

EMRO

HEALTH SYSTEM PROFILE

E G Y P T



Regional Health Systems Observatory
World Health Organization

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FOREWORD

Health systems are undergoing rapid change and the requirements for conforming to the new challenges of changing demographics, disease patterns, emerging and re emerging diseases coupled with rising costs of health care delivery have forced a comprehensive review of health systems and their functioning. As the countries examine their health systems in greater depth to adjust to new demands, the number and complexities of problems identified increases. Some health systems fail to provide the essential services and some are creaking under the strain of inefficient provision of services. A number of issues including governance in health, financing of health care, human resource imbalances, access and quality of health services, along with the impacts of reforms in other areas of the economies significantly affect the ability of health systems to deliver.

Decision-makers at all levels need to appraise the variation in health system performance, identify factors that influence it and articulate policies that will achieve better results in a variety of settings. Meaningful, comparable information on health system performance, and on key factors that explain performance variation, can strengthen the scientific foundations of health policy at national, regional and international levels. Comparison of performance across countries and over time can provide important insights into policies that improve performance and those that do not.

The WHO regional office for Eastern Mediterranean has taken an initiative to develop a Regional Health Systems Observatory, whose main purpose is to contribute to the improvement of health system performance and outcomes in the countries of the EM region, in terms of better health, fair financing and responsiveness of health systems. This will be achieved through the following closely inter-related functions: (i) *Descriptive function* that provides for an easily accessible database, that is constantly updated; (ii) *Analytical function* that draws lessons from success and failures and that can assist policy makers in the formulation of strategies; (iii) *Prescriptive function* that brings forward recommendations to policy makers; (iv) *Monitoring function* that focuses on aspects that can be improved; and (v) *Capacity building function* that aims to develop partnerships and share knowledge across the region.

One of the principal instruments for achieving the above objective is the development of health system profile of each of the member states. The EMRO Health Systems Profiles are country-based reports that provide a description and analysis of the health system and of reform initiatives in the respective countries. The profiles seek to provide comparative information to support policy-makers and analysts in the development of health systems in EMRO. The profiles can be used to learn about various approaches to the organization, financing and delivery of health services; describe the process, content, and implementation of health care reform programs; highlight challenges and areas that require more in-depth analysis; and provide a tool for the dissemination of information on health systems and the exchange of experiences of reform strategies between policy-makers and analysts in different countries. These profiles have been produced by country public health experts in collaboration with the Division of Health Systems & Services Development, WHO, EMRO based on standardized templates, comprehensive guidelines and a glossary of terms developed to help compile the profiles.

A real challenge in the development of these health system profiles has been the wide variation in the availability of data on all aspects of health systems. The profiles are based on the most authentic sources of information available, which have been cited for ease of reference. For maintaining consistency and comparability in the sources of

information, efforts have been made to use as a first source, the information published and available from a national source such as Ministries of Health, Finance, Labor, Welfare; National Statistics Organizations or reports of national surveys. In case information is not available from these sources then unpublished information from official sources or information published in unofficial sources are used. As a last resort, country-specific information published by international agencies and research papers published in international and local journals are used. Since health systems are dynamic and ever changing, any additional information is welcome, which after proper verification, can be put up on the website of the Regional Observatory as this is an ongoing initiative and these profiles will be updated on regular intervals. The profiles along with summaries, template, guidelines and glossary of terms are available on the EMRO HSO website at www.who.int.healthobservatory

It is hoped the member states, international agencies, academia and other stakeholders would use the information available in these profiles and actively participate to make this initiative a success. I would like to acknowledge the efforts undertaken by the Division of Health Systems and Services Development to help countries of the region in better analyzing health system performance and in improving it.

Regional Director
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1 EXECUTIVE SUMMARY

Egypt is going through a demographic and epidemiological transition that is affecting both the size and health status of the population. The population growth rate has fluctuated from a low of 1.92% a year during 1966–1967, to 2.75% annually during 1976–1986, later declining to 2% a year during 1980–1993 and 2.1% annually in 2001. Changes in fertility and mortality rates have been the major source of population growth in Egypt.

The population pyramid has a wide base with children aged under 15 representing 37% of the population, reflecting relatively high fertility in recent years. The proportion of children aged under 10 years is smaller than the proportion aged 10–14 years. The rate decreased from 80 in 1988 to 69 in 2000, so the proportion of productive group aged 15–64 years has increased. The average age of the population has risen, with a life expectancy from birth of 65.5 years for males in 1996 to 69.2 years in 2006. It is higher for women than for men (69.2 and 73.6 years, respectively).

Egypt is a lower-middle-income country with a per capita gross national product (GNP) that doubled between the years 1993 and 1999, from US \$600 to \$1200 (DHS, 2000). The Egyptian economy has witnessed a turnaround in growth performance following a period of economic slow-down that started in 1986. The adoption of the open door policy in 1975 afforded the Egyptian economy a decade of rapid economic growth, supported by large inflows of foreign assistance, workers' remittances, and oil and tourism revenues. The drop in oil prices in 1986 signaled the end of a decade of economic boost, underscoring the volatility of Egypt's key revenues sources and the constraints of an inward-oriented growth strategy.

With the success of the stabilization program in achieving its objectives, Egypt has been successful in reversing the slow growth rates that characterized the period 1991–1995. Real GDP grew annually at an average of 3.8% during 1993–1996 and at an average of 6% during 1996–1998. Inflation has been brought down from a peak of 21% in 1992 to 7% in 1996 and 3.6% by 2000 (UNDP, 2000).

While public expenditure on health in terms of budget share appears to be low in Egypt, overall spending at 3.7% of GDP is also low, when compared to other comparable income countries. The Ministry of Health and Population (MOHP) budget, as part of the entire Government budget, increased from 2.2% in 1995/1996 to 3.3% in 2000/2001 and the MOHP expenditure per capita increased from LE26.8 in 1996 to LE56.7 in 2001.

The health financing system in Egypt today manifests significant systemic inefficiencies and inequities that severely limit the effectiveness of the health system as a whole. Any attempts to expand the scope of services or increase the revenues and expenditures on health care without first addressing these systemic bottlenecks in the health financing system will result in further exacerbating the inefficiencies and inequities in the system.

The existing system of health financing mechanisms in place today, whether it is through the general revenues Ministry of Finance or the Health Insurance Organization system or through private spending, establishes a regressive pattern of resource mobilization and resource allocation. Inequities are evident across many dimensions, in terms of income levels, gender, geographical distribution (rural and urban, and by governorate levels), and health outcomes.

The coverage of the Egyptian population with the National Health Insurance scheme is increasing through the addition of new population groups under the umbrella of social health insurance, for example school children and newborn children. In the year 1980, the coverage was 4% of the total population, and it doubled in 1990. In the year 1995, it reached 36% and increased over the last ten years to 45%.

Out of pocket spending has been rising over past decade and currently stands at 62%.

HIO does not reach 80% of the private sector workforce.

Highest governmental healthcare spend is proportionately in lowest income quintile.

The 1952 Constitution pronounced free medical care as a basic right for all Egyptians. The Government has been the sole provider and financier of all primary/preventive and most inpatient curative care in Egypt. However, over the past two decades governmental budgetary constraints have resulted in relatively stagnant health expenditures. The structural adjustment program has also reduced the government's resource position vis-à-vis allocation for social services sectors in general, and health services in particular.

The Egyptian health system has a pluralistic nature with a wide range of health care providers competing and complementing each other, allowing clients freedom of choice when seeking care according to their needs and ability to pay. However, the Government is committed to providing health care to poor and unprivileged population groups.

Parallel to, and related to, its demographic transition, Egypt is currently facing an epidemiological transition that is characterized by:

- Reduced mortality rates among infants and children from diarrhea, immunization-preventable diseases and respiratory infections.
- Rising prevalence of risk factors such as obesity, smoking and hypertension, responsible for chronic diseases.
- A changing socioeconomic environment leading to different diets, increased industrialization, and increased motor vehicle traffic accidents.

The distribution of the burden of diseases has changed from a predominance of infectious and parasitic diseases to a different mortality pattern whereby cardiovascular diseases are currently the leading cause of mortality (45% in 1991, compared to 12% in 1970 and 6.3% in 2001). Egypt is therefore affected by a dual burden of disease, thus associating the morbidity and mortality patterns of developing countries with those induced by modernization.

As a result of the demographic and epidemiological transition, the major health and population challenges are:

1. Population growth
2. Burden of endemic and infectious diseases
3. Maternal, infant and childhood mortality
4. Burden of chronic diseases, renal failure and cancer
5. Injuries and accidents
6. Smoking, other addictions, and their complications
7. Disabilities and congenital anomalies

8. Human resources (capabilities, skills, knowledge, allocation, salaries and incentives)
9. Infrastructure (buildings, equipment, furniture and maintenance)
10. Basic public services (housing, unplanned areas and slums, potable water, sewage disposal).

The health system has significant strengths and weaknesses resulting from its continuing evolution. The performance of the sector with respect to health services, human resources, physical infrastructure, financing, organization and management, and the pharmaceutical sector will be assessed in following eight sections. Ministry of Health and Population has decided on a reform program based on the strengths of the current system, while at the same time rectifying its weaknesses. The Government of Egypt has embarked on a major restructuring of the health sector. This reform was deemed necessary because the MOHP and its main partners had identified fragmentation in the delivery of health services, excessive reliance specialist care and low primary care service quality as the main constraints to achieving universal coverage.

The Egyptian Health Sector Reform Program (HSRP) was officially launched in 1997. The World Bank (WB) started its contribution by designing the Master Plan for Montazah Health District in Alexandria Governorate, in May 1998. By the following year, in 1999, United States Agency for International Development (USAID) was the first donor to begin field-level operations, while the European Commission (EC) joined the HSRP in November 1999. The African Development Bank (ADB) initiated its work through designing Master Plans for three health districts in June 2003. The most recent partner at HSRP is the Austrian Government, which directs its participation to improving the district hospitals as part of health district approach.

The overall aim of the HSRP is twofold. Firstly to introduce a quality basic package of primary health care services, contribute to the establishment of a decentralized (district) service system and improve the availability and use of health services. Secondly to introduce institutional structural reform based on the concept of splitting purchasing/providing and the regulatory functions of the Ministry of Health and Population. Coverage would be provided by a National Social Insurance System. The ultimate goal of health sector reform initiatives is to improve the health status of the population, including reductions in infant, under-five, maternal mortality rates and population growth rates and the burden of infectious disease.

The HSRP has meanwhile initiated a new primary care strategy in accredited facilities, known as Family Health Units (FHU's). Facilities are being contracted by a purchasing agency -the Family Health Fund (FHF) - to provide services to the population. It is envisaged that the HSRP will gradually extend its scope to the secondary level by establishing "District Provider Organizations". The FHF will consequently develop in the direction of a full purchasing agency of services from the public and private sector. The newly introduced Family Health Model (FHM) constitutes one of the cornerstones of the reform program. It brings high quality services to the patient and will integrate most of the vertical programs into the Basic Benefit Package of services. To date the FHM has been introduced in 817 health facilities, which present 18% of the total public primary health care facilities. HSRP has an ambitious five years plan, by the end of year 2010, to cover the entire public primary health care facilities with the Family Health Model.

The Egyptian Health Sector Reform Program went through several stages, including the preparatory stage from 1994 to 1996. During this stage, several valuable studies were conducted and used later to develop the "Strategies for Health Sector Change" study.

This was an analytical report on the Egyptian health sector. Designing the health Master Plans stage for the three pilot governorates followed this. Experimenting stage of the Family Health Model took place in one of the primary health care facilities, which took about two years to implement. This was followed by piloting stage of the Model in three governorates followed by another two governorates and included activities such as: Building staff pattern, designing the contents of the Basic Benefits Package and Essential Drug List, and other components of the Family Health Model. The Program has shifted its strategy in March 2003 from health facility oriented approach to the district approach, which was called the District Provider Organization. As of 2005, the HSRP has gradually expanded its operations to ten additional governorates, pushing the total number of involved governorates to 15, which presents more than 50% of the country coverage.

The Health Reform Program has three main components; (1) Service component as seen in the Family Health Mode, (2) Mandate role and functions of the Ministry of Health and Population, and (3) Introduction of a sustainable universal health insurance system. It is envisaged that all three goals and objectives can be achieved in an Integrated District Health System model. All the necessary elements are available and the Sector for Technical Support and Projects (STSP) is in developing process for an integrated health system based on a district that is evaluated internally and externally and be replicable. The Integrated District Health System (IDHS) is the district that covers the following criteria; (1) fully implements the District Provider Organization, (2) has financial sustainability, (3) separates providing from financing of health services, (4) implements the content of the district health coverage plan, (5) provides basic benefits and secondary care packages through public, private and NGO, (6) and applies quarterly measures for the achievements of HSRP's five objectives.

2 SOCIO ECONOMIC GEOPOLITICAL MAPPING

2.1 Socio-cultural Factors

Table 2-1 Socio-cultural indicators

Indicators	1990	1995	2000	2004
Human Development Index:	-	-	-	-
Literacy Total:	48.8 (92)	57.7 (98)	67.4 (02)	69.4 (02)
Female Literacy to total literacy:	35.3 (92)	65.9 (98)	63.4 (01)	67.4 (02)
Women % of Workforce	29.2(93)	18.0(96)	18.5(01)	21.8(02)
Primary School enrollment	98.0(92)	98.5(98)	91.7(01)	99.2(02)
% Female Primary school pupils	80.4(92)	84.5(98)	93.2	107.1(02)
%Urban Population	44.0(86)	43.0(96)	42.8	57.6

Source: NICHIP Report, Ministry of Health and Population, 2005.

Egypt Human Development Report, 1995, 1999, 2003, 2004.

2.2 Economy

Key economic trends, policies and reforms

Lack of substantial progress on economic reform since the mid 1990s has limited foreign direct investment in Egypt and kept annual GDP growth in the range of 2%-3% in 2001-03. However, in 2004 Egypt implemented several measures to boost foreign direct investment. In September 2004, Egypt pushed through custom reforms, proposed income and corporate tax reforms, reduced energy subsidies, and privatized several enterprises. The budget deficit rose to an estimated 8% of GDP in 2004 compared to 6.1% of GDP the previous year, in part as a result of these reforms. Monetary pressures on an overvalued Egyptian pound led the government to float the currency in January 2003, leading to a sharp drop in its value and consequent inflationary pressure. In 2004, the Central Bank implemented measures to improve currency liquidity. Egypt reached record tourism levels, despite the Taba and Nuweiba bombings in September 2004. The development of an export market for natural gas is a bright spot for future growth prospects, but improvement in the capital-intensive hydrocarbons sector does little to reduce Egypt's persistent unemployment

Table 2-2 Economic Indicators

Indicators	1990	1995	2000	2004
GNI per Capita (Atlas method) current US\$			NA	
GNI per capita (PPP) Current International				
Real GDP Growth (%)	1.9 (91-92)	5 (95-96)	3.4 (00-01)	4 (03-04)

Real GDP per Capita (\$) (91- 92)	769	1,143	1,285	1,036
Unemployment % (estimates)	9.2	9.6	9.0	10.2
	(91-92)	(91-92)	(01)	(03)

Source: Egypt Human Development Report, 2003.

Ministry of Foreign Trade, Egypt, Monthly Economic Digest, February 2005.

Table 2-3 Major Imports and Exports

Major Exports:	Crude oil and petroleum products, cotton, textiles, metal products and chemicals.
Major Imports	Machinery and equipment, foodstuffs, chemicals, wood products and fuels.

2.3 Geography and Climate

Map of Egypt



Arab Republic of Egypt is located at the northern Africa, bordering the Mediterranean Sea, between Libya and the Gaza Strip, and the Red Sea north of Sudan, and includes the Asian Sinai Peninsula. Total area is 1,001,450 sq km (land: 995,450 sq km, water: 6,000 sq km). A total of 2,665 km border countries: Gaza Strip 11 km, Israel 266 km, Libya 1,115 km, Sudan 1,273 km. Coastline is 2,450 km. The climate is desert; hot, dry summers with moderate winters. Natural resources; petroleum, natural gas, iron ore, phosphates, manganese, limestone, gypsum, talc, asbestos, lead and zinc.

2.4 Political/ Administrative Structure

The chief of state is the President, head of government is the Prime Minister. Bicameral system consists of the People's Assembly or Majlis al-Sha'b (454 seats; 444 elected by popular vote, 10 appointed by the president; members serve five-year terms) and the

Advisory Council or Majlis al-Shura - which functions only in a consultative role (264 seats; 176 elected by popular vote, 88 appointed by the president; members serve six-year terms; mid-term elections for half the members). People's Assembly election is in three phase voting, last held 19 October, 29 October, 8 November 2000 (next to be held October-November 2005); Advisory Council - last held May-June 2004.

The Shoura Council was established constitutionally in 1980. The Shoura Council is mainly a "think-tank" to advise the Government on national policies. A committee of the Shoura Council on Health, Population and Environment examines issues relevant to these areas prior to their discussion in the Shoura Council's plenary sessions.

Although it does not have a direct legislative role, laws impacting significantly on broad government policy are required to be discussed by the Shoura Council before being passed to the People's Assembly

Laws, before going to the plenary sessions of Parliament, are referred for preliminary study to the relevant committees. These specific committees are currently 22 in number; an example is the Committee for Health and Environment. This committee, consisting solely of Members of Parliament, often invites experts to its meetings for the purpose of obtaining a more comprehensive view of topics under study. The committee influences health policy changes planned for the future

3 HEALTH STATUS AND DEMOGRAPHICS

3.1 Health Status Indicators

Table 3.1 Health Status Indicators 1990-2005

Indicators	1990	1995	2000	2004	2005
Life Expectancy at Birth	65.3 (92)	66.9 (98)	67.1 (01)	70.1 (02)	-
HALE	-	-	-	-	-
Infant Mortality Rate	63	66	24.5	22.4	20.5
Probability of dying before 5th birthday/1000	-	3.9 (97)	33.8	28.6	26.2
Maternal Mortality ratio	174 (92)	96 (98)	84 (01)	68 (02)	63
Percent of Normal birth weight babies	-	-	-	-	-
Prevalence of stunting	26	29.8	28.7	NA	17.6
Prevalence of wasting	3.4	4.6	2.5	NA	3.9

Source: NICHHP Report, Ministry of Health and Population,2005.
Egypt Human Development Report,2004

Table 3-2 Indicators of Health Status by Gender and by urban rural 2006

Indicators	Urban	Rural	Male	Female
Life expectancy at birth	-	-	69.2	73.6
HALE	-	-	-	-
Infant Mortality Rate	27.7	15.3	-	-
Probability of dying before 5th birthday/1000	33.9	20.6	27.6	24.7
Maternal Mortality Ratio	-	-	-	-
Percent of Normal Birth Weight Babies	-	-	-	-
Prevalence of stunning/wasting	-	-	-	-

Source: NICHHP Report, Ministry of Health and Population,2005.
WHO Web Site, August 2005

Table 3-3 Top 10 causes of Mortality

Rank	Mortality Y2005
Intra-cerebral hemorrhage	21,473
Essential (primary) hypertension	20,354
Fibrosis and cirrhosis of liver	18,434
Hepatic failure, not elsewhere classified	11,353
Atherosclerosis	10,800
Arterial embolism and thrombosis	8,233
Elevated blood glucose level	8,000
Acute myocardial infarction	6,645
Cerebral infarction	6,334
Others	320,011
Total	431,637

Source: NICHIP Report, Ministry of Health and Population, 2005.

The Burden of Disease and Injury in Egypt (Mortality and Morbidity). 2004.

3.2 Demography

Demographic patterns and trends

Total population of Arab Republic of Egypt is 77,505,756 (July 2005 est.). The age distribution is 0-14 years presents 33% (male 13,106,043/female 12,483,899), 15-64 years presents 62.6% (male 24,531,266/female 23,972,216), 65 years and over presents 4.4% (male 1,457,097/ female 1,955,235) (2005 est.). Net migration rate is -0.22 migrant(s)/1,000 population (2005 est.).

Sex ratio: at birth 1.05 male(s)/female, under 15 years it is 1.05 male(s)/ female, 15-64 years it is 1.02 male(s)/female, 65 years and over it is 0.74 male(s)/female, for the total population it is 1.02 male(s)/female (2005 est.)

The median age is 23.68 years, 23.31 years for males and 24.05 years for females (2005 est.). Eastern Hamitic stock (Egyptians and Bedouins) presents 99%, Greek, Nubian, Armenian, other European (primarily Italian and French) presents 1%. Muslim (mostly Sunni) 94%, Coptic Christian and other 6%.

Arabic is the official language, English and French are widely understood by educated classes. 57.7% of the population (age 15 and over) can read and write. Male presents 68.3% and female presents female: 46.9% (2003 est.).

Table 3-4 Demographic Indicators

Indicators	1990	1995	2000	2004	2005
Birth Rate per 1,000 Population	-	27.9 1997	27.9	27.0 (03)	25.8 (05)
Death rate per 1,000 Population	-	6.4 1997	6.3	6.4 (03)	6.4 (05)
Population growth rate	2.4 (60.86)	2.08 (86-96)	2.3 (96-02)	2.0 (03)	19.1 (05)
Dependency ratio%	74.7 1992	69.7 1998	69.9 (01)	69.9 (02)	-
% Population <15 years	-	37.8 1996	38.8 (03)	37.4	-
Total fertility rate	3.90 1992	3.6	3.53	3.2 (02)	3.2 (03)

Source: NICHP Report, Ministry of Health and Population,2005.
Egypt Human Development Report,1995,99,03,04
Egypt Demographic and Health Survey,1992,2000

Table 3-5 Indicators of Health Status by Gender and by urban rural

Indicators	Urban	Rural	Total	Male	Female
Crude Birth Rate	-	-	25.8	-	-
Crude Death Rate	-	-	6.4	-	-
Population Growth Rate	-	-	19.1	-	-
Dependency Ratio%	-	-	-	-	-
% Population <15 years	Total	49.1	37.5	46.5	52.1
Total Fertility Rate	2.6	3.6	-	NA	3.2

Source: NICHP Report, Ministry of Health and Population,2005.
Egypt Interim Demographic and Health Survey,2003

4 HEALTH SYSTEM ORGANIZATION

4.1 Brief History of the Health Care System

Egypt has a highly pluralistic health care system, with many different public and private providers and financing agents. Health services are currently managed, financed and provided by agencies in the various sectors of the government under different laws, operating with variable levels of independence. They are also made available by private providers of different categories and at variable levels of intervention. See 9.1.1 for Egyptian Health Sector Reform Program.

