mainly, if not exclusively, from the under-utilization of its potentials. This might be briefly illustrated as follows:

Coordination: The Egyptian health care system is characterized by a low level of coordination between its various organizations. This results in fragmentation of the system, which has a negative impact on its performance.

Performance: The basic health services units, i.e. peripheral units of the health system network, are generally characterized by low performance. This is due to a variety of factors related mainly to the inadequate orientation of the PHC units to the actual nature and scope of their services, especially their social dimensions, as an integral component of the health care network.

Distribution of health manpower: The health care network suffers from significant disparities in the distribution of health care providers between the primary, secondary and tertiary levels. Only 24 percent of MOH physicians and 30 percent of its nurses work in PHC facilities compared to 55 percent and 52 percent, respectively, working in its hospitals. In addition, the ratio of physicians to nurses is 1 to 1 in contrast to the international norm of 1 to 3.

Over staffing: Physicians' over staffing is noticed in some governmental units. This is reflected in the very small number of patients seen by one physician per day which ranged from 1.7 to 3.04 in a sample of rural health units with externally low rates of output. As indicated by the DDM staff, this phenomenon is the most significant cause of technical inefficiency. A similar situation exists among dentists (3.4 dentists per dental chair). The staff of the PHC units consists usually of new graduates with no, or very little, understanding of their role as community health service providers, and they lack the necessary communication skills. In addition they have no clear career prospects, and their chances for continuing education to achieve higher degrees is limited. Physicians are obligatory assigned, for two years, to PHC centers according to their graduation scores and not to their interests. This system of staffing assigns physicians with higher graduation scores to the more developed governorates and those with lower graduation scores to the less developed ones. In addition, there is no, or very weak, supervision and the PHC units provide very limited chances to improve the physicians' skills through a two - ways referral system within district or governorate hospitals.

Equipment and supplies: Due to the low level of equipment and supplies, including medical drugs, patients are referred, in many cases, to secondary care levels for interventions that could have been done at the PHC level. In addition to the unnecessary burdens (economic, physical and social) imposed on such patients, these lose confidence in the services provided by PHC units which leads to low utilization rates. This implies constraining the PHC units to accomplish their crucial functions; to reduce unnecessary utilization of more costly secondary and tertiary care services. Otherwise, the health care system will lack a crucial element for its efficiency.

Structure of funding: This structure is biased to curative health units at the expense of the PHC units. PHC receives about 25 percent, and preventive services absorb 12 percent of the MOHP budget. Rural hospitals receive only 3 percent of the total budget of the MOHP, while urban hospitals receive 58 percent of this budget. This simply shows the strong bias to curative services while the real burden of diagnosis and treatment of the infectious and endemic diseases, which still represent an important component of the Egyptian disease profile, falls on the PHC units.

Deterioration of health facilities: While the MOHP facilities constitute the largest portion of the health services network in Egypt, the insufficient funds allocated to this portion have led to a deterioration in the quality of services provided by these facilities; hence, a dissatisfaction with their services. Shortage in pharmaceutical drugs, of which some are essential for medical and surgical interventions and sometimes for diagnostic services like those of laboratories and x-raying, is among the main reasons for users' dissatisfaction with the services delivered by the MOHP facilities. This was reflected in the decrease of outpatient users of MOHP hospitals by 23 percent during the period 1982-1993 despite a 33 percent increase in the number of MOH facilities within the same period. Bed occupancy
rates declined from an average of 60 percent in 1982 to 45 percent in 1993. In addition, the MOH beds per 10000 decreased from 14.4 in 1979 to 11.64 in 1994.

**Regional disparities in health services:**
The existing Egyptian health system network suffers from uneven distribution of services between and within governorates. In 1997, the rate of physicians per 10000 inhabitants reaches 11.7 in urban governorates and declines to 6.5 in Lower Egypt governorates and to 5.5 in Upper Egypt governorates. The same regional disparities prevail for dentists per 10000 inhabitants, reaching 1.66 in urban governorates, 0.83 in Upper Egypt governorates, and 0.85 in Lower Egypt governorates.

The ratio of all health service units per 10000 inhabitants is relatively high in urban governorates; Cairo has the highest ratio while the lower ones are in Behaira, and the Upper Egypt region. In terms of beds, Urban Governorates have the highest rate both from public facilities, 34 per 10000 inhabitants, and from all health facilities (41) in 1997. Upper Egypt governorates have the lowest ratios of 13 and 15 respectively.

**Low utilization rates:** Low utilization rates of governmental health facilities especially of rural and urban peripheral health units is a well observed phenomenon mainly due to the low quality of services offered and negative attitudes of health care providers towards users.