The health delivery system in Egypt consists of the government sector providers, which are financed primarily through Ministry of Finance budget transfers, and public sector providers, which receive some transfers from MOF (but have other independent sources of revenues), and also the private sector providers. Figure 1 below shows how the sources of health spending are distributed across these different sectors of the health delivery system.

MOHP facilities in total receive only 19% of total financial resources in the health sector, most of this coming from the MOF, but significant quantities are also coming from international donors. Of this total budget less than 60% actually is spent in MOHP facilities. More than 40% is transferred to other institutions and agencies such as the teaching hospitals, Ministry of Education (MOE), Health Insurance Organization (HIO), Curative Care Organization (CCO), and other facilities run by other ministries. Given this profile of spending, it is apparent that the Ministry of Health and Population (MOHP) does not have a dominant position within the health sector from a financing perspective.

The modest financing role of the MOHP is further confirmed when one examines the final uses of the money entering the health sector. Whereas only 19% of total health financing is spent in MOHP facilities, approximately 20% of total health spending occurs in other government or public health facilities. This occurs because the other public providers of care, such as university hospitals, HIO facilities, and CCO, have a much more diversified financial base than MOHP. They are less dependent on MOF financing, although they receive considerable public subsidies. Levels of cost recovery in these other public facilities are also greater than for MOHP facilities. University hospitals and HIO are major recipients of health sector spending. They account for 8% and 12% respectively of total health spending. The other non-MOHP government providers are relatively insignificant.

4.2 Public Health Care System

The Ministry of Health and Population (MOHP) operates through a functional structure, through an administrative and a technical workforce across four levels namely, Central, Health Directorates (at governorate level), Health Districts, and Health care Providers.

The MOHP central organizational structure is an extensive structure headed by the Minister. See the attached MOHP organogram. It employs almost 5,000 personnel, including professional and supporting staff, who are in charge of main central functions such as planning, supervision, program management and maintenance.

At the central level, the MOHP is divided into broad functional divisions including:

- (i) The Minister's Office Affairs Sector
- (ii) The Training and Research Sector
- (iii) The Health Care and Nursing Sector
- (iv) The Preventive Affairs and Endemic Diseases Sector
- (v) The Curative Health Sector
- (vi) The Health Regions Sector

In addition to the above six sectors, the central organizational structure of the MOHP includes a central department directly accountable to the Minister:

- (vii) Central Department for General Secretariat
- (viii) Sector for Technical Support and Projects

The MOHP overall structure is therefore made up of seven functional divisions embracing 23 central departments and 73 general departments at the central level. Each of departments is in charge of various functions. The seven sectoral heads, however, report directly to the Minister. In addition to this, several of the central departmental heads also report directly to the Minister. These include the heads of:

- Preventive Care
- Laboratories
- Primary Health Care
- Endemic Diseases
- Technical Support and Projects
- Curative Care
- Research and Development
- Pharmaceuticals
- Dentistry
- Family Planning
- Nursing

The above central organizational structure is replicated at each governorate level. The governorate level health directorates are responsible to the MOHP for technical functions, but report to the Governorate Executive Council (headed by the Governor) for day-to-day management of activities.

Egypt is formed of 26 governorates. There are, however, 27 health directorates in operation because Luxor City has a separate health directorate, despite being administratively part of Qena Governorate.

An Undersecretary or a Director General, the "Director of Health Affairs", whose functional grade differs according to the governorate size, heads each governorate health directorate. The Director of Health Affairs supervises the Health District Directors.

The district health organizational structure is simply a replication of the governorate structure, where the basic functions are implemented on a smaller scale.

Reporting to the governorate health directorates are 255 health districts. Each district has a director who is sometimes also the District Hospital Director (seconded to take over both jobs). The health districts (and to some extent the health directorate) work, in theory, according to the organizational structure and staffing patterns authorized by the CAO. However, in reality, there is a great degree of variability in these structures and patterns.

The MOHP is the major provider of primary, preventive and curative care throughout Egypt, utilizing 4,506 health facilities and 152,172 beds nationwide.

The MOHP services delivery units are organized along differing lines. These lines may be geographical (i.e. rural and urban), structural (i.e. health units, health centers, hospitals), functional (i.e. maternal child health centers), or programmatic (i.e. immunization, diarrheal disease centers).

Currently, there is no nationwide referral system in the MOHP delivery system; rather, there are a number of pilot referral systems in some districts belonging to various health projects. The MOHP service delivery units are organized along different lines. These may be geographic (i.e. rural and urban), structural (e.g. health units, health centers, hospitals), functional (e.g. maternal child health centers) or programmatic (e.g. immunization, diarrheal disease control). Following is a description of the MOHP public health programs (whereas a detailed description of the MOHP service delivery network is included in the later on section MOHP public health programs).

Planned organizational reforms

Health Sector Reform Program is taking the lead in decentralized structure with institutions at three levels undertaking three distinct and separate functions:

- Central “Strategic” level, dealing with policy and regulation of the health sector.
- “Purchasing and Financing” at governorate level.
- “Provider” level.

These three levels would provide a rational basis for undertaking the functions necessary to ensure sustainable, affordable health services that tackle the disease burden of the country. It would allow overall health policy – the strategic direction – to be led by the MOHP, yet it would also assure the government that, in a decentralized system, its policies will be carried out by those providing health care to the people and that such care is delivered effectively and efficiently.

In the private sector, both for-profit and not-for-profit players would operate at either (or both) the purchaser level (offering additional health insurance to limited ranges of beneficiaries) and/or the provider level.

Organizations and functions in a decentralized health service

▪ Central strategic level

- **MOHP:** Policy formulation and the regulation of the health sector (public, non-governmental and private) in order to achieve those policies. Resource allocation. Give support to the Minister in Parliament (People’s Assembly) through providing professional advice and information to allow him to account for the use of resources and obtain sufficient resources to promote the health and well-being of the population of Egypt.
- **HIO:** to focus on developing a sustainable universal coverage – universal in that all members of society would have health coverage. The HIO branches would then focus on the purchaser role for the beneficiaries of the existing schemes and a new supplementary health insurance scheme. It would, however, channel funds for its beneficiaries receiving basic benefit package (BBP) services through the FHF as a “single payer” mechanism for the BBP services.

▪ Governorate level: purchasing/financing

Assesses the health needs of its resident population. Purchases health services to meet local needs, within the national policy guidelines and targets. Contracts for defined quality and quantity of both services and information (to verify the delivery of the contract) at agreed prices. Obtains the high performance of the public sector through

purchasing/commissioning. Ensures compliance to regulations determined nationally throughout the health sector.

Provide services specified in contracts efficiently and effectively, with a duty to balance income and expenditure. Provider organizations in the public sector include a wide range of organizations; they can best be defined as those organizations whose primary purpose is the direct delivery of health services to both families and individuals, and also to defined populations.

- **Provider**

Providers include all the categories of hospitals and district providers (districts acting as organizations with whom the purchasers can negotiate and contract for the delivery of family-orientated health care as well as that delivered to defined populations [the catchment areas of the districts]). Contracting for all services ensures that the purchaser has to be explicit about what it wishes to see provided and how much it is prepared to pay for it. It also, by implication, must be explicit about for what it does not wish to pay.

4.3 Private Health Care System

At present there is very little organized financing of the private health services. Most of the transactions occur as household out of pocket payments to the provider on a fee for service basis for both ambulatory and inpatient care. There is no formal mechanism in place to monitor and evaluate the rates being charged and the quality of the health care service offered by different categories of private providers, although the Medical Syndicate may have some information on medical fees charged by the member physicians. On a very limited scale, private firms and private insurance companies enter into contractual arrangements with private providers. The number of health service providers joined the NGO sector within the few past years, increase dramatically due to different socioeconomic reasons.

On the side of the health care providers:

- No strict rules and regulations are governing this sector
- The NGOs are tax-exempted.
- It is considered an attractive sector for physicians, who are not capable of practicing health services privately, to practice medicine through the NGOs facilities.
- The dramatic increase in the population size

Problems and challenges facing private health care in Egypt

- Inadequate quality of private health care services.
- Presence of some unreachable areas.
- Insufficient public budget allocated for quality private health care services.
- Deficiencies in the private health care referral system.
- Distribution of health facilities and services according to community needs.
- Providing required number of qualified family physicians.
- Implementing health insurance system covering all community members and providing sufficient resources.
- Upgrading the quality of undergraduate medical education for physicians and nurses. Developing a strong health system having the ability of accrediting, monitoring, and evaluating the provided services.

Ministry of Health strategy to regulate public/private interactions (Institutional)

- Provide integrated basic health care services for mothers, children, and to all family members emphasizing risk areas and risk groups.
- Assure quality standards in providing private health care package of services.
- Community mobilization and participation.
- Decentralize planning, implementation, and monitoring.
- Apply health reform strategies of private health care sector.
- Capacity building and training of family physicians and nurses.
- Integrate all partners (inside and outside MOHP) for the implementation of health reform strategies and plans, vision, and mission.

Actions for implementing private health care strategies

- Definition of an integrated basic package of private health care services and its quality indicators, built on scientific basis and needs assessment.
- Development of a separate system responsible for the financial needs of PHC services.
- Cooperation between public and private sectors in providing health services.
- Implement concept of family medicine.
- Strengthen the existing referral system.
- Improving the quality of emergency basic and comprehensive services which includes developing technical protocols and guidelines, competency based training of health provide, and continuous university support.

There is no plan to change the private sector organization, in the mean time Ministry of Health and Population is moving toward involving the private sector and the creation of a public–private partnership. Building the capacity of private sector providers to provide quality services and contain costs, organize themselves to participate in the social insurance program and formulate new provision models to provide different levels of care.

Health Sector Reform Program is ensuring on the private sector representation in the reform process and creating public-private alliances, creating incentives for private providers to participate in the social insurance system through payment mechanisms and other means. Expanding the role of the private sector in the public sector delivery system, where appropriate, through contracting out service delivery, facility management, and ancillary services.

4.4 Overall Health Care System

The Medical Syndicate is the country's association of physicians, and by far the most powerful professional association in the health sector. The Medical Syndicate is regarded as being the most likely professional association to become involved in and possibly react to health reform; however, its role and participation in the reform to date has been marginal.

The Medical Syndicate is also the founder and administrator of what is perceived as a successful health insurance model in Egypt, the Medical Union, which includes the four medical syndicates (physicians, dentists, pharmacists, and veterinarians). The plan, established in 1988, serves members of the syndicates, spouses, children, retirees and widows/widowers of deceased members. The program is tightly run, with measures to

control utilization and drug fraud. It also has a number of built-in measures for financial viability such as co-payments and moderate coverage ceiling. This health insurance model is replicated, with some differences, by a number of other professional syndicates. The prime responsibility of the Supreme Council for Health is to set the direction for national health policy and overall coordination among major health organizations. The Council was established by a presidential decree and is chaired by the Minister of Health and Population. The structure of the Council is very complex with 18 working groups, each comprising 15–20 members. Each group is designated for a specific policy area, including primary health care, family planning, maternal child health, health insurance, private sector, training and human resource development, health promotion and education, research, legislation, management, pharmaceuticals, nutrition, foreign affairs, and coordination.

There is ambiguity regarding the Council's organizational relationship with the MOHP and its role vis-à-vis the role of other advisory bodies. Its complex structure also hampers coordination and undermines its potential for effectively setting national priorities for health care. Besides the need for re-structuring the Council with the aim of encouraging it to take amore proactive in pursuing its envisaged role, there is a need to involve it more with HSRP.

The People's (National) Assembly is the legislative body elected by the Egyptian people to represent them and holds a mandate to protect the rights and the interests of the public. The Health Committee of the Assembly was developed to be responsible for overseeing the functioning and accountability of the MOHP, as representative of the health sector. However, its main preoccupation is with social protection issues such as universal insurance coverage and primary health care for all. The Committee must approve any new health sector legislation, bylaws, or decrees, or the modification of existing ones. It must also approve the endorsement or amendment of cooperative agreements with bilateral or international organizations in the health sector. In that sense, the Committee is a powerful legislative body with a strong likelihood of impacting health policy changes. Though it is a powerful legislative body, the Committee does not have all the technical expertise needed to adequately analyze, evaluate and accordingly approve or reject health policy changes. Improved communication and access to technical expertise in the MOHP would enhance its effectiveness.

The Shoura Council was developed to be a 'think-tank' for advising the Government on national public policy matters. The Shoura Council Health Committee tends to have more health-specific expertise as compared to that of the People's Assembly. Yet, it has no actual decision- or policy-making authority. The Committee has in the past generated substantive sectoral analysis reports.

The Steering Committee for Health Sector Reform (SCHSR) was formulated by ministerial decree no. 256 for the year 1997 to oversee the planning and implementation of the health sector reform initiative. The Committee is chaired by the Minister of Health and Population and is comprised of 10–15 members. Members of the SCHSR include, but are not be limited to, senior representation from the following stakeholders; Ministry of Health and Population(including the first undersecretaries), Ministry of Finance, Ministry of Planning, Ministry of Higher Education, Universities, Central Agency for Organization and Administration, Social Fund, Parastatal Organizations, Governorates, Medical Syndicate, Private and non-governmental sector, The donor community, Ministry of Rural Administration, People's Assembly. The Steering Committee is a fixed body meeting on a regular basis and each member is appointed for a period of 3–5 years.

5 GOVERNANCE/OVERSIGHT

5.1 Process of Policy, Planning and management

National health policy, and trends in stated priorities

Ministry of Health and Population (MOHP) has published an analysis for health sector in Egypt with name of "Egypt Health Service Analysis and Future Strategy Report". The document was first published in 1998 and the Health Sector Reform Program has updated it on December 2003. The report has addressed the fragmentation of healthcare funding, low utilization rate and quality of health care. The following presents the proposed strategies at the document:

- Establishing an appropriate overall institutional and legal framework for the health sector is crucial for successful implementation and sustainability of the reform. It is, however, anticipated that this will take several years to complete.
- Undertake an analysis of the health sector legislative environment to identify which existing regulations are likely to hamper the intended reforms – then seek ways of removing them and replacing them with a legal framework supportive of the reform.
- Redefine the relationships between the various relevant institutions including Ministry of Finance, Ministry of Higher Education and the Central Agency for Organization and Administration to ensure that the MOHP takes the lead and has the necessary authority to determine overall priorities, plan and allocate all resources needed for its operations.

In order to achieve this, the following actions are in various steps of implementation:

- a) Establish a multi-sector Legislative and Regulatory Review Committee led by the MOHP, with representation from other ministries, to recommend a legislative and institutional framework conducive to reform.
- b) Redefine the relationship between the MOHP and the political bodies in order to enable the technical expertise within the MOHP to become available.

Ministry of Health and Population regulatory capacity to design and implement national standards has developed health sector regulatory bodies/functions. The following bodies/ roles / functions are in different stages of development for adequate regulation of the health sector:

- **Capital investment control and certification of need:** a new MOHP function that licenses capital and technological investment for the whole health sector (governmental and private).
- **Health Care Facility Accreditation:** an autonomous body that collaborates with the MOHP Quality Assurance Unit.
- **Physician certification:** re-certification on the basis of continued medical education – a collaborative function/body with MOHP, medical schools and medical syndicate representation.
- **Regulation of health insurance:** a new MOHP function to regulate social health insurance and private health insurance.

- **Standard Setting Unit:** as part of the MOHP, its role is to provide patients, health professionals and the public with authoritative, robust and reliable guidance on current best practice. The guidance would cover both individual health technologies (including medicines, medical devices, diagnostic techniques and procedures) and the clinical management of specific conditions. It started with the BBP for family-orientated primary health care.
- **Resource allocation:** in which Ministry of Health and Population develop methodologies and mechanisms for achieving the stated principle of “equity” through continued financing of priority public health programs, by applying an appropriately-weighted (i.e. addressing the country’s health priorities and health needs assessment data) capitation formula.
- **Consumer awareness:** developing the capacity of consumers to make informed choices about providers and play a greater role in ensuring the accountability of providers for the quality of services. Developing regulations to require insurers (whether social or private) to provide written information to enrollees on their benefits, co-payments and choice of participating providers. Consumers should also be able to check on the credentials of a provider through the Licensing and accreditation agencies

5.2 Decentralization: Key characteristics of principal types

The Ministry of Health and Population (MOHP)

The MOHP operates through a functional structure, through an administrative and a technical workforce across four levels namely, Central, Health Directorates (at governorate level), Health Districts, and Health care Providers.

The central level organizational structure

The MOHP central organizational structure is an extensive structure headed by the Minister. It employs almost 5,000 personnel, including professional and supporting staff, who are in charge of main central functions such as planning, supervision, program management and maintenance. The MOHP is a merger of the Ministry of Health and the former Ministry of State for Population.

At the central level, the MOHP is divided into seven broad functional divisions including:

- (i) The Minister’s Office Affairs Sector
- (ii) The Training and Research Sector
- (iii) The Integrated Care and Nursing Sector
- (iv) The Preventive Affairs and Endemic Diseases Sector
- (v) The Curative Health Sector
- (vi) The Health Regions Sector
- (vii) Sector for Technical Support and Projects
- (viii) Sector for Population and Family Planning

In addition to the above eight sectors, the central organizational structure of the MOHP includes a central department directly accountable to the Minister:

- (ix) Central Department for General Secretariat

The MOHP overall structure is therefore made up of seven functional divisions embracing 23 central departments and 73 general departments at the central level. Each of departments is in charge of various functions. The eight sectoral heads, however, report

directly to the Minister. In addition to this, some of the central departmental heads also report directly to the Minister. These include the heads of:

- Research and Development
- Pharmaceuticals
- Dentistry

This central structure includes 103 sectoral, central and general departmental units, integrated under the Minister who, constitutionally, is the key policy formulator and decision-maker. The key role of the Minister is traditionally undertaken according to the practice and past experience of the previous 36 Ministers who have occupied this position since 1936 when the Ministry was established.

In addition to these functional units, the central organization structure includes certain policy-making, planning, and advisory bodies such as councils, executive committees and advisory committees.

The district level organizational structure

The district health organizational structure is simply a replication of the governorate structure, where the basic functions are implemented on a smaller scale. Reporting to the governorate health directorates are 255 health districts. Each district has a director. The health districts (and to some extent the health directorate) work, in theory, according to the organizational structure and staffing patterns authorized by the CAO. However, in reality, there is a great degree of variability in these structures and patterns.

Each district organizational structure is headed by a health director, supervising a team of physicians, nurse supervisor and administrators. Both health directorate and district level structures need to be restructured so that their organizational structure and capacity meet the demands of their new roles and functions.

The governorate level organizational structure

The above central organizational structure is replicated at each governorate level. The governorate level health directorates are responsible to the MOHP for technical functions, but report to the Governorate Executive Council (headed by the Governor) for day-to-day management of activities.

Egypt is formed of 26 governorates. There are, however, 27 health directorates in operation because Luxor City has a separate health directorate, despite being administratively part of Qena Governorate.

Each governorate health directorate is headed by an Undersecretary or a Director General, the "Director of Health Affairs", whose functional grade differs according to the governorate size. The Director of Health Affairs supervises the Health District Directors.

Private Service providers, through contracts

The public sector in Egypt cannot provide all health care services because of the continuous increase of health services cost. The intention is to provide a hybrid model of both public and private sector provision. The aim is to encourage private sector investment where the local market conditions make it sustainable.

The Health Sector Reform Program, through the Governorate's plans, is preparing to cover 35 - 40% of the urban population through MOHP health services, while the rest will be covered by private/NGO. Partnership with private/NGO will give the opportunity for HSRP to enable the coverage of underserved areas with family health model and basic benefits package.

Having a contract with the private sector will maintain the implementation of the national quality standards among different types of health service providers. On the other side, this will provide an equity dimension for both of public and private sectors patients.

Main problems and benefits to date

- The overall institutional framework of the health sector is complex. The MOHP has relations with more than 29 ministries and public sector agencies. MOHP lacks adequate control over its budgets, investment planning, human-resource planning and staff allocation. This has not changed since the last situation analysis five years ago.
- The organizational structure of the MOHP headquarters is complex including various sectors, departments and units vertically organized with little communication and interaction across boundaries. Organizational roles and responsibilities are sometimes redundant and lack clarity. Authority levels are ill defined and tend to be over-centralized.
- MOHP operations do not utilize modern management systems or well-defined policies and procedures. The MOHP decision-making process is mostly subjective and rarely information-based. Management information systems are under-developed.
- There is imbalance between the MOHP strategic and operational functions. Moreover, the MOHP operations demonstrate micro-management and over-emphasis on its health care delivery function at the expense of sectoral and national roles. This has not changed since the last situation analysis five years ago.
- The MOHP is currently undertaking the roles of planning, budgeting, financing, resource allocation, regulation, monitoring and evaluation as well as health care service delivery. This lack of differentiation of roles between levels, so that each level from the center to the periphery replicate and overlap, is leading to inefficient and poor quality of delivery of health services in general, and curative services in particular. (Proposals later in the document differentiate roles at different levels.)
- Highly centralized administrative structures, resource management and flow of funds has lead to a considerable degree of lack of responsiveness between the local needs and related policies, strategies and allocation of resources.
- The system of delivery of services is fragmented across a large number of providers. The service delivery system is not designed to integrate services and provide community orientation.
- There is uneven and insensitive allocation of resources and investments between primary, secondary and higher levels of care, mainly in favor of secondary and higher care levels not matching with the actual needs. This, added to the lack of efficient management systems and trained personnel, is leading to compromised quality of care provision at all levels and is evidenced by the poor utilization at the secondary and higher care levels.
- Information management and systems are fragmented across the different HOHP organizations, with lack of integration and lack of systems to avoid redundancy and ensure reliability of data and quality of information. The ministry does not have an clear strategy for information management across its organizations. There is poor utilization of information for health care planning, management and decision support.
- Pharmaceuticals and medical supplies suffer a lack of efficient and informed management based on local needs, leading to deficiencies and surplus of supplies,

with slow and ineffective ordering, stock replacement and inefficient drug dispensing control systems.

Integration of Services

The MOHP is the major provider of primary, preventive and curative care throughout Egypt, utilizing 4,300 health facilities and 66,440 beds nationwide. The MOHP services delivery units are organized along differing lines. These lines may be geographical (i.e. rural and urban), structural (i.e. health units, health centers, hospitals), functional (i.e. maternal child health centers), or programmatic (i.e. immunization, diarrheal disease centers).