**Variations in unit costs:** According to the DDM preliminary studies on costs in the health facilities, there are great variations in unit costs in the MOH health facilities of the same size. The cost per outpatient visit in a rural health unit varied between LE 5 and LE 80, while unit cost per episode in surveyed hospitals ranged between LE 25 and LE 575. Despite the fact that cost differences may be explained by many factors, including the care mix and the levels of inputs, they indicate differences in service according to facility as well as inefficiency in the distribution of health services by type of facility. While users of various MOH facilities are not usually aware of these variations they are in the long run liable to lose confidence in service provided by various facilities, specially when they are unable to explain high costs on the basis of quality of the service provided.

**Inappropriate remuneration:** Present remuneration levels for health workers, especially physicians and nurses, are far below their actual needs to maintain a socially acceptable living standard for themselves and their families. This forces them to compensate for such a decline through a variety of ways which include opening their own private clinics, having a second job in health facilities run by other health care organizations, referring their private cases to government facilities in which they are employed, and accepting emollients for services rendered to users of government health facilities. While this practice is not openly discussed, it is one of the reasons why in some cases patients resort to private services which they perceive as being de-facto less costly to them. But the fact that some MOH and university health facilities have sophisticated technologies and employ highly qualified personnel motivates some patients to use these facilities especially when compared to the high costs of dealing with the private investment hospitals. There has been some indications of the existence of an informal price lists for certain health interventions in government health facilities and university hospitals as well.

**Towards a more integrated health system**

During the last two decades the Egyptian health sector has realized a number of important achievements which contributed to the improvement of health status of the Egyptian population despite the above mentioned shortfalls. The health system in Egypt is a pluralistic organization made of government, public and private health care providers with the government sector as the main provider.

Unfortunately the design of the components of the health care system is professionally predominated; this leaves a very small role for people's participation in major decisions. Moreover, there is very little coordination between the components of the system, and in many cases they behave as rivals rather than as complementary units. All the three components provide similar services at different unit costs which are difficult to explain by the difference in quality of services provided.

The level of utilization of services provided by the three components is generally much lower than it should be, which means a
The national health strategy should be build on a holistic approach targeting an accelerated and sustainable progress in the health status of all Egyptians

sizable redundancy in the overall sector reflected on its efficiency and effectiveness. People’s preferences to use any of the three components of the health system depends on different factors including their perception of the level of effectiveness of services provided for various ailments, the economic affordability of the cost of services provided, and their physical, social, and cultural accessibility to services provided.

In fact, studies have shown that people tend to use various components of the system to obtain various services required; e.g. the services of government health facilities for sophisticated diagnostic services, highly specialized medical and surgical interventions, and expensive medical drugs at no or very low cost.

The health system suffers from the absence of a clear policy for providing health care services to the poor and each of its three components caters to this need differently. In reality, the Government, the charitable organizations (NGOs and PVOs) and the private component are the main health care entities providing services to the poor after eligibility assessment of individual cases. In some hospitals, e.g. CCO hospitals, one finds a section for providing free health care for the poor. Unfortunately these sections are usually inadequately financed which is reflected on the quality of services provided. In addition, the government assumes the responsibility of full or partial treatment charges in some cases reported eligible medically and financially.

In its endeavor to relax the financial constraint hindering the improvement of its health services quality, the MOH established so-called economic treatment departments in various hospitals. Such departments provide health services at low costs charged to the patients. Moreover, the government has started to apply a scheme of cost sharing in a few hospitals. The lack of costing mechanisms in the government health facilities is the main obstacle to the expansion of this scheme.

The resistance, reluctance or slowness of the Government health system to utilize the resources available to NGOs in providing certain health services to their communities deprives the Government health system from efficient resource use. Some of these organizations can use resources to provide various components of health services more effectively than the formal system. Examples can be found in health education, community motivation and health awareness, social and environmental services at the PHC level. Social and community aspects of immunization programs, health surveys, assistance of handicapped patients, fund mobilization to finance community health activities, and establishment of supportive groups for patients of cancer, cardiac problems, AIDS, etc, are other examples.

Policy recommendations

Remembering that social spending, within the context of human development in general and poverty alleviation in particular, is the main theme of this year's report; it seems more convenient to focus the policy recommendations on the maximization of social and human returns of the health expenditure actually incurred by the above mentioned four sources of health services finance.

(1) Health is one of the basic needs that benefits from the satisfaction of other basic needs especially education, nutrition, and safe environment; the latter being widely interpreted to encompass the material elements (natural and man-made) as well as the socioeconomic, cultural, and political elements. All spending in these areas has a profound social dimension, while significant portions of this spending have direct positive and considerable impact on preventive health care. This means that social spending on health is, in fact, greater than that of the health sector per se; hence, a national health strategy should be conceived, and approved, at the nationwide level. Building up this strategy should be the task of a Supreme Health Council. Membership of this council should include representatives of all components of the health care sector: Government, public, and private, as well as the concerned ministries, pharmaceutical companies, and representatives of health system users.