The MOHP has attempted to target a number of health priorities in Egypt, mainly family planning and maternal child health, through a number of vertical programs that rely heavily on donor assistance. These programs are provided at the primary health facilities:

- Population and Family Planning Program
- Control of Diarrheal Diseases (CDD)
- Acute Respiratory Infections (ARI)
- Expanded Program on Immunization (EPI)
- Maternal Health: Maternal Health is part of the Maternal Child Health program, which provides priority medical care during pregnancy and delivery.

5.3 Health Information Systems

In 2000, the Epidemiology and Disease Surveillance Unit (ESU) was established by ministerial decree, under the First Undersecretary of Preventive Affairs in the organizational structure of MOHP.

Activities

- Assessment of the available resources at governorate and district level, and selection of surveillance staff.
- Training of the selected staff.
- Training workshops for private sector staff.
- Field investigations.
- Cruise Boats Inspection Program.
- Release of version 1 of the National Egyptian Disease Surveillance System (NEDSS).
- Publishing the Disease Surveillance Bulletin of Egypt (in process).
- Monitoring and evaluation.

Objectives of the surveillance system

- Identification of disease pattern
- Follow temporal (mid and long- term) trends and patterns of disease
- Detection of sudden changes in disease occurrence and distribution
- Detection of changes in health care practice

Specific objectives

- Strengthening all surveillance components by:
 - Data collection, management and analysis
 - Interpretation, dissemination and feedback
 - Provide the decision-makers with data in time for action.
- Strengthening the link between all levels (units, districts, governorates and central).

- Standardization and computerization of data in all levels.
- Advanced epidemiological and biostatistics training for health staff.
- Increase the role of health unit staff in the surveillance system and the reporting of diseases.

Achievements

- Epidemic management and fieldwork:
 - Epidemic preparedness
 - Outbreak investigation.
- Field Epidemiology Training Program (FETP)
 - To train MOHP physicians to apply the principals of epidemiology and biostatistics to important public health issues.
- Private sector initiative:
 - To encourage the reporting of diseases under surveillance
 - To develop knowledge and skills in disease surveillance
 - To develop and strengthen the cooperation between the private sector and ESU.
- National Egyptian Disease Surveillance System (NEDSS)
- Upgrading laboratory capacity for surveillance:
 - Training of common governorate laboratories
 - Upgrading fever hospital laboratories.
- Non-communicable disease (NCD) surveillance:
 - Establishing a nationwide standardized surveillance system and database
 - Using simplified reporting forms and data management
 - Monitoring patterns and trends in NCD occurrence and risk factors
 - Supporting NCD prevention and planning priorities.
- Vessel sanitation program

5.4 Health Systems Research

The ministry of health and population regulate the process of research through the ministerial decree No 95 issued in May 2005. The scientific health researches are forbidden to be carried out before being submitted to the central administration for research and health development e.g operational researches , whether carried out by deferent sectors of MOHP, hospitals ,organizations or association belonging to MOHP or in partnership with others. The policy applies also for clinical researches with therapeutics.

The Central Administration for Research and Health Development is responsible for submitting the protocols of these researches to scientific and ethical committees

Improving the research capabilities of researchers in different sectors of MOHP , and establishing a research data base are some of our goals.

5.5 Accountability Mechanisms

Data is not available.

6 HEALTH CARE FINANCE AND EXPENDITURE

6.1 Health Expenditure Data and Trends

Table 6-1 Health Expenditure

Indicators	1990	1995	2000	2004	2005
Total health expenditure/capital, \$	30	-	-	192 (02)	-
Total health expenditure as % of GDP	4.7	3.7 (94-95)	2.4 (00-01)	1.9 (01-02)	3.43
Investment Expenditure on health	-	-	-	-	-
Public sector % of total health expenditure	-	44 (94-95)	42 (00-01)	-	-

Source: Egypt Human Development Report, 2003,04
Egypt National Health Accounts, for the year 2001-2002, published in 2005

Table 6-2 Sources of finance, by percent

Source	1990	1995	2000	2004
General Government				
Central Ministry of Finance	28.98%	35%	29%	-
State/Provincial Public Firms Funds	2.04%	5%	3%	-
Local	-	-	-	-
Social Security	8.89%	6%	-	-
Private				
Private Social Insurance	-	-	6%	-
Other Private Insurance	-	-	-	-
Out of Pocket	55.73%	51%	61%	-
Non profit Institutions	-	-	<1%	-
Private firms and corporations	-	-	-	-
External sources (donors)	4.35%	3%	1%	-

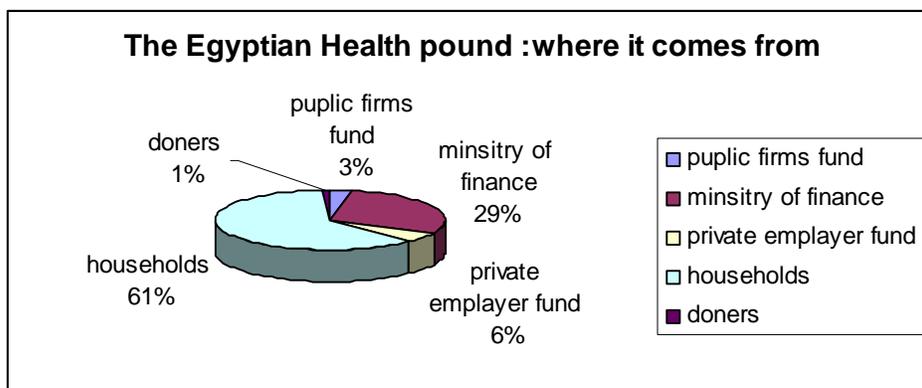
Source: Egypt National Health Accounts, for the year 2001-2002, published in 2005.

Trends in financing sources

Figure 2 summarizes the relative contributions of different financing sources to health care financing in Egypt. The single largest source of financing is direct private household spending which accounted for 51% of the total expenditure. Private sources also included spending by private firms, which accounted for another 5% of the total spending. Public sources of financing included 31% from the general revenues (through

Ministry of Finance [MOF]), 10% from the social insurance financing mechanism, and 3% from the donor support. This totals 44% of all funding sources for the health sector. Government spending on health, excluding HIO which is an extra budgetary item, accounted for less than 3% of the total government budget. Including the HIO, government spending on health was about 4% of the total government budget. As a percentage of GDP, total public financing comes to 1.6% of GDP, while private financing amounts to 2.1% of GDP.

Figure 2. Sources of Health care funding in Egypt , 2002



Source: NHA, 1995

Health expenditures by category

Budget Tracking System, which shows expenditure by type of services, was done once for the MOHP budget of 1992 – 1993.

Table 6-3 Health Expenditures by Category

Health Expenditures	1992	1995	2000	2004	2005
Total Expenditure (only public) Million LE	-	3.196	8.123	-	5.889
Per Capital expenditure LE	-	56	124	-	-
% by type of service:					
Curative care	51.33	-	-	-	-
Rehabilitative care	-	-	-	-	-
Preventive care	14.60	-	-	-	-
Primary/MCH	5.04	-	-	-	-
Family planning	1.20	-	-	-	-
Administration	27.83	-	-	-	-
% by item					
Staff costs	65.45	-	-	-	-
Drug and supplies	9.26	-	-	-	-

Investments	11.45	-	-	-	-
Grants transfer	4.17	-	-	-	-
Other	9.6	-	-	-	-

Source: Egypt's Health Sector Reform and Financing review, World Bank Report, February 2004
Budget Tracking System, Final Report, MOHP, 1996, MOF.2005

Table 6.3.1 below summarizes the types of services and benefits to which different subpopulations of the Egyptians have access or are eligible. The table identifies different benefits and eligibility in terms of coverage of services and choice of providers. As shown, the Egyptians are, in principle, guaranteed comprehensive and subsidized benefits through the government delivery system. In reality, access to these services are indirectly rationed through under financing which leads to shortages in drug supplies, absence of qualified staff, and unavailability of quality services. Social insurance coverage is restricted to eligible workers (excluding dependents), pensioners, widows and school children. Curative Care Organization (CCO) provide services primarily to the employees of the firms that have a contract with the CCO.

Table 6.3.1. Health care financing in Egypt: coverage, eligibility and benefits

Population coverage/eligibility	Benefits	Main sources of financing	Main providers
Government health services: all citizens eligible for free subsidized care in the following public delivery systems: a. MOHP (central/governorate level) b. THOs c. University hospitals	Comprehensive: primary preventive and curative care, hospital inpatient care, drugs, laboratory and diagnostic services, dental care, chronic care, referrals to tertiary care providers, and limited number of overseas treatment.	a. General revenues, central government budget allocated to MOHP (central and governorate). b. Direct budget transfers from MOF. Budget transfers from Ministry of Higher Education and user fees.	Government primary health care units and hospitals of MOHP. For tertiary care, THIOs and university hospitals.
Social Health Insurance (HIO): public and private employees of formal sector, excluding dependents and school children (infants under the new law).	Comprehensive: primary care of GP and specialist services, including home visits, dental, drugs, hospital inpatient care, prosthesis, and physiotherapy.	Employee and employer contributions (payroll tax), tobacco consumption tax for SHIP, household premium (LE4), co-payments, and general revenues (MOF).	HIO facilities, HIO contracted GPs, specialists, clinics and hospitals, including CCOs, MOHP, and private providers.
CCO patients: a. Employees of companies with CCO contracts b. Accident cases	Services limited to those available within the CCO network, which includes comprehensive curative care.	Government grants for poor patients, service fees and contracts with private enterprises, and HIO.	CCO facilities.

c. Private patients
(fee for service)

Limited number of poor patients (MOHP grant)

Armed forces, Ministries of Interior and Transport.	Not available.	Government budget.	Military hospitals and facilities.
Private sector: Households willing to pay for private services.	Variable and is dependent on individual's ability to pay and availability of services in the provider market.	Direct household out of pocket payments, limited insurance premiums, and corporate contributions.	Mainly ambulatory care provided by private physicians and clinics and more limited numbers of private/NGO hospitals

6.2 Tax-based Financing

Egypt's tax structure mirrors that of other countries in the Middle East. The system relies heavily on customs duties and general sales taxes and relatively little on personal income taxes. Personal income tax yield in 1999 was 0.8% of GDP and customs duties represented 3.3% of GDP compared with 7.4% and 1.2% in OECD countries respectively (World Bank, 2001). The National Health Accounts (1995) estimated total health care spending in Egypt to have been LE7, 516 million in the financial year 1994/1995. This was equivalent to 3.7% of GDP, or LE127 per capita, or US\$38 in exchange rate-based dollars and approximately US\$200 in PPP. Since 1991, using the GDP deflator, per capita health spending in inflation adjusted terms has increased by 15%, or at a compound annual rate of growth of 3.5%.

Ministry of Health and Population has developed the Family Health Fund (FHF), which is a recent innovation in health financing in Egypt. At present, it act only as payment center, located in each of the five pilot governorates. They pay performance-based incentives to health workers. The FHF business plans highlight the challenges of sustaining these incentives and other expenditures in the short term, let alone the long term. A key objective of the HSRP is to put in place measures that promote long-term financial sustainability of the health system. The FHF is currently a financial intermediary. The FHF is permitted to contract with a range of public and private providers. The entity is currently in a transition phase where it is contracting with accredited providers and paying staff incentives based on a limited range of performance indicators. The incentives are intended to replace existing incentives and provide a net increase in remuneration.

6.3 Insurance

Table 6-4 Population coverage by source

Source of Coverage	1990	1995	2000	2004
Social Insurance	10%	37%	45%	51%
Other Private Insurance	-	-	-	-
Out of Pocket	-	-	-	-
Private firms and corporations	-	-	-	-
Government	-	-	--	-
Uninsured/Uncovered	90%	63%	55%	49%

Source: Health Insurance Organization reports, 2005

Trends in insurance coverage

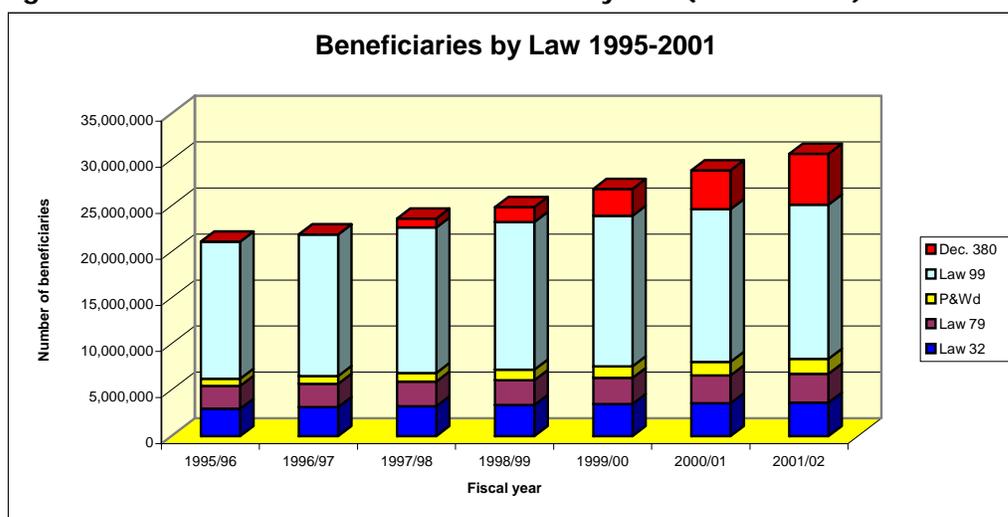
Health Insurance Organization (HIO) beneficiaries were less than 5 million until 1993 when Law 99 for the year 1992 was implemented that increased beneficiaries to be slightly less than 20 million. This number increased above 20 million in 1995 and started moving up to hit 30 million in 2002 after the issuing of ministerial decree no. 380 in 1997, as illustrated in Table 6.4.1 and Figure 3.

Health Insurance Organization covers over 30 million population in 2001/2002, or roughly 45% of the total population, and accounts for 10% of the total health spending. As such, it represents the largest health financing organization after the MOF, but it has not yet fulfilled its function of providing universal coverage. At the end of financial year 2001/2002, HIO beneficiaries comprised nearly 17 million school children, 5.5 million newborn, 6.7 million workers, and some 1.6 million pensioners and widows.

Table 6.4.1: Distribution of HIO beneficiaries by law (1995-2002)

Law	1995/1996	1996/1997	1997/1998	1998/1999	1999/2000	2000/2001	2001/2002
	2,961,000	3,129,000	3,251,000	3,367,000	3,462,000	3,550,000	3,629,996
Law 79	2,492,000	2,551,000	2,638,000	2,693,000	2,844,000	3,022,000	3,121,529
P&Wd	768,000	840,000	958,000	1,133,000	1,259,000	1,462,000	1,617,923
Law 99	14,890,000	15,370,000	15,771,000	16,039,000	16,345,000	16,584,000	16,740,022
Dec. 380	N/A	N/A	1,000,000	1,600,000	2,924,000	4,219,000	5,525,125
TOTAL	21,111,000	21,890,000	23,618,000	24,832,000	26,834,000	28,837,000	30,634,595

Source: HIO 2002

Figure 3: Distribution of HIO beneficiaries by law (1995–2002)

Source: HIO 2002

Some of key features for HIO are summarized below.

- The benefit package guaranteed under HIO is comprehensive, and includes transplants, plastic surgery, and treatment abroad. The package has no limits either on quantity of services provided or costs, and there is no effective mechanism in place to rationalize the use of health services by the beneficiaries or by the providers.
- The scheme covers, with the exception in Alexandria, benefits only for the primary beneficiaries (meaning the workers) and does not extend to other members of the family. Thus the covered adult population is highly skewed towards urban male workers. This is an unusual arrangement as most social insurance programs around the world include dependents in their coverage.
- All formally employed workers are required to participate in the HIO, but companies are allowed to opt out of the system by paying in 1% premium on worker wages. Many of the large companies have chosen to opt out, as is evident from the National Health Account data which show that spending by private firms outside of the HIO scheme accounted for about 5% of the total health expenditures. This clause raises serious questions about the sustainability and viability of the HIO in the long run if the more affluent workers are allowed to opt out of the system for very low premium contribution.
- Choice of provider is restricted to HIO facilities or to providers that have a contractual arrangement with HIO, but in reality there seems to be few restrictions placed on the choice of providers, especially for school children.
- The coverage extends only to the formal sector where at present there is no plan in place to extend the coverage to the self-employed or the informal sector workers who account for the majority of workers. There is a separate social insurance program for the self-employed (Law 108) and agricultural workers (Law 112), but these do not yet include contributions to health insurance.
- The School Health Insurance Program (SHIP) is managed and funded separately from the other beneficiary categories. SHIP collects premium contributions are fixed at LE4 from households and LE12 from GOE, and not indexed to inflation or cost of

living. In addition, SHIP receives revenues from consumption tax on cigarettes, which is an innovative means of generating additional revenues for the program.

- HIO receives transfers from the MOF from time to time to cover operational losses. The largest such transfer being considered is that of LE430 million to the HIO in 1997 to deal with its accumulated deficit, raise the standards of services provided by the HIO, and undertake pilot projects to expand coverage.

A number of new legislative initiatives are under consideration by the government that will have a profound effect on the HIO. The government is considering a legislation to unify Laws 32 and 79, which will bring into consonance the two categories of workers under a common scheme of premiums and co-payments. This will result in the doubling of premium payments by workers formerly covered under Law 32, and will raise the drug co-payment rates to one third of the total drug cost, which is the same rate charged to the school children.

Social insurance programs: trends, eligibility, benefits, contributions

The Egyptian Health Insurance Organization (HIO) was created after the enactment of the Health Insurance Law in 1964, with the mission of coverage of the entire Egyptian population within 10 years.

There are four broad classes of HIO beneficiaries:

- 1) Employees covered through Law 32 of the year 1975 (all employees working in the government sector).
- 2) Employees covered through Law 79 of 1975 (some public and private sector employees), and pensioners and widows.
- 3) Beneficiaries of the Student Health Insurance Program (SHIP) introduced In February 1993 and covering more than 14 million students, thus increasing the total beneficiary population from 4.895 million in 1992 to 20.67 million in 1995 (Egypt National Health Accounts, 1995).
- 4) Newly-born children up to age five years, according to ministerial decree number 380 for the year 1997, an action that has increased the beneficiary population by some 9 million, to include approximately 55% of the Egyptian population.

HIO is a public institutional, government-owned entity under the Egyptian Minister of Health and Population. As such, the final decision on major policy, or structural and managerial changes rests with the Ministry. As a government-owned entity, governmental decrees and laws also govern the HIO.

Since it was founded in 1964, HIO has functioned as both a payer and a provider of health care. The HIO is organized into three structures: a management structure, a service delivery structure and a referral structure.

Since 1999, HIO has been engaged with the MOHP through the HSRP in the formation of pilot Family Health Funds (FHF). This is achieved through contracting with the provider organizations to deliver this agreed package through accredited facilities prepared to accord with the agreed family health model.

HIO management structure

The HIO is divided into eight regional administrative branches. The branches manage the HIO service delivery units, as well as managing the contracts with private sector providers, primarily for school children, special medical procedures and highly specialized surgeries.

As a *payer* of health care, HIO functions as a staff model Health Maintenance Organization (HMO), running a prepaid managed care plan whereby it provides comprehensive curative and preventive benefits to its beneficiaries through the hospitals and clinics it owns, and the physicians it employs. However, with the addition of the students to HIO beneficiaries, the organization has found it necessary to contract for services from other provider organizations, using a variety of payment mechanisms ranging from fee-for-service to time-based reimbursement.

Revenue for HIO comes from four primary sources: the Social Insurance Organization (SIO), as a proportion of employees' salaries; the Pensioners' Insurance Organization (PIO), as a proportion of pensioners' allowances; a fixed amount of school registration fees, as a contribution to the SHIP; and the government subsidy from general and earmarked tax revenues (e.g., cigarette tax). HIO also receives some revenues in the form of co-payments, primarily from government employees.

HIO service delivery structure

As a *provider* of health care, HIO manages about 808 General Practitioner (GP) clinics inside and outside factories, 601 specialist clinics or polyclinics, 7117 school health clinics and 37 hospitals (HIO data, 2005).

The HIO was founded primarily as a provider of health services to its beneficiaries, and its organizational structure and staffing reflect this function. Since the expansion of the program to include the school and pre-school children, HIO has *de facto* become a major purchaser of services as well, although its staffing and organizational capacity do not reflect this major shift in the scope and focus of its work. In the meantime, management and administration of the extensive network of HIO hospitals and clinics continue to occupy a large part of HIO management's focus and energy. Moreover, the addition of the SHIP and the administration of newborn-to-5-year-old programs under its supervision have greatly expanded the size and scope of its administrative structure.

HIO referral structure

The HIO outpatient care structure acts as a gatekeeper to promote the more efficient use of resources. At this level, GPs refer patients to more resource-intensive specialist care or hospital care, as needed. While the referral system is formally in place, it is not strictly followed except in relation to the school health insurance system.

HSRP-related HIO organizations

One of the key objectives of the HSRP has been to achieve universal insurance coverage for all Egyptians. To this end, the HSRP proposes a gradual and phased expansion of social health insurance coverage: in the first phase, the HSRP will extend a primary health care benefits package to all families living in pilot geographical areas (Alexandria, Menoufia, Suez, Qena and Sohag governorates). The introduction of these core insurance functions through the HSRP will lay the foundation for a future unified National Health Insurance Fund that will extend comprehensive insurance coverage to all Egyptians.

Family Health Fund (FHF)

The FHF was established according to ministerial decree no. 294 for the year 1999, stating the opening of a bank account named "Family Health Fund of the Health Sector Reform Program". This was followed by the ministerial decree no. 160 for the year 2001 regarding the constituency of the governing bodies of the Fund. Five pilot FHFs have been established, one in each of the governorate sites where HSRP is currently being piloted. FHF is responsible for providing insurance coverage to beneficiaries through

contracting and purchasing primary health care services from Family Health Units (FHUs) and Family Health Centers (FHCs) that are owned by the public sector or HIO providers, and have fulfilled the family medicine accreditation requirements. Currently the pilot FHF are contracted with accredited family health facilities that provide family health services to the registered population and are finalizing the enrolment of NGO healthcare providers into the family health facilities it contracts with.

Strengths of the HIO

- The large number of beneficiaries enrolled under this single insurance organization and its growing mandate to provide health care to a larger portion of the population gives the HIO a significant role in shaping the future health care delivery system of Egypt.
- HIO is unique in Egypt as a large staff model Health Maintenance Organization (HMO) with capitated financing, gate-keeping, and referral functions already in place. This gate-keeping/referral function, whereby general practitioners in ambulatory care are used to provide access to specialists through referrals, is important in reducing unnecessary specialty and inpatient care.
- Although HIO contracts with other providers lack the utilization management features of managed care arrangements, the organization has the potential to improve its contracting capabilities, use its economic power in the health care market place, and shape its contracts.
- HIO is probably the only public sector health care organization utilizing integrated management information systems throughout most of its organizations. The information systems are currently being enrolled in a process of development and upgrade through the HSRP. In addition to their value to HIO, the systems have potential application throughout the Egyptian health care system.

Constraints of the HIO

- As with many organizations in Egypt, the HIO has grown over the years, but its organizational structure has failed to cope with its complex management tasks. The headquarters organizational structure shows an absent middle management level, ill-defined accountability lines and unmanageable span of control.
- The HIO currently faces a number of serious constraints that limit its capacity to expand coverage. Besides its accelerated expansion of coverage combined with the low and fixed premium structure, the extensive benefits package, the poor institutional capacity and the inadequate HIO information systems.
- Although, HIO purchases around 40% of its services from providers outside of the HIO-owned network of providers, it lacks the systems to track and control utilization and costs through contracts, payment and monitoring systems. This is leading to serious cost-escalation problems, due to excessive and inappropriate utilization of services and fraud, and rapidly widening operating deficits in all aspects of the HIO services. The HIO segments the beneficiary coverage into groups that have different contribution and benefits plans, and breaks up family members into different categories of coverage. This adds to the administrative costs and complicates the task of integrating the different benefits plan into a universal coverage based on the family as the primary beneficiary unit. This has left HIO with millions of Egyptian pounds in cumulative deficit.
- The organization urgently needs to develop both the human resources and the information systems necessary to control expenditures and ensure quality and appropriateness of services.

- The HIO does not have an institutionalized structure to undertake strategic planning and policy development. Its cost accounting, insurance management (contracting, fraud control, actuarial, and containment functions) are under-developed.
- Like the MOHP, HIO is currently undertaking the roles of planning, budgeting, financing, resource allocation, regulation, monitoring and evaluation as well as health care service delivery. This lack of differentiation of roles is leading to inefficient and of poor quality in delivery of health services. The HIO needs to restructure to separate its purchaser and provider roles.
- HIO, theoretically a public institutional organization, functions as a government entity with no control over setting premiums, fixing benefits, and setting up co-payments. This has led to diminished revenues necessary for efficient and effective management of its resources, maintenance and upgrading and expansion of its facilities, and the provision of quality care.
- A large organization spread throughout Egypt, HIO lacks "standard" policies and procedures on the management of the organization outside of the headquarters. This lack of standards for managing and monitoring branches and their affiliated facilities has impaired the quality and cost of HIO services. At present, all major decisions regarding services, purchasing, finances and the direct operation of the health care facilities emanate from the HIO headquarters. The centralized operational style allows the headquarters very little time for its strategic and policy-making roles and allows the branches no autonomy or incentive to run efficient operations.
- HIO costs are high, its benefits are, in theory, very comprehensive and its premiums, which are set by the government, are low and not adjustable to inflation. As a result, HIO is running in deficit, and its cumulative deficits to date are estimated in millions. In addition, HIO is reimbursed through a capitated system whereby the premiums it receives are fixed for each beneficiary and not based on the individual's likelihood of using health care.
- As a provider, the health care structure of HIO is fragmented with no continuity between direct and indirect care. HIO has few effective mechanisms to manage and control the utilization and costs of its services, thus contributing further to its financial losses. Failure to control drug consumption in particular is causing HIO significant financial losses. Also, a large proportion of HIO beneficiaries consider its services to be of inferior quality and refuse to use the facilities.
- HIO lacks the human resources and institutional capacity to design a benefits package, to establish a purchasing agency, and design and implement a provider payment system determine appropriate premiums and co-payments, and conduct actuarial analysis of the beneficiary population.

In the financial year 2000/2001 the workers' scheme is operating in the deficit of about LE174 million, part of which is made up by contributions from accident insurance and companies who opt out of the system. The School Health Insurance program (SHIP) is currently breaking even, but is expected to begin running deficits within the coming years. This increase in premium and co-payment collection rate by the unification of Laws 79 and 32 will go some length towards covering part of the operating deficits in the program, but will not be sufficient to cover the costs either in the short or medium-term. Addition of infants aged under one year, by the ministerial decree no. 380, increase the operating deficit of the HIO since this group of beneficiaries incur very high unit cost of care compared with the workers and school age children. Since ministerial decree no. 380 is not a law, it is not obligatory neither to the MOF did not pay its share,

which is 12 LE per newborn, as planned to the HIO nor to the newborn to participate in that scheme.

Law 79, concerning pensioners and widows, is the most under funded one, as illustrated in Figure 6, since beneficiaries pay only 1% of their basic pensions to the HIO and no one for them as employer. The SIO should carry its responsibility toward this category by paying 3% of their basic pensions to aid in decreasing this huge deficit.

Private insurance programs: trends, eligibility, benefits, contributions

Under the current regulatory environment, private health insurance does not represent an attractive business opportunity for enterprisers. In fact it is quite hard to make money on private health insurance in Egypt. Premiums are regulated and too low in comparison to the costs. Another constraint is that an insurance law guarantees employees the right to refuse to participate in a co-payment mechanism.

Overall, health insurance in Egypt is regulated by more than 30 applicable laws and decrees (Kemprecos, 1995). Any insurance company, which develops a health insurance plan, has to have the plan reviewed by the Misr Reinsurance and the Insurance Review Organization, an independent public sector body that has review authority over insurance contracts and negotiations.

In the fiscal year 1995 there were 11 insurance companies in Egypt, three of which offered health insurance. The three insurance companies, which provide health insurance, are the largest in Egypt, and are all government-owned parastatal organizations (Al Shark, Misr and Al Ahlyia companies).

The largest company offering health insurance in Egypt – Al Shark – continues to lose money under these policies. Although health insurance is only a small part of the company's portfolio, it causes a disproportionate amount of problems, and might ultimately force Al Shark to withdraw from the health insurance business altogether.

Over the past few years and as part of the structural adjustment process, the private insurance environment started to become less restrictive. A new law was passed to allow the opening of private foreign insurance companies. Under the General Agreement on Trade and Tariffs (GATT), the minimum capital needed to start an insurance company has also been decreased.

A private health insurance program "Medicare" was introduced a few years ago by the "Nile Badrawi" Hospital. The program has most of its beneficiaries from the upper-middle and upper classes; it charges reasonable premiums and has a co-payment ingredient. In addition, a European private insurance firm has recently been allowed to operate in Egypt. Egyptians of upper-income level basically purchase the insurance. The firm's operations are handled through a Cairo office and its services are provided through Egyptian private sector providers.

6.4 Out-of-Pocket Payments

Table 6.4.2: Comparison between 2002 and 1995 estimates

Sources	2001-2002	1994-1995
Ministry of Finance	29%	35%
Public Firms funds	3%	5%
Social Insurance Organization	-	6%
Private Employer Funds	6%	-
Household Funds	61%	51%
Non Profits Organizations	<1%	-
Donors	1%	3%
Total Health Care Expenditure	L.E. 23,087 million	L.E. 7,516 million

Source: Egypt National accounts – DRAFT (May 2005)

Households are the largest financiers of health care in Egypt. In table 6.4.2, a comparison of source of funding between the two rounds of National Health Accounts reveals that the public contribution declined from 46 percent in 1995 to 32 percent in 2002. This decline in public spending is compensated by the substantial increase in the contributions of households in 2002. The proportion of household contribution has increased substantially to 61 percent.

(Direct Payments) Public sector formal user fees: scope, scale, issues and concerns

There is a formal user fees at each of outpatient/inpatient public services. MOHP facilities are the lowest in price followed by others (HIO, CCO, THOs). Revenues generated from user fees do not exceed 10% of the service cost. Table 6.4.3 presents expenditures and subsidies from MOF to hospital services, financial year 2004/2005

Table 6.4.3: Comparative expenditures and subsidies from MOF to hospital services, financial year 2004/2005

Provider category	Expenditure per bed (LE)	Average subsidy per bed (LE)	Subsidy per bed (%)
MOHP	6,000	5,800	97
THOs	14,400	13,500	94
University hospitals	22,200	19,100	86
HIO	24,721	6,600	27
Cairo CCOs	17,100	500	3
Private hospitals	20,700	0	0

Table 6.4.3 above indicates the level of dependence on MOF transfers (subsidies as a percentage of total expenditure) by categories of government and public hospitals. As can be seen, the MOHP facilities are most dependent on MOF budget for revenues, although among the government providers (others being the THOs and university

hospitals) it receives the lowest amount of subsidies per bed. THOs and university hospitals receive the highest level of subsidies from MOF, and are generally known to provide good quality of care.

Cost Sharing

Ministerial Decree 147, issued in 2003, is step toward outpatient treatment cost sharing at the accredited MOHP PHC facilities, which provide BBP. The patient pays 1/3 the price of the medication and 3 L.E. per visit (now represents a 300% increase compared to previous price). The Decree included an exemption clause for patients who cannot afford it.

6.5 External Sources of Finance

External sources of financial assistance for the health system (loans or grants from bilateral or multilateral organizations) presents between 1-3 percent of annual health care funding. See table 6.4.2.

6.6 Provider Payment Mechanisms

The LE7, 516 million mobilized in the health sector (National Health Accounts 1994-1995) did not just pass directly from the ultimate sources to their final uses. Much of the money first passes through financial intermediaries, which in turn transfer resources on to the providers of care. For all sources of funding, money is transferred to more than one financial intermediary and provider. The major intermediaries in the flow of funds are MOHP and other ministries, HIO, and private insurance schemes. However syndicates and households pass much, if not most, of their funding directly to the providers of care.

- The first pathway consists of MOF funding, which goes principally to other ministries, which in turn transfer the money to government providers of care. Donor funding shows a similar pattern, although a larger proportion of it goes to MOHP. Very little of the MOF and donor funding is transferred to the various insurance intermediaries, and virtually none ultimately passes to private sector providers. Together general revenue financing and donor support account for approximately one third of total health sector resources.
- The second major pathway consists of social insurance. The bulk of funding from firms and a small proportion of household funds pass to Social Insurance Organization (SIO) and Pensioners' Insurance Organization (PIO), which in turn fund HIO. HIO acts essentially as a combined provider and financier, using half its revenues to finance services provided by itself, and the rest to purchase services and goods from private and other public providers. Just under one seventh of total health sector funding passes through this social insurance mechanism.
- The third pathway consists of direct household funding. More than 90% of household funding passes directly to private sector health care providers, without any financial intermediaries. These private sector providers consist of NGOs, private clinics and hospitals, pharmacies, and other profit providers. Slightly more than half of all health sector funding consists of these household payments direct to private providers. A small percentage of private spending is organized through the employers who purchase health care services directly from providers on behalf of their employees or through private insurance. These organized sources of private financing account for less than 1% of the total health expenditure.

It is important to note that the direction of the flow of funds varies greatly depending on its source, and that the different intermediaries are funded by quite different sources. The flow of funds shows considerable verticality with very limited transfers of money between three major pathways of funding. The one major exception to this segmentation of financing occurs from the HIO, which purchases services across sectors, including private providers, MOHP, CCOs, and subsidizes part of the drug purchases.

Within the existing framework of the MOF budget allocation and integrated delivery system, there is little scope for introducing more effective provider payment mechanism. There is some flexibility being introduced through the self-funding scheme, which might serve as an entry point for introducing a more flexible payment system with productivity incentives. Unless these activities are monitored, however, there is a danger that these economic units could divert resources toward the more lucrative services which may not necessarily be in the best interest of the public.

Hospital payment method (piloted in Menofia now)

The payment mechanism for hospital is done according to what is documented in the contract with it as follow:

Out patient services: (specialists)

FHF/DPO pays 9 L.E for each registered referred case for getting the following advantages:

- No additional ticket for specialist examination
- 25% discount of lab. Investigations and X-ray cost
- Providing the medications with just only one third of their retail prices

Inpatient services (In transitional Period):

- Prices of medications prescribed in the patient admission file are determined by their tender prices (not retail prices).
- Prices of surgical interference according to the list annexed with the contract.
- Prices of non surgical interference according to the patient's bill .
- Patient will pay only 50% of the total his admission bill (out of pocket).

The FHF/ DPO pays 75% of total patient admission bill to be assured that they receive good quality services as well as encourage the hospital staff to cooperative with the family medicine referral system.

Payment to health care personnel

Currently the "reformed" model of family health services is funded by multiple payers: the MOHP, HIO and FHF. Health Sector Reform Program (HSRP) public health facilities are funded by two main sources. The MOHP/HIO fund salaries and medicines, whilst the FHF funds staff incentives. The dominant cost for both sources is labor.

Increase in cost, at present, reflects increased labor costs and the administrative costs of paying these incentives through a new agency. There is a lot of confusion over the net financial impact of the reforms as various incentives are being paid through different vertical programs. This system facilitates uncoordinated purchaser and provider behavior, is costly to administer, and may promote competing incentives – which leads to inefficiency and unsustainable health care provision. In short, the current system of financing in the three pilot governorates undermines stated HSRP policy goals.

A single payer system is likely to be less costly to administer than a multiple payer system and can improve efficiency. The development of a single payer system also allows the development of a provider payment system that is based on the number and profile of patients registered with a facility. A single payer would begin to address many of the problems of the current system. The FHF is in use to test the single payer concept at the district level. The single payer approach would require all district resources to be earmarked and channeled to the FHF. Earmarked resources would be based on an analysis of the previous year's MOHP/HIO accounts; donor funds would also need to be determined. The FHF would contract with providers to provide a level of benefits to the insured and uninsured populations. The percentage of incentives is determined based on the monthly performance of the health team whose performance is appraised through a set of Performance Indicators (PI), see table 6.4.4. These covers all aspects of service provision, whether the curative or the preventive, and maintains the efficiency and quality. There are eleven Performance Indicators; each one has a weight and standard as follows:

Table 6.4.4: Performance Indicators

	Indicator	Target	Standard
1	Number of Visits/ shift /Physician	20-30	100%
2	Number of drugs / prescription	<= 2	100%
3	% of Referral cases to the total ones	6-10%	100%
4	Patient satisfaction %	>= 90%	100%
5	Family Planning (All or Non)	>= 50%	100%
6	Immunization	>=95%	100%
7	Completion of medical records data	>= 90%	100%
8	Quality standards	>= 90%	100%
	Patient rights patient care		Family medicine model
	Facility management Pharmacy		Information management
	Laundry Lab. Cleaning services		X-ray Department
	Q.I Program Emergency room		Sterilization
	Employee health program		Infection control
	Environmental safety		
9	Files fees Revenue Percentage	According to rostered population	
10	Uninsured Tickets Revenues	According to rostered population	
11	Utilization in relation of population rostered on the facility		

Source: Manual of FHF

- Immunization and family planning are all –or none performance indicators as
- The other ones are graduated according the percentage of achievement as follow
> = 90% -100% 100%

> = 80% - >90% 75%

> =70% - 80% 50%

< 70 % 0

- the indicator of completion of medical records is graduated as follow

> = 90% 100%

85% - 90% 75%

80% - <85 50%

<80% 0

Patient waiting time is not applicable till now because to get exact time you must have most recent technology that is not available

7 HUMAN RESOURCES

7.1 Human resources availability and creation

Table 7-1 Health care personnel

Personnel per 10,000 population	2001	2004	2005
Physicians	6.13	6.27	6.53
Dentists	0.85	0.97	1.00
Pharmacists	0.44	0.93	1.07
Nurses	12.43	13.51	13.75
Paramedical staff	3.7	3.9	4
Midwives	NA	NA	0.40
Community Health workers	0.9	1.0	1.08
Others	NA	NA	24.44

***for MOHP staff only, per10,000**

Source: NICHHP Report, Ministry of Health and pop,2004. Burden of disease and injury in Egypt
Egypt Health Sector Analysis and Future Strategy, MOHP . page 147

Fifty percent of the health workforce is employed by the MOHP. However, substantial numbers are employed by the HIO, CCO, the General Organization for Teaching Hospitals & Institutes (GOTH&I), and NGOs, and by the private sector. Doctors and technicians (and, rarely, nurses) may be self-employed.

Conditions for employment offered by the MOHP are determined by the MOF in negotiation with Central Agency for Organization and Administration (CAOA). In general, the human resource management function in the public sector is limited by a number of constraints. The MOHP lacks a national human resource plan. While the MOHP has a computerized personnel database, it is not used for planning or for projecting future needs. Also, the MOHP does not refer to job descriptions in recruitment and monitoring although CAOAs assist in job analysis and design. Recruitment is another major constraint in the public sector. The public sector recruits a large number of employees. The performance review process is rather limited and is unreliable in determining the actual performance level of employees. A standard concise evaluation sheet is used for reviewing performance of all employees irrespective of their roles and responsibilities. The performance review in the public sector does not necessarily relate to promotion, which renders its usage rather limited. Finally, lack of an incentive system where incentives are linked to productivity and quality, and lack of adequate career development opportunities for public employees, does not provide employees with enough motivation to perform well nor to be committed to their job. In summary, pay and prospects for promotion are not in practice linked to work performance.

Coordination and planning

Previous sections have indicated that the number, distribution and skills of the health workforce do not correspond to the health needs of Egypt. The immediate factors

leading to this situation (education/training, conditions of employment/management) have been presented. This section describes the fundamental factors which affect or coordinate human resources for health.

Health workforce situation can be summarized in the following:

- Whilst the MOHP has overall responsibility for health in Egypt, it does not have authority to control the many factors that influence health or the health workforce. This is far from unusual and could be said about any country. Nevertheless, it is vitally important that this situation is recognized.
- It is difficult to say with any certainty that the overall size of the health workforce in Egypt is appropriate to Egypt's health needs, especially in the absence of staffing figures for facilities other than the MOHP and HIO. However, within staffing groups there are serious imbalances. There is an excess of physicians at the same time as there is a serious shortage of qualified nurses, especially graduate nurses, a complete lack of well-qualified midwives and a shortage of paramedical staff. The consequence is that physicians are under employed and assigned duties that would be more appropriately carried by staff with directly relevant training.
- The excess of physicians is striking. Currently there are more than two physicians per a thousand population which is about five times the number expected for countries of similar economic status. There are more than two physicians for every occupied hospital bed. Enrolments to medical schools in recent years mean that this situation will continue to get worse.
- There are serious inequities in the number of available human resources among the various regions. There are substantial variations in the geographic distribution of health manpower with Upper Egypt being relatively under-served. Urban governorates have higher number of physicians of various specialties compared to rural governorates. Most physicians in rural areas are usually new graduates and often lack clinical experience to provide quality care. This furthers the inequity between rural and urban governorates. This distribution of human resources contrasts with the pattern of health status. It is the areas with the poorest health status which have the lowest health personnel to population ratios.
- The health workforce in Egypt has shortages and weaknesses in certain specialties including midwives, community nurses, family medicine and primary health care doctors.
- The technical quality of health professionals remains inadequate in many areas. Implementation of basic aseptic procedures is sub-optimal. The complexity and multiplicity of medical records are the actual causes for their being incomplete and inaccurate, making it difficult to maintain continuity of care. Standard procedures are not widely used and routine monitoring of technical quality is inadequate. Also, there are serious problems with over-prescribing and over-utilization of unnecessary services in MOHP and HIO establishments, highlighting the essential need for control on drug prescription and medical consultation procedures.
- Continuing education for all categories of health worker continues to be fragmented and uncoordinated. Continuing education remains an individual choice among practitioners rather than a requirement. This has significant implications on improving the knowledge and skills of the health workforce in the country.
- The MOHP has a limited capacity to implement its policies. For example, MOHP does not control the curriculum of medical schools or regulate the number of

medical students. Even decisions regarding nursing schools that are under the MOHP's jurisdiction are constantly affected by irrational interventions. The MOHP has many general directorates that are not coordinated with each other. Local health authorities can neither make autonomous decisions nor have the capacity to implement their own plans. The private sector is not properly regulated either.

- There is a lack of co-ordination among stakeholders. Besides the MOHP, various stakeholders such as the MOF, universities, professional syndicates, and the People's Assembly have a strong influence on the health sector. However, its own priorities and rarely co-ordinates with the others govern each stakeholder. There is no human resource master plan that has been agreed upon by all stakeholders.

Trends in skill mix, turnover and distribution and key current human resource issues and concerns

MOHP figures for 1997 showed a total health workforce of about 330,000 health personnel. This figure was based on the numbers registered with the various syndicates and on the numbers licensed to practice. In 2001, similar data was collected to show an increase of 55% to over 420,000 health personnel.

The main categories are given below.

Table 7.1.1: Staff registered with syndicates

Staff	Dec 1997	Dec 2001	Increase (%)	Recorded 2005
Physicians	125.000	144.354	15	171799
Dentists	16.000	18.469	15	24222
Pharmacists	36.500	55.683	53	88335
Graduate Nurses	8.500	13.237	56	19801
Diploma Nurses	1.000	3.046	205	5313
Nursing (others)	74.000	169.576	129	196417
Others (Daiah, social visitors)	10.600	15810	49	16556
Total Nursing	94.100	201.669	114	238087
Technicians	18.000	29.427	63	
Others	40.000			
Total	329.600	449.602		

Source: D4/Governorate Health Directorates/NICHP

NOTES Table excludes: administration, ancillary, guards and drivers

Nursing (other) includes: all discontinued training and unqualified nurses, five-year

Diploma nurses, health visitors, assistant nurses and midwives.

It is not clear from the figures whether regular updating is carried out to exclude those who have died or retired from practice. In order to gauge some of the impact of those absent it is worth contrasting the figures for those still registered with the MOHP and those actually in their posts as at 2001.

Table 7.1.2 comparison of staff registered and in post in MOHP , 2005

Staff	2005	Registered	In post	No. absent
Physicians	68469	58829	46160	22339
Dentists	9367	7631	7092	2275
Pharmacists	10063	4345	7561	2522
Graduate Nurses	4420	2362	3497	923
Nurse technicians	2308	1231	2096	212
Diploma nurses	98248	84600	87465	107839
Nursing (others)	4397	5738	4137	260
Subtotal, all nurses	109373	93931	12178	97195
Technicians	32079	29427	28075	4004
Assistant technicians	11150	15756	10474	676
Others	30862	738	21301	9561
Total		210657		

Source : NICHHP

Note1. Assistant technicians include: Assistant sanitarian, Assistant laboratory technician, Assistant radiologist, Assistant pharmacist, Assistant first aid technician (3 years), Assistant first aid technician (1.5 years).