(2) The national health strategy should be built on a holistic approach targeting an accelerated and sustainable progress in the health status of all Egyptians with special attention paid to the poor and vulnerable groups all over the country. Partial approaches might result in some progress here and there; but such progress is usually slow, unevenly distributed, and lacks sustainability.
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(3) The sustainability of health progress consists not only of improving the traditional health indicators like mortality and morbidity rates, but also of being able to meet the challenges of epidemiological transition and minimizing the concomitant disease risk factors. This implies that any health strategy will never be appropriate unless it strikes the necessary balance between the primary, secondary, and tertiary levels of the health care services.

(4) While Egypt has one of the largest networks of health care facilities which covers almost 95 percent of the population, and is physically accessible to about 90 percent of Egyptians, its utilization is far from being efficient and effective despite the size of involved health human resources and the relatively advanced level of technology applied in the system. This indicates that restructuring the available health facilities and resources in such a way as to attain their full and efficient utilization should precede looking for additional physical and financial health resources. Full and efficient utilization of health facilities and resources are inseparable from their distribution on the basis of a societal health mapping covering all the country.

(5) All health facilities, public as well as private, need to introduce and implement a costing system to standardize unit costs for various medical interventions to improve levels of efficiency and effectiveness of health care providers. Such a system is fundamental for allocation and use of health services and will improve equity between users of various health care providers.

(6) The primary health care services should have only one users’ access to the whole health care system with its three levels; primary, secondary, and tertiary. This means that the principle of one single entry to all services of the health sector should be firmly applied and respected by the health services’ providers, both governmental and private, as well as by the users of these services. The primary health care units, i.e. the rural and urban health units and centers in addition to the general practitioners (individual physicians as well as the non-specialized clinics), should be the basis for the referral system in the health sector. Once this system is implemented and respected at both levels of health services supply and demand, social spending on health will be largely rationalized and the available health physical and human resources will be more efficiently used. A single entry health system requires, on one hand, a cultural environment in which specialization is highly appreciated and respected on both the users and providers side. On the other hand, this system needs to be supported by communication and transportation facilities in addition to coordination between the different levels of health care.

(7) The health insurance system needs to be reconsidered from A to Z to fulfill the following conditions:

* Cost recovery at the general level of the system as a whole with differentials between the users according to their socioeconomic conditions. The beneficiaries of the system should be classified according to the income deciles then charged with premiums covering the cost of a health insurance system in a progressive way ranging from free health insurance for the lower quintile to cost-plus health insurance for the two higher quintiles; the surplus margin being increased from the fourth to the fifth quintile. But in all cases, and for all subscribers, the service of health insurance should be the same and accessible to all the beneficiaries at the same cost in terms of money and time spent to enjoy this service.

* An HIO, be it a public or private agent, should be a pure financial entity leaving the provision of health care services to professional public and private health care units. In fact, the separation between the finance of health insurance and the provision of health services to the beneficiaries enables the HIO to better manage its resources and provide efficient schemes of health insurance coverage. However, this separation does not prevent the HIO from investing its financial resources, like all other financial intermediaries, in different projects including those providing health care services.

* Health insurance should be a competitive, but people friendly, market. This implies, on one hand, the author...
Financing and Utilization of Health Organizations

The health insurance system should cover all Egyptians; working or not, employed in the formal sector or the informal one, living in the rural or urban areas.

* Specifying the role of the HIOs in financing the health insurance system without providing health care services by themselves, implies adopting suitable schemes for reimbursing the insured patients for the diagnosis and treatment costs they incur. Herein, there should not be a confusion between financing the health insurance system itself, which has to follow the above mentioned progressive scale, and reimbursing the patients, which has to fulfil four essential conditions: First, providing a built-in disincentive against abusing the health care services and medicaments covered by health insurance. Second, providing incentive schemes for the health care and drugs providers to do their best in servicing the health insurance holders regardless of their socioeconomic status. Third, supporting the generalization of a single entry to the health care system. Fourth, including a suitable mechanism to help the poor afford to pay, in cash or in credit coupons issued by the HIO, for receiving the necessary health care services. It fulfilled, these conditions would help make the health insurance system one of the most important means to a better and efficient utilization of the three level health care facilities in Egypt.

* The health insurance system should cover all Egyptians; working or not, employed in the formal sector or the informal one, living in the rural or urban areas as well as the frontier governorates. This will require different modalities of subscription and financial participation in the system and an active role of the different types of NGOs to help generalize the health insurance system especially among the poor, disadvantaged groups and the people working in the informal sector. Moreover, the health insurance system should cover all non-Egyptians on the country's territory, including the tourists, against premiums depending on their stay periods, the purpose of their stay, and the relevant disease risk factors.

Once the above mentioned recommendations are applied, especially the costing and the health insurance systems, the cost recovery principle could be implemented in all of the health care facilities, including the government ones. This will allow better remuneration for health personnel according to the level of their performance, better use and maintenance of the available equipment and tools, and overcoming the shortages of many necessary logistics for running the health care services especially in the MOE health facilities.