Note2. others include: veterinarian, agricultural engineer, assistant agricultural engineer, engineer, assistant engineer, dietitian specialist, assistant administration support.

The main conclusions to be drawn from Tables 7.1.1 and 7.1.2 are as follows.

- a. The high proportion of physicians registered in Table 7.1.1, even allowing for those who have emigrated, retired or who are no longer practicing medicine for other reasons.
- b. The high proportion of pharmacists who do not practice within the MOHP.
- c. Diploma nurses have a rather low level of qualification and training and so have limited expertise. It is only the graduate nurses who are generally considered to have the level of training, which allows them to take responsibility for managing their own work as opposed to following the instructions of a physician. The last five years has seen a 56% year-on-year increase in graduate nurse registrations with the MOHP. This is, however, dwarfed by the 129% increase in diploma nurses in the same period – a reflection of political imperatives associated with the overall increase in population during this period.
- d. The overall MOHP workforce does not include administrative and ancillary staff. The figures are not provided to the NICHHP by the governorates because of confusion over those actually employed and those contracted for a temporary period. Using the Family Health Model establishment agreed for the HSRP these staff form between 25% and 50% of the average FHU depending on the size of the unit (50% for the smaller FHU 1 and 25% for the larger FHU 4). On this basis alone, this group of staff account for between 43,500 and 87,500 extra staff making the total size of the in post workforce of the MOHP in the range of 220,000–262,000 staff.

However, the trend is of a far faster growth in the size of the health workforce (55%) than in the growth of the population (10%).

The physician population ratio of 2.1 per 1,000 population in 1997 had increased by 5% to 2.2 per 1000 population in 2001. It was considered high in comparison to other countries in 1997. The ratio is also high when workload is taken into account. Using the number of beds in Egypt (123,671 in 1997 increasing to 143,940 in 2001) as a crude indicator of workload, there were 1.01 physicians per bed in Egypt in 1997; this ratio remained constant in 2001. The occupancy rate, quoted elsewhere in this report, of 32%–45% means that there is more than two physicians for every occupied bed. These figures suggest a substantial excess of physicians in relation to the work that is to be done. The argument is put forward which claims that the unfilled posts for doctors in some parts of Egypt indicate an overall shortage of physicians. However, the problem of shortages of physicians in some areas is an indication of mal-distribution of physicians rather than of a shortage.

Whilst the number of physicians is high, the overall size of the professional health workforce is not exceptional. The absence of paramedics and the limited number of nurses, especially graduate nurses, compensate for the high number of physicians. The consequence of the structure of the health workforce is that physicians are being used to do the work normally done by personnel with lower level, but more appropriate, training.

Trends in the size of the health workforce

The figures for the numbers of selected categories of health personnel who are employed by the MOHP are shown in Table 7.1.3, below.

Table 7.1.3: Staff registered and in post in MOHP plus percentage increase in difference over 20 years

Category of health personnel	1982		1990		1995		2002		20 years Increase (%)
	Reg.	In post							
Physicians	22,468	16,121	3,9828	3,0347	5,2625	3,6965	58,829	40,422	1.7
Dentists	3,592	2,814	6,893	5,577	6,920	5,054	7,631	5,770	1.3
Pharmacists	3,230	2,330	3,615	2,915	3,603	2,611	4,345	3,375	0.3
Graduate nurses	325	248	497	334	1,013	890	2,362	1,897	1.0

Source: NICHIP

A comparison of trends over the last 20 years shows that the gap, as shown in the last column, between registered and in post has grown marginally year-on-year indicating that the MOHP continues to lose staff on unpaid leave. These figures are only for the MOHP and so do not necessarily give a true reflection of the situation in Egypt as a whole.

Distribution by type of health care provided

The broad categories of health care considered in this section are primary health careers i.e. staff of Urban Health Centers (UHC), Rural Health Units (RHU) etc. as well as including preventative staff, curative (i.e. hospital staff) and "high administration" (i.e. staff employed in the MOHP headquarters).

The MOHP is the major employer of health personnel in the preventive and primary health care sectors, although the HIO employs physicians and other health personnel for their school health program, which includes primary health care and preventive services. Within the MOHP, the percentage distribution for physicians and nurses are given in table 7.1.4.

Table 7.1.4: physicians and nurses by health sector(%)

Health sector	Physicians (%)			Nurses (%)		
	1997	2001	2005	1997	2001	2005
Curative	60.3	58.6	54.8	44.2	47.7	41.6
High administration	2.6	4.0	4.5	1.1	1.4	1.5
Primary care inc.	37.1	37.4	40.7	54.7	50.9	56.9
Preventive						
Total	100	100	100	100	100	100

Source: NICHIP

Because of the unreliability of the MOHP figures in the 1997 document, the only comparison that can be made is on the basis of percentage employed in each sector. The trend in physicians when taken against the percentage increase in MOHP physicians is consistent. The nursing figures, whilst lower, are influenced by the significant rise in nurses overall albeit less well qualified staff.

Geographical distribution of health personnel

This section will show that there are substantial variations in health personnel: population ratios in the various governorates of Egypt. The principal data relates to health personnel employed by the MOHP, i.e. about 42% of the total workforce (this figure appears consistent even in 2002). When the whole workforce is considered, the variations are more pronounced because of the concentration of other health care providers in the urban governorates and Lower Egypt

The overall situation for the principal categories of health personnel employed and in post by the MOHP is shown in Table 7.1.5.

Table 7.1.5: Geographical distribution of MOHP physicians and nurses

	2001		Physicians			Nurses		
	Population per 1,000	% to total pop.	2001 numb	Ratio 2001	Ratio 1997	2001 numb	Ratio 2001	Ratio 1997
Urban governorates	11,933	18%	8,127	0.68	1.12	9,892	0.83	0.85
Lower Egypt	28,119	43%	18,532	0.66	0.65	46,552	1.66	1.32
Upper Egypt	24,236	37%	12,721	0.52	0.53	24,509	1.01	0.82
Frontier	922	1%	1,042	1.13	0.96	2,926	3.17	2.48
Total	65,209		40,422	0.62		83,879	1.29	

Source: NICHHP

It is difficult to draw too many conclusions from the 1997/2001 ratios. However, most notable is the reduction in physicians in the urban governorates and the increase in the frontier ratio. The increase in the physicians in the frontier areas may be due to the incentive system introduced in 1997 for rural areas.

Table 7.1.5: Geographical distribution of MOHP physicians and nurses 2005

Governorates	Physicians		Nurses	
	numb	Ratio	numb	Ratio
Urban	9,188	19.90	11,977	12.32
Lower Egypt	20,828	45.12	52,780	54.30
Upper Egypt	14,970	32.43	28,764	29.59
Frontier	1,174	2.54	3,674	3.78
Total	46,160	100.00	97,195	100.00

Source: NICHHP

The main features of this data are as follows.

- The high health personnel: population ratios in the frontier governorates. This reflects the sparse nature of the population in these governorates and the difficulty of providing health care to that population.
- The low ratios in Upper Egypt, where about one third of the population live and where health status is worst.
- The continuing high number of nurses in Lower Egypt, which is a consequence of the ready availability of training places for diploma nurses in that region.

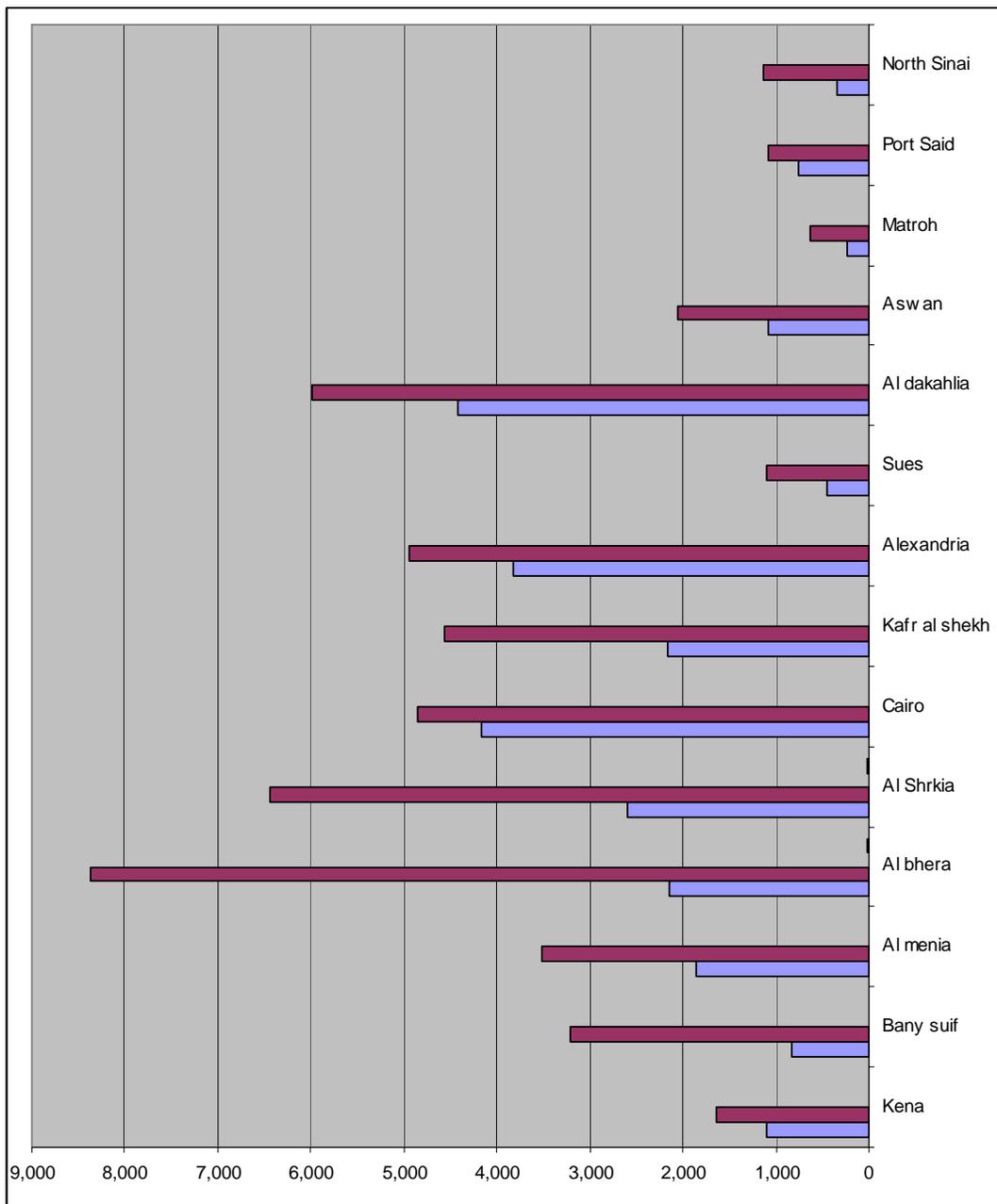
These aggregated figures for the four regions do not show the true nature of the variations between different parts of Egypt, since there are major variations within these four regions. The distribution of physicians and nurses (employed by the MOHP) by governorate is shown in figure 4.

Table 7.1.6: Distribution of physicians and nurses by governorate per 100,000 population (2005)

Governorate	NO. physician	NO. nurses	physician ratio /100.000	nurses ratio/100.000
Qena	1,093	1,639	1.5	2.3
Beny Suef	837	3,216	1.2	4.6
Al Menia	1,863	3,513	2.6	5.0
Al Behera	2,154	8,369	3.0	11.8
Al Shrkia	2,602	6,446	3.7	9.1
Cairo	4,172	4,853	5.9	6.9
Kafr al shekh	2,163	4,555	3.1	6.4
Alexandria	3,815	4,942	5.4	7.0
Sues	451	1,096	0.6	1.6
Al Dakahlia	4,416	5,990	6.2	8.5
Aswan	1,077	2,060	1.5	2.9
Matroh	242	626	0.3	0.9
Port Said	750	1,086	1.1	1.5
North Sinai	344	1,137	0.5	1.6

Source: NICHHP

Figure 4. Distribution of physicians and nurses by governorate per 100,000 population (2005)



Source: NICHIP

This confirms that the highest physicians to population ratios are generally found in the sparsely populated frontier governorates. This is also reflected in most cases in the nursing to population ratios. However, in these areas the total number of physicians and nurses are relatively small. In Upper Egypt, the ratio is generally much lower in both groups and it is in this region that health status is least good. The comment made in 1997 about the striking difference in physician numbers between the least well served governorate (Qena in 2001, Beni Suef in 1997) and the best served (South Sinai in 2001 and Red Sea in 1997) still stands. Even allowing for the significant increase in nursing

numbers nationally, governorates such as Sohag and Qena stand out as significantly below average. It has been the policy (in the case of both nurses and physicians) for newly qualified staff to spend their "takelef" (two years in the physician's case, one year in nursing) in shortage governorates. The staff are, however, recorded in the original governorates. The evidence is that whilst nurses tend to remain for the takelef in shortage governorates for the year, physicians generally move on. Further analysis on this is recommended in order to review the success, or otherwise, of the MOHP policy. This major variation, while being very marked, does not show the inevitably much greater variation between districts.

Overall, the most doctors can be found where health status is highest, although this is less true for the MOHP whose salary package and overall remuneration is well below that paid in the military, HIO, universities and private – the last two of which are concentrated in urban areas. This is the opposite of the distribution required in order to achieve equity in health care. This situation is exacerbated by the distribution of physicians employed by other organizations, as indicated below.

Table 7-2 Human Resource Training Institutions for Health

Type of Institution	Current		Planned		
	Number of Institutions	*Capacity	Number of Institutions	Capacity	Target Year
Medical Schools	23 (18 government & 5 private)	26,318		NA	
Postgraduate training Institutions	19 (Government)	-		NA	
Schools of Dentistry	13 (10 government & 3 private)	3,980 Y1996		NA	
Schools of Pharmacy	12 (6 government & 6 private) Y2004	22,013		NA	
Nursing Schools (high)	5 (Government)	6,569		NA	
Midwifery Schools	0	-		NA	
Paramedical Training Institutes	7 (Government)	-		NA	
Schools of Public Health	1 (Government)	-		NA	

*Capacity is the annual number of graduates from these institutions.

Source: Egypt Health Sector Analysis and Future Strategy, MOHP.

Egyptian Board Fellowships, Ministry of Health and Population.

7.2 Human resources policy and reforms over last 10 years

The overall goals of the health human resource development area are to ensure that the workforce:

- Be of the right size: the number of doctors, nurses and other health professionals in Egypt should be adequate to meet the health needs of the Egyptian population.
- Be in the right place: the health workforce should be distributed throughout Egypt in a way which parallels the needs for health care in each region of Egypt.
- Have the right mix and level of skills: the ratio of doctors, nurses and other health professionals should match the workload involved in providing the various components of health care. Furthermore, the level of skills should be sufficient to provide adequate quality care.
- Be employed and managed appropriately: the conditions of employment should be such that the health workforce is motivated and has adequate resources to provide a good standard of health care. Furthermore, the management of the workforce should be such that good standards of work are required.

The following are the Ministry of Health and Population strategies

1) Adjusting the size and composition of the health sector workforce

- To make it responsive to the characteristics and priority health needs of the population, and appropriate for effective health sector performance.

2) Short-term stabilization and long/medium term rationalization of the number of physicians

- By establishing a Human Resource Information System with a health workforce database (HWD) which will allow the MOHP to keep track of the numbers, specialization, qualifications and skills of health personnel employed in all sectors (government, public and private) and which will support the system for licensing and certification. The HWD would be a part of the general Management Information System to be developed for the MOHP.
- By building the capacity of the MOHP to conduct a sectoral-level inventory of numbers and skills of health personnel and to undertake manpower planning process and into medical school admissions.
- By restricting the numbers of admissions to schools of medicine and linking future admissions to a manpower planning process that takes into consideration:
 - A current inventory of numbers and skills of physicians.
 - Demographic/epidemiological transitions and changing health priorities of the population.
 - The number of doctors who leave the profession each year due to death retirement or change of employment.

This strategy will also enable the medical schools to provide higher standard of undergraduate education and appropriate clinical and community experience, which is now being limited by the large number of students.

- By establishing a limited number of posts in each health district which are only required to provide health care as per the basic benefits package. Newly graduated doctors will only be offered appointment to posts where there is a vacancy. If the doctor refuses this appointment, the moral and political obligation of the MOHP will have been fulfilled and there will be no obligation to offer alternative employment.

- By establishing a system of certification in which doctors will have a license to practice for a limited period of time, for example ten years. At the end of this period the doctor would be required to apply for renewal of the license. Renewal would be approved only if stated criteria were met. These criteria could include, for example, satisfactory work performance during the previous ten years, satisfactory attendance at approved continuing education courses and satisfactory performance in an examination of relevant clinical skills.
- By modifying the legislative and regulatory framework to allow doctors who wish to leave employment with the MOHP to do so.
- By developing, experimenting with, and pilot testing packages of measures which will encourage physicians to pursue voluntary early retirement, resignation or transfer from employment by the Government

3) Increasing the number of adequately trained nurses to establish an adequate physician to nurse ratio

- To conduct a needs assessment for nurses in Egypt.
- To control the number of diploma nurses training places in governorates where there is excess supply.
- To expand the number of training places for graduate nurses.

4) Strategies relating to distribution of the workforce

- Conduct a study of the current staffing patterns and levels for all types of health personnel in Egypt. The findings should be incorporated into a HWD that contains information about the numbers, skills and experience of all licensed health professionals whether employed by the MOHP or by other public/private sector agencies.
- Identify standard norms for staffing patterns, levels and ratios based on the demographic and health profile and the socioeconomic conditions in Egypt and utilizing international practices in that respect. Standards for staffing levels and patterns should be developed by specialty and region. This has already been developed as part of the HSRP for FHUs, but full application in the HSRP remains.
- Compare the current situation with the standard norm so as to identify deviations. Some of the strategies proposed to reconcile these deviations include:
 - Offering contract for higher payments in districts, which are less attractive to health professionals. In this way, doctors and other health workers can be expected to choose to work where such contracts are available. This has been attempted with a Ministerial Decree in 1997 which has had some effect, but without constant review of the incentives it may prove to be ineffective in the long run.
 - In districts where there is a surplus of doctors of other health professionals, when a doctor or other health professional leaves (due to resignation, retirement or death), no doctor will be appointed as a replacement
 - Developing an incentive system to encourage redistribution of physicians, especially in under-served areas. This should include financial incentives as well as incentives for continuing education and professional growth.
- Institute the capability in the MOHP to allocate staff among specialties and geographic regions based on health needs.

5) Strategies to improve skills of health workforce

Approaches for upgrading the skills of physicians and nurses include:

- Upgrading of the undergraduate curriculum to enhance knowledge and case management skills in assessment, diagnosis, advice treatment and follow-up of the most common causes of morbidity and mortality In Egypt.
- Enhancing in-services training, and orientation of new graduates during their pre-service training; the MOHP introduced a two-week induction course for the new takleef physicians.
- Review of personnel licensing, certification and continued medical education practices.

6) Undergraduate training

- Undergraduate medical education
 - Improvement of curricula should be a MOHP and MOHE collaborative effort. Upgrading medical education should start with a review of the current curricula and of available evaluations.
 - The undergraduate medical curriculum will be substantially developed and comprehensively set to give a much stronger community orientation, and greater in-depth experience in providing clinical care and training in family health.
- **Nursing education has been developed as follows**
 - The current training for secondary nurses has been upgraded.
 - Curricula upgrading of the three grades of the technical secondary nursing schools has been achieved and also for some specialities in high technical institutes and this will be accomplished for the other specialities
 - Formulation of a high committee , for revising and approval of the curricula .
 - A questionnaire for evaluating the teaching organisations is being prepared now to be submitted to the high committee for approval before being applied to the technical secondary nursing school (256 in number) , and the high technical institutes (12 in number)
 - A plan for training the new teaching staff in technical secondary schools and technicians in high technical institutes on teaching methods and technology skills is being prepared .
 - A new system for monitoring and evaluating the training programmes being prepared now .
 - Programs in allied health professions (such as health economics and health management) will be developed and introduced at diploma or masters level.

7) In-service training

A proposed new curriculum for in-service training should emphasize hands-on clinical skills, interpersonal counseling skills, community orientation and family health and other core skills that accompany the basic services provision. Charts and guidelines and standard training course modules will be a prerequisite for implementation of the in-service training. The training will require a resource of core trainers to conduct training of trainers courses in each governorate.

It is recommended that the MOHP utilizes a clear job description for each post and establishes the training needs for each post, thereby determining the required curriculum for each training course. The style of training in the MOHP needs to move from a didactic style to a more facilitative – problem based approach. This will require an investment in Train the Trainer courses that have this practical based approach.

Training Centers need to be accredited on a regular basis to ensure standards of training are being maintained. Finally a cadre of fast tracked leaders of the future need to be identified and supported over a long-term period to realize the benefits of their training.

8) Licensing, certification and continued medical education

The current policy of life-long licensing of health personnel upon graduation should be re-visited. Licensing renewal should be conditional to a minimum number of continued medical education hours per year.

Strategies to improve conditions of employment

Strategies to improve the conditions of employment within the health sector should include the following elements.

- Upgrading the physical working environment and the housing conditions for health personnel, especially in rural and remote areas. However, first it is recommended that research is undertaken on the actual take-up of these facilities by staff.
- Developing a career planning and development function in governmental and public organizations as a crucial factor for employee motivation.
- Building the human resource management function of the MOHP and parastatal institutions with special emphasis on recruitment, job analysis, motivation and performance achievement.
- Adoption of performance-based and productivity-based incentive systems for employee motivation.
- Adoption of annual employment contracts subject to renewal on condition of satisfactory performance.

9) Strategies to advocate for staff retention

Strategies to advocate for staff retention should include the following elements.

- The stipulation of a clearly defined job description for health team members at various levels (central, governorate, district, and FHU/FHC level).
- Upgrading supervisory skills in work procedures/progress and personnel performance at all levels (central, governorate, district, and FHU/FHC level).
- The evolution of training practices to include distant learning, telemedicine, and unified curricula for programs targeting managerial and service provider's activities.
- The expansion in the training-of-trainers programs at governorate level to build a core of trainers at governorate level.
- The inclusion of physical examination guidelines and clinical management protocols in various medical specializations.
- Strengthen the links between district health system, FHU, and FHC in capacity-building activities.
- Endorse family health training practices.
- Promotion of the Egyptian Board Fellowships in various medical specializations, and family medicine in particular.

8 HEALTH SERVICE DELIVERY

8.1 Service Delivery Data for Health services

Table 8-1 Service Delivery Data and Trends

TOTAL (percentages)	1990	1995	2000	2004
Population with access to health services	-	-	100 (01)	-
Married women (15-49) using contraceptives	47.7 (92)	48.4 (97)	56.1	59.2 (05)
Pregnant women attended by trained personnel	56.1 (92)	51.9 1997	52.9	69.6 (05)
Deliveries attended by trained personnel	40.7 (92)	46.3 (97)	60.9	47.2 (05)
Infants attended by trained personnel (doctor/nurse/midwife)	45 (92)	56.4 (97)	64.7	-
Infants attended by trained and untrained traditional attendants	49 (92)	38.1 (97)	32.1	-
Infants immunized with BCG	86.7 (92)	95	97	97.3
Infants immunized with DPT3	85.2 (92)	83	97	96.07
Infants immunized with Hepatitis B3	-	76.6	96.1	96.04
Infants fully immunized (measles)	70.1 (92)	89	94.3	96.0
Population with access to safe drinking water	79.9 (92)	81.4 (96)	91.3 01	-
Population with adequate excreta disposal facilities	77.0 (92)	94.5 (99)	93.6 (01)	-

Source: NICHIP Report, Ministry of Health and Population, 2005.

Egypt Human Development Report, 1995, 1999, 2004

Egypt Health Sector Analysis and Future Strategy, Data of the Preventive Sector

Egypt Demographic and Health Survey, 1992, 2000.

URBAN (percentages)	1990	1995	2000	2004
Population with access to health services	100 (92)	-	100 (01)	-
Married women (15-49) using contraceptives	57.0 (92)	56.4 1997	61.2	62.6 (05)
Pregnant women attended by trained personnel	68.9 (92)	70.8 97	-	82.2 (05)
Deliveries attended by trained personnel	62.5 (92)	67.9	81.4	88.7 (05)
Infants attended by trained personnel	62.5 9(2)	-	81.4	-

Infants attended by trained and untrained traditional attendants	33.4 (92)	-	17.0	-
Infants immunized with BCG	94.0 (92)	98	99.7	98.8
Infants immunized with DPT3	92.8 (92)	91.6	96.5	93.5
Infants immunized with Hepatitis B3	-	78.6	92.7	-
Infants fully immunized (measles)	87.7 (92)	91.2	97.8	96.8
Population with access to safe drinking water	-	-	91.3 (01)	-
Population with adequate excreta disposal facilities	-	-	-	-

Source: Egypt Demographic and Health Survey, 1997, 1992, 2000, Egypt Human Development Report, 1995.

RURAL (percentages)	1990	1995	2000	2004
Population with access to health services	99 (92)	-	99 (01)	99
Married women (15-49) using contraceptives	38.4 (92)	40.5 (97)	52.0	56.8
Pregnant women attended by trained personnel	43.2 (92)	27.2	41.9	62.1
Deliveries attended by trained personnel	27.5 (92)	32.8	48.0	65.8
Infants attended by trained personnel	27.5 (92)	-	48.0	-
Infants attended by trained and untrained traditional attendants	64.6 (92)	-	47.1	-
Infants immunized with BCG	86.7 (92)	94.5	99.1	97.6
Infants immunized with DPT3	84.9 (92)	88.1	97.5	93.5
Infants immunized with Hepatitis B3	-	75.3	93.1	-
Infants fully immunized (measles)	77.9 (92)	88.1	96.2	96.5
Population with access to safe drinking water	61.1 (92)	-	82.1 (01)	-
Population with adequate excreta disposal facilities	57.0 (92)	-	78.2 (01)	-

Source: Egypt Demographic and Health Survey 1992, 1997, 2000, 2004. Egypt Human Development Report, 1995.

Overall, the general conditions of employment and the management of the health workforce at the place of work do little to ensure adequate or improved standards of work. Conditions provide little incentive and supervision is weak. Where physicians or other health personnel do provide high standards of health care, it is mainly as a result of their personal standards and motivation rather as a consequence of effective management.

The salary scale is low and is considered a major reason why doctors also engage in private practice. The conditions are rather inflexible and do not provide a strong career structure. All public employees are entitled to an unlimited unpaid leave without the loss of benefits or tenure if they pay the yearly tax while on leave. They are also entitled up to six years unpaid maternity leave without any loss of benefits. This benefit can impose a tremendous burden on the staff establishment of an organization, and on productivity, especially in specialties where there are shortages in the country.

Supervision of the health workforce is in general rather limited. Procedures such as medical audit to identify and correct weaknesses are rarely applied. Monitoring of prescribing patterns does, in theory, occur but appears to have little impact on work performance.

Most of the public sector physicians also practice privately. Physicians earn over 80% of their income from their private practice. Physicians are allowed to use public facilities to consult with private patients after their hours of duty. Physicians often continue to keep their positions in the public sector along with their private practice. This is primarily because the public sector job offers various benefits i.e. job security, prestige, and social status. By keeping their public positions physicians also have access to postgraduate training and to hospital beds and equipment. The lack of clear delineation between physicians' public and private practice often results in a loss of discipline among physicians. This dual system of practicing both in the public and private sector is widely prevalent among the various categories of health professionals.

Access and coverage

Egypt has an extensive network of physicians and facilities with 95% of Egyptians living within 5km of a health facility, however, access to and utilization of the system is not equitable or conducive of generating the best possible health outcomes. The current strategy aims at universal access to a basic primary care package. Several aspects of the performance of the health service delivery system including its utilization, efficiency, and quality will be discussed below within health services utilization.

Egypt's MOHP data (NICHP) show that Egyptians use significant levels of both inpatient and outpatient services.

Inpatient care utilization

MOHP data from 2001 show that hospital (general and district) admission average 29 per 1,000 population, or 0.029 admissions per capita per year (in the upper middle range for developing countries). If we consider the admission to specialized hospitals, this figure rises to 36 per 1,000 population, an average length of stay of three days. Nearly 85% of all inpatient stays occurred in either a government or public facilities with only 15% of inpatient stays being accounted for by private facilities. The average turnover rate in Egypt is 65 patients per bed, per year.

- Regarding hospital admissions, there is a total of 1,926,675 (29 per 1000 population per year) in general hospitals, the specialized hospitals have an additional 435,054 admissions making a total of 2,361,729 (36 per 1000 population admissions per year).
- Surgical operations totaled 1,094,672 at general hospitals and 119,624 operations in specialized hospitals.
- Causes of hospital admission (sample of 10% of MOHP admissions) are listed below.

- Trauma, accidents, poisoning, 18.97% (main age range 15–45 years, 53% male)
- Pregnancy, labor, and their complications, 18.61% (females, aged 15–45 years)
- Gastrointestinal, mainly acute appendicitis and inguinal hernia, 13.01% (aged 15–45 years)
- Respiratory system, 11.16% (25% are under 5 years, 22% are tonsillitis cases)
- Urogenital system, 10.08%
- Cardiovascular system, 6.53%
- Infections and parasitic infestation, 7.49%

Hospital Occupancy in 1994–1995 in Egypt was 45% (Data for Decision Making, 1995). However, the household survey conducted in 1996 showed even a lower occupancy rate of 32%. Both studies confirm the low occupancy rates of Egyptian hospitals. This figure rises to 38.4% in 2001 (NICHP), still indicating the low utilization of MOHP beds. The average length of stay (ALOS) is three days (six days in 1996) and varies according to case mix and cause of admission. Sample average stays in different areas are listed below.

- Psychiatry, 18 days
- Plastic surgery, 8.8 days
- Obstetrics and gynecology, 1.7 days
- Incubator care, 4 days

Outpatient service utilization

Data show that on average households reported four outpatient visits per capita per year, a relatively high rate by international standards. This includes and complements high levels of pharmaceutical consumption. Total number of outpatient visits depends on the following points.

- General and district hospitals 21,455,240 (0.33 visits per capita per year) and emergency rooms 7,025,918 (0.10 visits per capita per year) with a total of 28,481,158 (0.43 visits per capita per year).
- Specialized hospitals 8,952,960 (0.10 visits per capita per year).
- Primary health care center outpatient visits 19,277,708 (0.29 visits per capita per year) .
- Dental outpatient visits 4,197,350 (0.06 visits per capita per year).
- Total MOHP outpatient visits 1.4 visits per capita per year, and all outpatient visits per capita per year is 3.98.

Improvement in hospital-based services is illustrated in Table 8.1.1.

Table 8.1.1: Improvement in hospital based services(1996-2005)

Efficiency Indicator 2005	1996	2001
MOHP hospital beds (78502)	69.093	80.519 (56.3%)
Average length of stay (days)	6.0	3.0
Occupancy rate (%)	32	38.4
Bed turnover (cases)	42	65
Outpatient visits (cases/1000)	3.5	4
Hospital admissions (cases/1000)		

Source: HCAIHC

8.2 Package of Services for Health Care

The Basic benefits Package (BBP) is given in section 8.3 in detail. The Basic Benefits Package is designed to prevent and treat the most prevalent and pressing health problems among individuals in a population. To select the health services included in a basic benefits package for Egypt these four criteria are used:

1. The most common health needs of the population to reduce suffering and improve well being.
2. The severity of the illnesses and diseases afflicting the population.
3. The cost-effectiveness of interventions to treat or cure those illnesses and diseases and attain the most for money spent.
4. The availability resources.

The definition of the Basic Benefits package proceeded according to these steps:

- Develop a list of the most essential preventive and curative services needed by the Egyptian population.
- Circulate this list to the key health officials and providers in the system to determine the applicability of the proposed list to health needs in general and the specific needs of different districts.
- Calculate the costs of the proposed services in the list.
- Define the Basic Benefits Package according to the four criteria for selecting services:
 - Burden of disease
 - Severity
 - Cost-effectiveness of interventions
 - Available resources

This package is a first step towards the attainment of universal health coverage for all Egyptians. With increased efficiency in the system, government allocations to primary care and beneficiary co-payments, the basic benefits package can expand to include more services and be adapted to meet local needs by health authorities in diverse governorates.

8.3 Primary Health Care

Expenditures on PHC and preventive medicine (PM) have been significantly increased since the period 1995 to 1996. MOHP data indicated an 81% increase in expenditure on

PHC and PM over the last five years (1995/1996 to 2000/2001). PHC and PM represent 44% of the total MOHP expenditures (between headquarters and governorates). This indicates the special concern and focus of MOHP on preventive approaches and PHC as a gatekeeper for health care in Egypt. There is a wide network of PHC facilities (total of 4,506) distributed all over the country illustrated in Table 8.1.2.

Table 8.1.2: Distribution of health facilities across Egypt (2005)

Health facilities 2005	Number
Rural Health Unites	3006
Rural health centers	268
Rural hospitals	323
Urban health centers	298
Maternal and children health centers	195
Health offices	338
District clinic	78
Total	4506

Source: Central Administration of Integrated Health Care (CAIHC)

Table 8.1.3: Distribution of health care workers in Egypt (2005)

Health care workers	Number
Physicians	12,917
Dentists	3, 885
Pharmacists	1277
Nurses	44,300
Lab technicians	3,575

Source: Central Administration of Integrated Health Care (CAIHC)

Infrastructure for Primary Health Care

A high proportion of physicians have specialist training. Of the 40,422 physicians employed by the MOHP in December 2001, 21,430 (59%) are specialists (although this includes house officers in training). The areas of specialization are given in the table below.

Tables 8.1.4, 8.1.5: Comparison of specialists

Specialty	2005				
	House officers	Specialists	Total specialists + house officers	% of specialists	Ratio/beneficiaries
General surgery	2,473	616	3,089	13.8	4.4
Plastic surgery	48	8	56	0.2	0.1
Chest and cardiac surgery	68	35	103	0.5	0.1
Neurosurgery	26	8	34	0.2	0.0
Urology	814	212	1,026	4.6	1.5
Orthopedics	800	352	1,152	5.1	1.6
ENT	837	297	1,134	5.1	1.6
Obstetrics and gynecology	2,857	1,218	4,075	18.2	5.8
Ophthalmology	801	292	1,093	4.9	1.5
Internal medicine	1,951	573	2,524	11.2	3.6
Cardiology	238	91	329	1.5	0.5
Psychiatry	364	66	430	1.9	0.6
Pediatrics	1,922	661	2,583	11.5	3.7
Chest	669	182	851	3.8	1.2
Dermatology	785	369	1,154	5.1	1.6

Source: NICHHP

Specialty	2005				
	House officers	Specialists	Total specialists + house officers	% of specialists	Ratio/beneficiaries
Laboratory (clinical pathology)	785	369	1,154	5.1	1.6
Endocrinology	14	10	24	0.1	0.0
Endemic (tropical medicine)	522	191	713	3.2	1.0
Anesthesia	738	257	995	4.4	1.4
Diagnostic radiology	267	120	387	1.7	0.5
Curative radiology	51	43	94	0.4	0.1
Physiotherapy	415	178	593	2.6	0.8
TOTAL	16,660	5,779	22,439	100.0	31.8

Source: NICHHP

The main features of the data in the table above are as follows.

- The data refer only to physicians employed by the MOHP. When the whole of the health workforce is considered, the proportion of specialists is even higher. The 1995 Provider Survey showed that 88% of private physicians are specialists.
- Family physicians would be treated as specialists in primary care and therefore do not register on this table.
- Ministerial decree NO 62/2004 stated that :the physicians who attend the family medicine fellowship course should be treated as specialist

There are two dominant employers of health personnel in Egypt, the MOHP and the HIO. In addition, other organizations and ministries (notably the Ministry of Higher Education [MOHE]) employ health personnel, as do the military, public organizations such as Egypt Air, Curative Care Organizations (CCOs), General Organization for Hospitals and Teaching Institutes, NGOs, and private hospitals. There are also significant numbers of self-employed doctors, dentists and pharmacists.

The numbers employed by the two main organizations are given in Table 8.1.6, below.

Table 8.1.6: comparison of MOHP and HIO personnel (2005)

Health Personnel	MOHP			HIO		
	Reg 2005	In post 2005	%	Reg 2005	In post 2005	%
Physicians	68,499	46,160	67.39	7,288	5,830	79.99
Dentists	9,367	7,092	75.71	1,882	1,569	83.37
Pharmacists	10,083	7,561	74.99	2,661	2,335	87.75
Graduate Nurses	4,420	3,497	79.12	1,126	996	88.45
Nurse technicians	2,308	2,096	90.81			
Diploma Nurses	98,248	87,465	89.02	19,390	18,117	93.43
Nursing(other)	4,397	4,137	94.09	1,306	1,301	99.62
Subtotal, all nurse	109,373	97,195	88.87	21,822	20,414	93.55
Technicians	32,079	28,075	87.52	3,011	2,661	88.38
Assistant Technicians	1,150	10,474				

Source: NICHIP

The main features of the data in the table above are as follows.

- The two main employers together only employ just less than half of the health workforce. Other ministries and the private sector are also major employers of health personnel. Hence, if the MOHP wishes to control the distribution of the health workforce it can only partially do this through its own employment or deployment procedures: it must also exert control through the regulation of other employers.
- The HIO are marginally more successful in retaining their staff, probably due to the better terms and conditions offered.

- An important feature of the way in which health personnel are employed is dual or multiple employments. However, dual employment does mean that the numbers given above for employment by the MOHP and HIO do not imply that the personnel are employed only by MOHP or HIO: they may also be employed by other agencies.

Public/private, modern/traditional balance of provision

The public sector in Egypt cannot provide all health care services because of the continuous increase of health services cost. The intention is to provide a hybrid model of both public and private sector provision. The aim is to encourage private sector investment where the local market conditions make it sustainable.

The Health Sector Reform Program, through the Governorate's plans, is preparing to cover 35 - 40% of the urban population through MOHP health services, while the rest will be covered by private/NGO. Partnership with private/NGO will give the opportunity for HSRP to enable the coverage of underserved areas with family health model and basic benefits package.

Having a contract with the private sector will maintain the implementation of the national quality standards among different types of health service providers. On the other side, this will provide an equity dimension for both of public and private sectors patients.

Primary care delivery settings and principal providers of services; new models of provision over last 10 years

Over the period of piloting the Family Health Model in at the first five Governorates, number of standards has been developed through the Health Sector Reform and in coordination with Quality Improvement Department and vertical programs at the MOHP, this includes:

- Standard criteria of accreditations
- Basic Benefits Package (BBP)
- Standard staff pattern
- Standard list of training programs
- Family Folder
- Standard equipment and furniture
- Building design and patient flow
- Clinical guidelines for Basic Benefits Package
- Essential Drug List (EDL)
- Referral system

Quality improvement Department has developed Accreditation Standards. Health facility accreditation is mandatory prior contract with Family Health Fund. The Primary Assessment of the facility, through the Quality Improvement Department, is to evaluate the current situation and the required needs to fulfill the accreditation program. This is followed by training of the staff on quality improvement, infection control, leadership, accreditation program, and clinical guidelines. The third step is the pre-accreditation through on-job training to evaluate the current performance and to set the improvement plan, where the Technical Support Team in each governorate is responsible to follow up the implementation of the improvement plan.

Final accreditation is based on measuring eight categories. Each category includes several measures that focus on the key processes, the activities and the outcomes that facilities should achieve. During the accreditation survey, facilities are assessed to determine their compliance with standards in each of the eight categories. These eight categories are: patient rights, patient care, management of the facility, management of

human resources, management of support services, management of information, quality improvement program and infection control program.

Public sector: Package of Services at PHC facilities

The Health Sector Reform Program launched by the Ministry of Health and Population has defined as an essential corner stone a set of health services that the Government of Egypt would like to offer to the general population, with a special emphasis on the poorest and the low-incomes categories. This core set of health services delivered by the reformed health system is called "the Basic Benefit Package". It is the masterpiece of the Family Model, which has been chosen as a strategic model in the new service delivery.

	Child health services	Family Health Unit	Family Health Center	Referral Hospital
I .	Neonatal care A1 *	<ul style="list-style-type: none"> . Assess and identify cases of jaundice, infections or congenital abnormalities . Refer complication to Hosp. . Early detection of hypothyroidism by blood sampling (during 1st week of life) . referral of positive cases to Hosp. 	<ul style="list-style-type: none"> Assess and refer complication to Hospital . Early detection of hypothyroidism by blood sampling (during 1st week of life) . Referral of positive cases to Hosp. 	<ul style="list-style-type: none"> . Assess and manage complications (e.g. jaundice), asphyxia, and hypothermia. . Management of hypothyroidism cases
	Management of young infant A2 *	<ul style="list-style-type: none"> . Management of possible serious bacterial infection and referral to Hospital . Management of local bacterial infection and non-bacteriological infection. Follow up, and referral if needed. . Early detection of congenital anomalies and referral to Hosp. . Counseling (incl. Breastfeeding) 	<ul style="list-style-type: none"> . Management of possible serious bacterial infection . Treatment of local infection . Referral to Hospital if needed. 	<ul style="list-style-type: none"> . Management of complicated cases of serious bacterial infections
M .	Immunization services and vitamin A supplementation A3 *	<ul style="list-style-type: none"> BCG 0 – 3 m. OPV 2, 4, 6, 9, 18 months DPT 2, 4, 6, 18 months Hep. B 2, 4, 6 months Measles 9 months MMR 18 months DT 6 and 9 years (school Health) . Vitamin A supplementation (9-18 m) . Missed opportunities tracing . Counseling mother on family planning 		
C .	Monitoring of Growth and Development A4 *	<ul style="list-style-type: none"> . Assessment of developmental status . Assessment of nutritional status and nutrition counseling (incl. breastfeeding / weaning) . Iron supplementation in Anemia . Identification and referral of rickets and severely malnourished to FHC/Hospital 	<ul style="list-style-type: none"> . Diagnosis and treatment of recurrent and resistant cases 	<ul style="list-style-type: none"> . Management of serious cases of rickets, kwashiorkor or marasmus . Management of severe anemia
	Management of Childhood Illness A5 *	<ul style="list-style-type: none"> . Assessment, classification and treatment of ARI/ wheezing, Diarrhea, Malnutrition, Ear / Eye problems, Sore Throat, Fevers (Measles). . Counseling on home care. . Follow up visits. . Referral of severe cases to FHC or Hospital. 	<ul style="list-style-type: none"> . Management of child with serious infection. . Emergency treatment (airway, oxygen, IV, convulsion) . Referral to Hospital if needed. 	<ul style="list-style-type: none"> . Emergency treatment (airway, oxygen, IV, treat convulsion, continued problem-based assessment and treatment)
	Management of rheumatic fever and complications A6 *	<ul style="list-style-type: none"> . Assessment, treatment of acute simple cases . Refer chronic and complicated cases (rheumatic heart disease, nephritis, arthritis) to Hospital/ Specialist . Counseling 		<ul style="list-style-type: none"> . Management of rheumatic heart disease, nephritis, arthritis complications . Counseling

* Intervention with available national guideline/protocol

* Stabilization = pre-referral treatment

C. Health Services for All Age Groups (including Young Adolescent, Adult and Aging Health Services)		Family Health Unit	Family Health Center	Referral Hospital
Communicable Diseases	DOTS / Treatment of Tuberculosis C1 *	<ul style="list-style-type: none"> . Identification of symptoms, referral of suspected cases to special center (Chest hospital) . Health education . Identification of contacts and referral of patients for screening . Follow up: supervised treatment 		Chest Hospital: lab tests (2 positive sputum smears), start standard regimen with triple antibiotherapy, follow-up and back-referral to the FHU for treatment compliance
	Treatment of helminthes C2 * (Schistosomiasis, Fasciolis, and others)	<ul style="list-style-type: none"> . Identification of symptoms, diagnosis and treatment . Health education . Participation in peripheral activities of control program, according to protocols . Referral of complicated cases to FHC or Hospital 	Diagnosis and treatment of complicated cases	Management of resistant and complicated cases
	Management of Urinary Tract Infections/ Sexually Transmitted Diseases UTI/STD C3 *	<ul style="list-style-type: none"> . Syndromic assessment and early detection of UTI cases, treatment . Syndromic assessment of STD cases and treatment (both partners) . Health education . Referral of complicated cases to FHC, Hospital or special clinic 	Diagnosis and treatment of complicated cases	Management of resistant and complicated cases
	Management of Respiratory Tract Diseases / ENT (Ear Nose Throat) C4 *	<ul style="list-style-type: none"> . Assessment, diagnosis and treatment of chest diseases, otitis, tonsillitis, etc.. . Health education. . Early detection and referral to Hospital for suspect pneumonia. 		Management of chronic or complicated cases
	Management of Gastro-intestinal diseases C5 *	<ul style="list-style-type: none"> . Assessment, diagnosis and case management . Hepatitis screening by clinical examination . Counselling . Referral of recurrent and resistant cases to FHC or Hospital 	<ul style="list-style-type: none"> . Diagnosis and treatment of recurrent and resistant cases . Lab diagnosis for referred Hepatitis cases + management/treatment . Referral of complicated cases to Hospital 	<ul style="list-style-type: none"> . Management of complicated cases . Surgical management of intestinal obstructions and infections
	Skin infections and allergies C6 *	<ul style="list-style-type: none"> . Assessment, diagnosis and case management according to guidelines . Counselling . Referral of recurrent and resistant cases to Hospital 		Diagnosis and treatment of recurrent and resistant cases
Non Communicable Diseases	Management of Diabetes C7 *	<ul style="list-style-type: none"> . Diagnosis (clinical, urine test and plasma glucose) and treatment of uncomplicated cases. . Control of uncomplicated cases monthly. Complication detection . Referral of complicated cases to FHC or Hospital. . Counseling on diet, hygiene, exercise 	Management of uncontrolled cases	Management of uncontrolled and complicated cases (ketosis, persistent hyperglycaemia, intercurrent illness)
	Management of Hypertension C8 *	<ul style="list-style-type: none"> . Identification of symptoms, diagnosis and treatment of uncomplicated cases, . Referral of complicated hypertension to Hospital. . Control of uncomplicated cases monthly . Counseling on diet, exercise 	Management of uncontrolled cases	Management of uncontrolled and complicated cases (internal hemorrhage, hemi- or paraplegia, etc..)

	Management of Ischemic Heart Disease C9 *	. Early identification (clinical and simple diagnosis) and referral to Hospital for management of Myocardial Infarction (MI) . Follow up of confirmed and stable MI patients monthly	. 6-monthly follow-up visit for chronic stable cases	Management of uncontrolled and complicated cases (dyspnoea, oedema, arrhythmia and uncompensated chronic ischemia)
	Management of Rheumatic and Allergic diseases C10	. Early identification (clinical and simple diagnosis) of arthritis, and referral to Hospital . Counseling for psycho-somatic cases		Management of uncontrolled and complicated cases
Eye problems (Conjunctivitis, trachoma, glaucoma)	C11 *	. Identification, diagnosis and treatment . Health education. . Early detection and referral to hospital for suspect glaucoma.		. Surgical treatment of glaucoma . Diagnosis and treatment of recurrent and complicated cases
Dental care	C12	. Emergency treatment / Tooth extraction . Caries care/filling, Gum treatment . Referral to Hosp. for dental prosthesis		
Management of emergencies C13 * (Trauma/accidents, injuries, haemorrhage, poisoning/snake and scorpion bites, shock, burns, acute pain acute renal shock, convulsion, occupational hazards)	C13 *	. First aid, anti-shock treatment stabilisation of fractures, IV line as needed, . Referral to Hospital if needed. . Parent's education on the prevention of household child accidents	. First aid, anti-shock treatment stabilisation of fractures, IV line as needed, . Referral to Hospital, if needed.	. Management of fractures (reduction, fixation) . Management of recurrent and complicated cases . Surgical cases : life-threatening cases . Complicated burns with skin retraction : cosmetic surgery preventing disability (skin graft)
Minor surgery*	C14 *	. Assessment and minor surgery* (e.g. nail extraction, abscess, cut wound, male circumcision) . Follow up. . Referral to Hospital for other surgery requiring general anaesthesia and admission over night.	. Assessment and minor surgery* (e.g. nail extraction, abscess, cut wound, male circumcision) . Follow up . Referral to Hospital for other surgery requiring general anaesthesia and admission over night.	
Mental Health	C15 *	. Early detection of mental and neurological disorders . Referral to Specialist Centre or Mental Hospital		

*Minor surgery = surgery that can be done (i) ambulatory, (ii) does not require general anesthesia or (iii) does not require a specialist surgeon.

* = Intervention with available national guideline/protocol

Laboratory Tests

Family Health Unit	Family Health Center
<ul style="list-style-type: none"> . Blood glucose . Blood group, Rhesus Factor (RH) group . Erythrocyte Sedimentation Rate (ESR) . Haemoglobin (HB) . Pregnancy test . Stool analysis . Urine analysis 	<ul style="list-style-type: none"> . Antistreptolysin O titre (ASOT) . Blood chemistry : <ul style="list-style-type: none"> - glucose - liver function - kidney function - electrolytes . Blood cross-matching . Blood group, Rhesus Factor (RH) group . C-reactive Protein (CRP) . Cerebro-Spinal Fluid (CSF) . Complete Blood Count (CBC) . Culture sensitivity . ESR . Haemoglobin . Microbiology : throat swabs, smear staining, cultures and antibiotic sensitivity . Pregnancy test

	<ul style="list-style-type: none"> . Semen analysis (infertility) . Stool analysis . Urine analysis
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Radio Diagnostic services

Family Health Unit	Family Health Center
None	<ul style="list-style-type: none"> . Plain X-Rays for any part of the body : <ul style="list-style-type: none"> - Chest (face, lateral) - Abdomen (face, lateral) - Bone fractures - Foreign body . Ultrasound

Minor Surgery

Family Health Unit	Family Health Centre
<ul style="list-style-type: none"> . Male circumcision . Sebaceous cyst . Lipoma . Simple abscess . Nail extraction . Warts . Cut wound suture 	<ul style="list-style-type: none"> . Male circumcision . Sebaceous cyst . Dermoid cyst . Lipoma . Simple abscess . Breast abscess . Nail extraction . Warts . Cut wound suture . Hand and foot infection

The Basic Benefit Package will be provided at 3 primary care levels, through the family health delivery model:

Family Health Unit	Basic outpatient preventive and curative services, minor surgery and basic Lab.
Family Health Centre	Curative + Diagnostic services (Lab, X ray) Safe deliveries, minor surgery
Hospital	Specialist outpatient services Basic inpatient services Other referral services / Emergency surgery

The Family Health Unit (FHU) is the first level of care and the entry to the Family Health system of care. A FHU will have between one and eight family health practitioners, divided in up to the served population.

The Family Health Center (FHC) is the first level of referral for basic inpatient services from the FHU: e.g. safe deliveries, essential obstetric care, uncomplicated neonatal services and severely ill children. Ideally, one FHC will serve a population of 50,000 to 100,000 at < 5 km distance, which is the cumulative population of 5 to 6 FHUs. The same assessment, diagnosis/classification, treatment and referral guidelines methodology will be used as in FHU. At the FHC, specialists in pediatrics, obstetrics/gynecology and internal medicine will be available. All other problems needing anesthesia will be referred directly from the FHU to Hospital.

Private sector: range of services, trends

The Private Sector delivery structure tends to be unorganized and fragmented, but amounts to a significant proportion of both inpatient and outpatient services. The quality

of its services varies widely and is largely unregulated. There is also more emphasis on curative services rather than preventive and health promotion services. So far, the private sector has not been involved in the health policy dialogue nor has it demonstrated significant interest in doing so.

Private sector provision of services covers everything from traditional healers and midwives, private pharmacies, private doctors, and private hospitals of all sizes. Also, in this sector are a large number of NGOs providing services, including religiously affiliated clinics and other charitable organizations, all of which are registered with the Ministry of Social Affairs.

Physicians represent the most powerful professional group in the health sector. Doctors are permitted to work simultaneously for the government and in the private sector. Those who are employed by the government but run a private practice because of their low salaries, account for a large portion of private providers. Many other physicians, however, cannot afford to open their own private clinics and work in more than one non-governmental religious or private facility, in addition to their morning government jobs.

The Egyptian National Health Care Provider Survey (MOHP/DDM, 1995) showed that 89% of the physicians in the sample have multiple jobs. The proportion of physicians with two jobs (i.e. another job outside their private clinic) was 73%, while 14% had three jobs and 2% had four jobs. The MOHP employs 53% of physicians with multiple jobs, followed by universities with 14% and HIO with 11%. See table 8.1.7 for distribution of physicians with private clinics by number of jobs (%).

Table 8.1.7: Distribution of physicians with private clinics by number of jobs

Number of jobs	Percentage
One	11
Two	73
Three	14
Four	2

Source: Egyptian National Health Care Provider Survey, 1997

The remaining physicians include well-established and qualified senior physicians, who are usually faculty members in the major medical schools or shareholders in modern private hospitals. These physicians have the technology, the resources, and the visibility required to run very successful and profitable private practices.

After the declaration of an open economic policy in 1974, the private health sector began to grow. Between 1975 and 1990, the total number of private beds rose significantly. Private care providers in Egypt range from large modern sophisticated hospitals, to smaller hospitals, day-care centers, polyclinics and individual clinics

In the private sector, there is also a number of Private Voluntary Organizations (PVOs) providing care through polyclinics and small hospitals, which usually are affiliated with charitable or religious organizations. Out of the various PVOs, the mosque clinics operated by Muslim social agencies have become the stereotype of non-profit organizations that are perceived to be popular and successful providers of ambulatory health care in Egypt. PVO health services are increasingly localized in the larger provincial cities, particularly those governorate capitals with medical universities and teaching hospitals. Those in metropolitan Cairo are known for their quality medical care, thriving on low-cost services that are readily accessible to low-income households, These are mostly manned by senior to middle level university medical staff. Village PVO clinics are scarce and are least likely to be sustainable.

Recently, PVOs have started to hire university consultants in their staffing patterns in addition to the introduction of modern technology. This situation not only increases their power and participation in the health care system, but also enhances the accessibility and willingness of the population in utilizing their facilities. PVO health care mirrors the private, for-profit sector in its preoccupation with curative health services. Rarely do PVO health care providers offer health education, provide public information and awareness campaigns, conduct health outreach to their patients or communities, or promote preventive care. The PVO health sector is financially self-supporting through user fees. Small PVO clinics however are generally losing more on current operations and far more vulnerable to service disruption and failure. Overall, the PVO sector receives only a very small share – just 1% – of health care spending in Egypt. The sector's overall contribution to health care across Egypt is as yet marginal when measured objectively against the share of health care spending that goes to private physicians, pharmacies and government, public sector and university hospitals.

Referral systems and their performance

The Ministry of Health and Population has an official referral system, which is not active in all of PHC facilities. The Health Sector Reform Program is putting a sizeable effort to strengthening the referral system at all of its pilot governorates.

The first level referral for the family health unit (FHU) would be the family health center or general hospital, depending on access and need for specialist care. The FHU can refer to the general hospital, which will only accept referred cases.

The Health Sector Reform Program is in total coordination with different MOHP departments in the process of completing the following issues in relationship to the referral systems:

- Update the current referral guidelines:
 - Revise guidelines for referral (including minimum basic services at each level of referral) and tie them to provider payment systems
 - Based on the new referral guidelines, establish referral policies and a procedure manual.
- Develop job descriptions and standard basic treatment policies and guidelines.
- Revise in-service and undergraduate/per-service training curriculum.
- Ensure information dissemination and community participation.
- Register and map population in catchments areas of pilot governorates where the Family Health Management Model will be implemented.

Utilization: patterns and trends

The Egyptian National Health Care Provider Survey (MOHP/DDM, 1995) showed that there are large differences in the utilization pattern by type of provider according to the geographical region (urban versus rural) for health care services.

Current issues/concerns with primary care services

- A highly dichotomized health delivery system, in which inpatient care is largely provided by the MOHP/public sector, while most ambulatory care and pharmaceuticals are mainly provided by the private sector.
- A segmented provider market structure which results in different population groups having different points of access, different level of payments, and following different paths after entry into the system.

- There is marked disparity among different population groups that affects the health status of these groups (socioeconomic, gender, educational, geographical and insurance coverage).
- Inequities also exist in the quality of services due to poorly equipped facilities, lack supplies and drugs, and are staffed by unmotivated, often poorly trained, practitioners.
- Secondary care (hospital-based) is still under-utilized in spite of its high costs.
- Emphasis on vertical programs that target specific conditions rather than overall health of the community. This vertical supply of services leads to a high level of expensive duplication of costly services and unfortunate gaps.
- Under the existing fragmented financing and delivery systems of vertically integrated government and public providers, there is limited scope for the provider payment system to have any effect on the efficiency and quality of services. To be effective, there needs to be a provider market in which each provider faces economic incentives to improve quality and efficiency of services.
- Government expenditure on PHC and preventive activities has been increased, however it is not adequately allocated to maintain quality of provided care.
- Some quality issues have been initiated as accreditation and development of clinical guidelines and the hospital management modules, but further revision, refinement and expansion are likely to be taken into consideration.
- Marked improvement in information systems at different sectors, departments and projects that necessitate their integration to serve for decision-making.
- Population growth is still a major problem constraining country development and an ambitious population strategy is must.

Planned reforms for delivery of primary care services

Health care services reform aims to ensure universal access to a basic level of care including preventive, curative and rehabilitative services which utilize cost-effective interventions to maximize well-being and address priority community health problems. The following presents the Ministry of Health and Population strategies outline for the health care service.

- Reduce the infant mortality rate and maternal mortality rate by dealing with the mother and child as a one unit and addressing:
 - Contribute to significant reduction in population growth.
 - Address significant causes of adult and overall mortality and morbidity
 - Develop and ensure access to a BBP of preventive and curative outpatient and inpatient services.
 - Develop the BBP and the Essential Drug List (EDL).
 - Design the delivery of the BBP through the Family Health Model
 - Full implement the referral system.
 - Develop and sustain basic preventive and promotional public health programs.
 - Promotion of a healthy lifestyle.
 - Injury prevention and control.
 - Communicable disease control.
 - Environmental sanitation.
 - School health program improvements.
 - Healthy Egyptians 2010 initiative (a public health agenda).
 - Environmental health.
 - Smoking control

The Health Sector Reform Program plan for implementing of family Health Model divided into three phases,

Phase One: It includes 10 governorates and will continue for two years. It includes governorate of Cairo, Giza, Kalubia, Demietta, Fayum, Behera, Beni Suef, Ismailia, Port Said and Wady el Gaded. It is planned to complete it by December 2006.

Phase Two: It includes 6 governorates and will continue for two years. It includes governorates of Sharkia, Ghrbia, Menia, Dakahlia, Aswan and Kafr el Sheikh. It is planned to complete it by December 2008.

Phase Three: It includes 6 governorate and will continue for one year. It includes governorates of Marsa Matrouh, Norht and South of Sinai, Red See, Asiout and Louxor. It is planned to complete it by December 2010.

8.4 Non personal Services: Preventive/Promotional Care

Environmental health

In June 1997, the Ministry of State for Environmental Affairs was established. The new ministry has focused, in close collaboration with the national and international development partners, on defining environmental policies, setting priorities and implementing initiatives within a context of sustainable development.

At the central level, Egyptian Environmental Affairs Agency (EEAA) represents the executive arm of the Ministry.

Environmental objectives of the Ministry

- **Short-term:** to reduce current pollution levels and thereby minimize health hazards and improve quality of life. It is responsible for environmental sanitation issues including control of water and air pollution and of hazardous and industrial waste. It is also responsible for the issue and enforcement of related regulations and legislation.
- **Medium-term:** to preserve the natural resource base, national heritage and bio-diversity within a context of sustainable development.
- **Strategic:** to introduce and integrate environmental dimensions in all national policies, plans, and programs relevant to protection of human health and management of natural resources.

Health education/promotion

Ministry of Health and Population is responsible for health education and promotion. Table 8.1.9 presents the key themes and its contents.

Table 8.1.8: Basic preventive and promotional public health services

Theme	Content
Healthy living	– Substance abuse control (tobacco, drugs, medicines)
	– Diet
	– Malnutrition
	– Exclusive breastfeeding until 6 months
	– Breastfeeding until 2 years
	– Baby-friendly hospital initiative

Injury prevention and control	<ul style="list-style-type: none">- Obesity- Cholesterol screening and counseling- Stress reduction and counseling- Traffic accidents- Domestic injury and violence- Occupational hazards
Communicable diseases control	<ul style="list-style-type: none">- Screening, surveillance, early detection and early response for selected priority diseases- Community approach to integrated prevention and management of childhood illness- Immunization and disease control
Environmental health	<ul style="list-style-type: none">- Environmental safety- Indoor and outdoor air pollution- Waste disposal- Access to safe water supply- Sanitation- Food safety- Fly control- Healthy living
School health program	<ul style="list-style-type: none">- Injury prevention and control- Gender education and awareness- De-worming- First aid- Screening and treatment of selected infections (schistosomiasis)

8.5 Secondary/Tertiary Care

Table 8-2 Inpatient use and performance

	1990	1995	2000	2004
Hospital Beds/1,000	2.04 (93)	2.07	2.19	2.02
Admissions/1000	-	27 (96)	29 (01)	2.17 (02)
Average LOS (days)	-	6.0 (96)	3.0 (01)	3.0
Occupancy Rate (%)	-	32 (96)	38.4 (01)	48

*The numbers presents the national averages and not only MOHP.

Source: NICHHP Report, Ministry of Health and Population, 2004,

Egypt Health Sector Analysis and Future Strategy, MOHP

Egypt has 3,508 inpatient providers located in 24 different types of facilities. The total number of beds found in these facilities is 143,940, which translates to a rate of 2.2 beds per thousand of the population (2001, MOHP). Egypt has a large number of fever (99), chest (35) and ophthalmology (29) hospitals. These facilities are all located in urban areas. At rural level, Egypt has 371 rural hospitals and 272-health group centers contributing 8.82% of inpatient beds. See table 8.2.1 for the national distribution of inpatient beds by type of facility.

Table 8.2.1: National distribution of inpatient beds by type of facility (2005)

Health facilities (with beds)	No. of units	Beds	
		Number	%
MOHP	1,166	78,502	51.59
Rural	669	11,093	7.29
Rural (integrated) hospital	439	8,509	5.59
Rural health group centers	230	2,584	1.70
Urban	497	67,406	44.30
General and district hospitals	233	34,656	22.77
Obstetric and pediatric hospitals	10	728	0.48
Mental hospitals	17	6,415	4.22
Chest hospitals	37	6,278	4.13
Chest clinics with beds	6	147	0.10
Dermatology hospitals	1	100	0.07
Ophthalmology	29	1,389	0.91
Endemic disease hospitals	8	83	0.05
Fever hospitals	104	10,203	6.70
Leprosy hospitals	3	1,273	0.84
Quarantine	5	79	0.05

MCH centers	199	0	0.00
Specialized Medical Centers (SMC)	24	4,818	3.17
Specialized hospitals and centers			0.00
One-day surgery hospitals	12	711	0.47
Cancer centers	8	529	0.35
Organizations *	69	17,596	11.56
Teaching hospitals and institutes (THO)	18	5,639	3.71
Curative Care Organization (CCO)	11	2,129	1.40
Health Insurance Organization (HIO)	40	9,828	6.46
Other ministries' hospitals	119	29,851	19.62
University (medical schools)	71	25,891	17.01
Police and prison	26	1,382	0.91
Others(companies, organizations , factories)	22	2,578	1.69
Private hospitals	1,329	26,223	17.23
Total	2,683	152,172	100.00

Source: NICHIP-MOHP,2005.

*under supervision of MOHP.

Egypt has large hospitals with an occupancy rate as low as 48% and a large number of small inpatient facilities with bed capacity of less than 50 beds. The MOHP is the single largest institutional provider of health care services in Egypt with an extensive network of over 4,000 facilities at primary, secondary, and tertiary level. University hospitals have the second largest bed capacity in Egypt accounting for **17.01%** of total bed capacity in the country. University hospitals and the specialized medical centers are the main providers of tertiary health care services in the country and are mostly concentrated in urban areas. In 2005, the private sector had a total of **1,329** inpatient facilities consisting of **26,223** beds and accounting for **17.23 %** of total bed capacity in Egypt (2005, MOHP). Health Insurance Organization (HIO) is another major provider of inpatient care in Egypt. In 2005, HIO had **40** facilities consisting of **9,828** beds.

The number of beds in Egypt has increased steadily over the last ten years, with the largest increase occurring in the private sector. Table 8.2.2 shows the change in bed capacity by provider in 1991, 1997 and 2001.

Table 8.2.2: Change in hospital beds by type of provider

Type of hospitals	year				change(2005 vs.1991)	
	1,991	1,997	2,001	2,005	Number	%
MOHP(urban and rural hospitals)	65,674	70,470	81,356	78,502	12,828	16.34
THO	4,501	4,753	5,404	5,639	1,138	20.18
CCO	4,799	5,477	2,127	2,129	-2,670	-125.41
HIO	4,871	6,380	8,301	9,828	4,957	50.44

Health Systems Profile- Egypt	Regional Health Systems Observatory- EMRO					
Universities (medicalschoools)	15,456	18,822	20,790	25,891	10,435	40.30
Police and prison	565	1,016	1,076	1,382	817	59.12
Others (companies , organizations,factories)	1,456	1,928	2,239	2,578	1,122	43.52
private hospitals	10,921	14,545	22,647	26,223	15,302	58.35
Total	108,243	123,391	143,940	152,172	43,929	28.87

Source: NICHP_MOHP,2005.

The number of beds overall increased to **28.87%** by 2005 (MOHP, 2005). The MOHP has an increase rate of 16.34% in hospital beds in the last fifteen years, adding **12,828** beds to its inpatient capacity between 1991 and 2005. The inpatient capacity of universities and hospitals increased by **40.30** %. The number of beds in the private sector has increased (**58.35%**), the majority of which are in Cairo. In the last fifteen years, HIO increased its inpatient capacity by **4,957** beds or **50.44** %. On the other hand, the bed capacity of CCO has reduced, with a decrease of **-2,670** beds over the last fifteen years. This is simply because most of its big hospitals have been shifted to another institution, newly developed within MOHP headquarters, termed Specialized Medical Centers (SMC).

Table 8.2.3: MOHP strategy (1997, 2001, 2017)

Indicator	1997	2001	2017
One bed *	per 700 pop.	per 804 pop.	per 400 pop.
Urban health center**	per 150 thousand pop.	per 139 thousand pop.	per 100 thousand pop.
Rural health center***	per 12 thousand pop.	per 18 thousand pop.	per 6 thousand pop.
One physician	per 1,000 pop.	per 1618 pop.****	per 750 pop.
One nurse	per 900 pop.	per 696 pop.	per 600 pop.
Health specialist	per 3,000 pop.	per 2,714 pop.	per 1,500 pop.
Dental clinic	per 37 thousand pop.	per 28 thousand pop.	per 20 thousand pop.

Source: Technical Support Office (TSO), MOHP.

* Population of Egypt (on 01/07/2001) = 65,419,797

MOHP hospital beds (in 2001) = 81,356

(If we consider the total bed capacity in Egypt of 143,940 beds, the ratio will be one bed per 455 of the population).

** MCH centers, urban health centers.

*** Rural hospitals, rural units, and rural centers.

**** The number of physicians working in MOHP units is 40,422 physicians.

If we consider physicians working in MOHP units together with those working in MOHP organizations (7,389 physicians), the ratio will be decreased to one physician per 1,338 of the population. Further decrease will be noticed if we consider the whole number of physicians registered in the Egyptian Medical Syndicate (144,354 physicians), i.e. one physician per 453 of the population. According to the family health model, recently applied and suggested in Egypt, urban and rural health units and centers would be given new terms as family health units (FHU) and family health centers (FHC). Dental clinics should no

longer be separate units, they are supposed to be a part of most health units and centers and other health facilities, e.g. hospitals and polyclinics.

Table 8.2.4 shows the distribution of physicians among some service providers. Those registered physicians who are not actually working are mostly on vacation (home or abroad). The total number of physicians registered in the Egyptian Medical Syndicate is 144,354 whereas those working in MOHP and other public health facilities number 75,314. The difference between the sets of figures is the number of physicians working in police and army, or those with private careers or already retired. Physicians working in the SMC are originally MOHP or with other public health facilities (1,196), very few having contracts (114) or being newly employed (1,205).

Table 8.2.4: Distribution of physicians among some service providers (2002)

Service provider	Number of physicians	
	Registered*	Actually working
Governorates	58,829	40,422
MOHP (headquarters)	390	341
SMC	2,715	2,515
CCO	348	174
HIO	6,651	5,041
THO	2,880	2,174
Universities	3,501	3,153
Others	69,040	-

Source: NICHP-MOHP, 2001.

* Registered in the Egyptian Medical Syndicate

Table 8.2.5 presents the distribution of beds by governorate according to health provider. Regarding private sector beds, the table shows a marked discrepancy between governorates such as Cairo (33,489 beds), Giza (12,127 beds) and Alex (13,347 beds) and other governorates such as Luxor (34 beds), Fayoum (345 beds), South Sinai (40 beds), North Sinai (50 beds), New Valley (36 beds) and Matrouh (12 beds).

Table 8.2.5: Bed distribution by health provider in governorates (2005)

Governorate	Number of beds				
	MOHP and SMC	MOHP org.*	Other ministries	Private sector	Total
Cairo	8,104	6,037	10,985	8,363	33,489
Alexandria	4,346	2,530	3,819	2,652	13,347
Port Said	1,017	467	38	340	1,862
Suez	1,119	250	0	301	1,670
Ismailia	1,320	50	836	263	2,469
Damietta	2,093	45	70	233	2,441
Dakahla	5,473	445	2,520	1,132	9,570
Sharkia	3,840	436	1,916	1,869	8,061
Kaliobia	5,996	1,155	1,177	924	9,252

Kafr El Sheikh	2,813	497	0	230	3,540
Gharbia	4,334	497	2,252	1,489	8,572
Menofia	3,466	941	850	500	5,757
Bahaira	3,771	765	237	412	5,185
Giza	5,921	1,171	801	4,234	12,127
Beni Suef	2,365	250	0	209	2,824
Fayoum	2,038	332	30	345	2,745
Menia	4,546	469	875	550	6,440
Assuit	3,734	387	2,648	921	7,690
Sohag	3,769	337	615	416	5,137
Qena	2,935	0	142	165	3,242
Aswan	1,678	535	10	328	2,551
Matrouh	873	0	0	12	885
New Valley	781	0	30	36	847
Red Sea	453	0	0	175	628
North Sinai	475	0	0	50	525
South Sinai	414	0	0	40	454
Luxor	828	0	0	34	862
Total	78,502	17,596	29,851	26,223	152,172

Source: NICHP-MOHP, 2005.

SMC: Specialized Medical Center

*MOHP organizations = CCO, HIO and THO

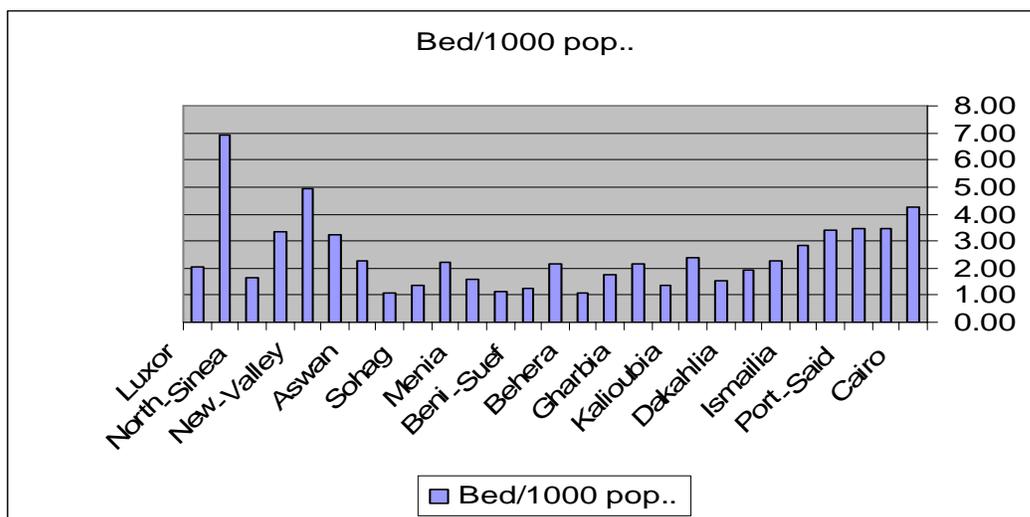
Table 8.2 6: Bed / Population by governorate and type of provider (2005)

Governorate	population	Number of bed	One bed per pop.	Bed/1000 pop.
Cairo	7820362	33489	234	4.28
Alexandria	3853873	13347	289	3.46
Port-Said	541707	1862	291	3.44
Suez	493402	1670	295	3.38
Ismailia	873315	2469	354	2.83
Damietta	1088857	2441	446	2.24
Dakahlia	4978752	9570	520	1.92
Sharkia	5166956	8061	641	1.56
Kalioubia	3911155	9252	423	2.37
Kafr ElShiekh	2616318	3540	739	1.35

Gharbia	3964082	8572	462	2.16
Menofia	3259719	5757	566	1.77
Behera	4737714	5185	914	1.09
Giza	5699013	12127	470	2.13
Beni-Suef	2275754	2824	806	1.24
El-Fayoum	2450128	2745	893	1.12
Menia	4099002	6440	636	1.57
Asuit	3455950	7690	449	2.23
Sohag	3846225	5137	749	1.34
Qena	2965499	3242	915	1.09
Aswan	1130998	2551	443	2.26
Matruh	274003	885	310	3.23
New-Valley	171799	986	174	5.74
Red-Sea	188454	489	385	2.59
North-Sinea	313884	525	598	1.67
south-Sinea	65801	454	145	6.90
Luxor	425407	862	494	2.03
Total	70668129	152172	464	2.15

Source NICH-PMOHP, 2005

Figure 5. Beds per populations in governorates



Except for South Sinai and New Valley governorates, which have the lowest population density in the country, the governorate of Cairo has the largest capacity of inpatient beds (one bed per 212 pop.), as shown in Table 3f and in Figure 5, Fayoum, Bahaira and Qena are the lowest-bedded governorates (one bed per 968 pop., one bed per 882 pop. and one bed per 872 pop., respectively).

Public/private distribution of hospital beds

Both the excess and misdistribution of bed capacity is aggravated by the MOHP–public–private imbalance. In many of the governorates with above national bed capacity (2.2 beds per 1,000 population in 2001), there is a strong presence of the private sector alongside the public sector. This is the case in Cairo (4.72 beds per 1,000 population in 2001), Alexandria (3.05 beds per 1,000 population in 2001), Port Said (2.88 beds per 1,000 population in 2001) and other governorates. In these governorates there is a strong HIO and CCO presence, in addition to an extensive MOHP network. Conversely, governorates such as Fayoum, Baheira and Qena, which have weak parastatal and or private capacities, are not targeted by the MOHP. The private sector should be invited and encouraged to share in health provision in such governorates and also in the remote and frontiers ones.

The Egyptian National Health Care Provider Survey conducted by MOHP and Data for Decision-Making (DDM) estimates that there are between 38,000 and 50,000 single doctor practices in the country. See table 8.2.7 for number of private sector providers and table 8.2.8 for private sector services

Table 8.2.7: Private sector providers(2005)

Type of service	Number 2002	Beds 2002	Number 2005	Beds 2005
Hospital	2024	22647	1329	26223
Clinics	44417*	-	33980	-

Source: NICHP .2005

*Single physician clinic. Polyclinics and dental clinics

Of the physicians sampled in private clinics, 92% were male, and 8% female. Of the 8% of female physicians, the majority is located in urban areas.

This has the implication that women in rural areas have limited access to female physicians in the private sector and where it may be particularly uncomfortable for them to be seen by male physicians.

Table 8.2.8: Private sector services (2002)

Types of services	Number	%
Single physician clinics	30,992	57.38
Polyclinics	7,073	13.10
Dental clinics	6,352	11.76
Medical laboratories	4,199	7.77
Dental laboratories	396	0.73
Private hospitals	1,869	3.46
Renal dialysis centers	343	0.64

X-ray centers	259	0.48
Physiotherapy centers	671	1.24
Opticians	1,648	3.05
Investment hospitals*	155	0.29
Gymnasiums	52	0.10
Total	54,009	100.00

Source: Non-Governmental Institutions and Licency Gen. Dept., MOHP, 2001.

* Those hospitals established under the investment law no. 8 in year 1997. This law gives them the advantage of 10 years tax-free. Meanwhile, 10% of beds of these hospitals should be delivered free (unpaid) to people.

The different types of services delivered by the private sector are shown in Table 8.2.8. Clinics constitute the majority of delivered private services i.e. 82.24% of all services delivered. Hospitals, whether private or investment, constitute 3.75%.

Key issues and concerns in Secondary/Tertiary care

Excess supply of beds: The excessive bed capacity in Egypt compared with the current low utilization rate (about 38%), places significant financial burden on the health care system. It also prevents the MOHP from allocating necessary resources to primary and preventive care. The problem with existing bed capacity is exacerbated further when the very low national hospital occupancy rates (ranging from 32%–45%) are taken into consideration. Better utilization of the number of beds could significantly improve efficiency and quality of care. In 2001, the population of Egypt was 65,419,797 and the total national bed capacity was 143,940 beds. This means there was one bed for every 455 of the population. Surprisingly, this ratio is almost the same as what was previously aimed at for achievement by 2017, which is one bed per 400 of the population. Hence, in special circumstances (as in the frontiers governorates and newly developing communities) new beds can be added to the current beds (143,940 beds). A reduction of available beds is to be adopted as a five-year policy.

Misdistribution of beds: Beds in Egypt are not properly distributed as evidenced by a 5 to 1 differential in beds between urban governorates, such as Cairo with 4.72 beds per 1,000 population, and poor rural Governorates, such as Fayoum, Bahaira and Qena with only 1.03, 1.13 and 1.15 per 1000 population, respectively.

Inappropriate mix of beds: Egypt has also many inappropriate beds, i.e. the type and mix of hospital beds and services are not always optimal. In South Sinai for example, one MOHP facility has 20 incubators, which exceeds the need in that region for this service, particularly when the characteristics of the population served in that area are taken into account.

Inadequate capital investment planning: Decisions on investments in physical capacity (e.g. number and categories of beds, diagnostic laboratories) and medical technology have a profound effect on the levels of health expenditure and the types of services that are provided and used.

While each government agency involved in providing health care is responsible for planning and recommending an appropriate level of investment for health services within their area of jurisdiction, there is no national level process that ensures the appropriateness of investments across all sectors – private, government and public. Regulation of capital investment is one important way in which the state rationalizes health care services and directs the resources toward the more needy areas. MOHP should put into action regulations to decide what, where and how a new health-

providing unit is going to be established. Technology assessment is mandatory in this respect, and national guidelines and standards will also be crucial.

Planned Reforms in secondary/tertiary care

Egyptian Health Sector Reform Program is focusing on the primary health care services in its current phase.

The reform goals for the health facility infrastructure focus on:

- A. Developing and institutionalizing systems, policies and procedures to rationalize investment in health infrastructure and to ensure efficient resource allocation; and
- B. Re-organizing the service delivery infrastructure along the new Family Health Model (discussed under the Health Services Section).

(A) Developing and institutionalizing systems, policies and procedures to rationalize health sector infrastructure

1. Adopting investment planning based on priority population health needs

One of the fundamental bases for reform rests on the ability of the government to have an institutionalized planning process whereby evolving demographic and health needs of the population are continuously analyzed and accounted for. This planning function is dependent on two factors:

- A strong health information system that has the capacity to integrate demographic, epidemiological and geographical profiles of the population with data on existing health resources; and
- A strong organizational capacity within the MOHP to consolidate and process the data for purposes of health planning.

Actions

- Conduct a national health status survey to identify the epidemiological profile of the population and to target health needs.
- Conduct a national facility survey.
- Develop an automated database to consolidate demographic, epidemiological and census data for health planning.
- Conduct an organizational analysis of all bodies that have input into the health planning function (the MOHP statistics department, the MOHP planning unit, census department and other relevant bodies) with the intent of consolidating/coordinating their planning roles where all information from the various units could be routinely compiled and analyzed.

2. Rationalize the development and distribution of health infrastructure

Much of the emphasis in the next period should be placed on rationalizing available resources and directing future growth in infrastructure. This effort is imperative to eliminate the substantial waste in the existing health care system and to improve its efficiency. This will require the establishment of a "certification of need" function in the MOHP to set and impose guidelines for investment in facilities, maintenance and technology for the whole health sector (MOHP, parastatal and private sectors) so as to ensure that:

- New facility construction and/or expansion is based on local community health needs and rational indicators, such as bed to population ratio.
- New capital-intensive technology acquisition is based on need, cost-effectiveness, affordability and geographic mapping of similar technology.
- Maintenance.

Establishing the certification of need process will involve:

- Identifying the MOHP function where the responsibility for investment control will reside.
- Reviewing the international experience in this respect.
- Build the technical capacity of this unit/function to perform its role through technical assistance.
- Developing and continuously updating national certification of need standards based on demographic, epidemiologic, and health transitions.

Resource allocation and investment rationalization strategies will address both bed capacity and medical technology/equipment.

3. Bed capacity

This component aims to:

- Stop the overall growth in number of beds at the national level to reach an appropriate bed capacity for Egypt.
- Re-distribute beds according to health needs at the regional level.
- Change the mix of health and medical services provided in order to meet the health needs of the population at the regional level.
- Establish policies to rationalize the expansion of bed capacity in the future through the certificate of need program.

Actions:

- **National facility survey:** to determine the number and geographical distribution of all health facilities in the country. More specifically, this survey will determine the type of services provided, number of beds by service, staffing patterns, use patterns, and number and distribution of medical technology and equipment.
- **Regional planning:** based on the results of the facility survey and the health status survey, regional planning will take place to determine the number of facilities needed.
- **Facility planning:** this process will build on the regional planning and will determine:
 - the type and mix of service needed in the region based on health needs
 - the optimal size of facilities by service areas.
- **Renovation facilities:** the facility reform plan may call for renovating some physical structures, especially after consolidation of facilities.
- **The certificate of need process:** as mentioned earlier, this will apply to both public and private sector and will require the development of standards and their regular review to ensure responsiveness to population needs. More specific investment plans should be developed at the governorate levels.
- **Develop incentives** to encourage the re-distribution of providers in undeserved areas.

4. Medical technology and equipment

Health facilities in Egypt often use advanced medical technology as a means to continually attract new patients, irrespective of its efficient use. Oversupply of medical technology does not only contribute to an increase in the costs of health care, but also has implications on quality of care, if not properly regulated. There are no current laws in Egypt that require a review process to determine whether investment in a particular technology is needed.

Rationalizing the availability of medical technology and equipment at the regional level according to need can be ensured by:

- Surveying available equipment at the national level through the facility survey.
- Implementing the certificate of need program.

(B) Re-organizing of the service delivery infrastructure

As mentioned in the situational analysis, the service delivery infrastructure in Egypt is fragmented with several health care organizations and different types of service delivery units involved. Physical and functional integration of service delivery units in the government (particularly the MOHP) and public sectors, as well as in the private sector, is important to avoid waste and reduce inefficiency.

Interventions for transformation of the service delivery infrastructure will include management restructuring of MOHP, HIO and the private sector (discussed under the Institutional Development Section); streamlining service provision; retraining staff and restructuring and modifying the public financing (discussed under the Health Finance Section).

1. The Ministry of Health and Population

Ministry of Health and Population health infrastructure should be reorganized along the holistic “family health” model that provides a community-based basic health services package to all family members in all districts, whether urban or rural.

It is proposed to have only three types of service delivery facilities that will result from the consolidation of the different types of MOHP health facilities. These are:

- FHU: the FHU will be the basic health infrastructure unit in the primary health care system in all districts and will be the primary contact between the beneficiary and the health system. It will be staffed by 1–2 family physicians, 2–5 nurses, and an adequate number of paramedics and administrative staff. The FHU will evolve from existing rural health units. It will provide general outpatient services as defined in the primary health care package.
- FHC: the FHC will be another level that will provide limited specialist outpatient/inpatient services as defined in the primary health care package. It will be staffed by at least six specialists (internist, surgeon, obstetrician/gynecologist, pediatrician, dentist, and radiologist) in addition to 10–20 nurses, and an adequate number of paramedics and administrative staff. This will evolve from the existing rural hospitals. The FHC may include within the same facility a FHU, which is administratively separate to ensure autonomy.
- General hospitals (GH): which will provide all specialist outpatient/inpatient services as defined in the primary health care package. A GH may include within the same facility a FHU which is administratively separate. They will evolve from current MOHP GHs and District Hospitals (DH).

Beneficiaries of the National Health Insurance Fund will have the right to register with a FHU of their choice. The family physician in the FHU will have the right to refer the patients either to a FHC or to the GH.

Actions:

To satisfy the basic community needs, the following are steps in the MOHP to transform the existing service delivery units into the family health model:

- RHU will be reasonably renovated to become FHUs.

- RH will be reasonably renovated, equipped and staffed to function as FHCs. This will require providing the necessary equipment, instruments, supplies and drugs for the added specialties.
- RHC should not be upgraded to RHs since their beds are not currently utilized. They should continue to function and gradually downgrade to either FHUs or FHCs. This will depend on their geographic location, the population served, and the existence of other RHUs. In general, no RHC should be upgraded to a FHC unless the occupancy rate in the nearest FHC and/or GH reaches at least 60%. The others should be modified to function as FHUs. MCH centers with beds, particularly the government-owned centers, should be upgraded, equipped and staffed to function as FHCs. The plans to improve MCH centers by providing delivery rooms may continue although none should be upgraded to UHC until a plan to ensure adequate coverage is developed.
- UHCs should be upgraded equipped and staffed to function as FHCs.
- Thus, the primary health care services would be delivered to the community through two family health models: the FHUs and FHCs.
- GHs and DHs should be assessed to determine which ones will become part of the system. Priority for adequate staff, equipment, supplies and drugs should be given to hospitals where no other public or private hospitals exist, particularly those serving rural areas in Upper Egypt. DHs and GHs would be assessed to become part of the family health models at level 1 and level 2, respectively.

2. The Health Insurance Organization (HIO)

- The GP clinics will be upgraded to function as Family Health Units (FHUs). The GP clinics inside the factories should be made accessible to the workers as well as other walk-in beneficiaries. This will be particularly useful if HIO decides to extend the health insurance umbrella to the families of the current beneficiaries.
- The polyclinics may be upgraded to function as FHCs. An assessment is needed to determine which ones may be upgraded, depending on the status of the building and the space available.
- The hospitals will continue to function as GHs for referred cases from the FHUs and FHCs, within the context of the levels of the family health model.

3. The private sector

In some areas where the adequate and the efficient medical service may be lacking or not available, the private sector may function as the primary contact with beneficiaries for receiving the GP outpatient services of the package. This can be achieved through certain regulations. The next level of facility may be a group practice where several physicians provide a wider range of primary care and specialized services.

It is also suggested that associations may be established to incorporate a number of private clinics, group practices and hospitals for collective contract negotiation and efficient organization of service delivery.

In the private sector:

- The private clinics may function as FHUs, while polyclinics may function as FHCs.

Private facilities should organize themselves in such a way to provide the full basic benefits package and be able to complete for National Health Insurance Fund participation.

Other types of facilities

The service delivery structure of the THO will not require significant restructuring under the reform. Whereas the CCO may be, in some form or another, incorporated and merged to the HIO.

8.6 Long-Term Care

Geriatric Health Center in Suez

In October 2001 Center of Geriatric Health was opened aiming at providing medical care for elderly patients in the form of :

1. 16 beds for inpatient department on basis of full board residence.
2. 2 beds for I C U with ECG and monitor for critical care by trained personnel
3. 4 out-patient clinics for internal medicine, psychiatry , orthopedics and physiotherapy
4. Emergency laboratory for urgent investigations
5. Physiotherapy department with electrical and ultrasound machines and gem
6. Pharmacy for in and out-patients with all drugs for Geriatric related illnesses.
7. Training programs for nursing staff (internal by physicians in different specialties, and external in Ain Shams University, Geriatric medicine department) .
8. Recurrent visits of consultants in Geriatric medicine and nursing (Faculty of Medicine and Faculty of Nursing).
9. Guiding and assessing families to know about care and management of Geriatric problems and emergencies through many social meetings in schools, clubs, universities and other active groups by the center staff.
10. Social activates in the center in the form of inviting students, social groups and other governorate departments employee to share the elderly people
11. There are 23 beds prepared for use to increase capacity of internal department to satisfy the increased needs.

It is planned to increase the capacity to cope with the increasing needs and to improve skills and utilities, planning for Geriatric village with medical, psychiatric, and social care (with special care for Alzheimer).

Geriatric friendship group for interested volunteers will be announced in Suez soon.

8.7 Pharmaceuticals

By 2002, the pharmaceutical market size in Egypt, at retail prices, was LE5.8 billion. At manufacturers and importers selling price, the pharmaceutical market size was approximately LE4.2 to LE4.4 billion. Since 1991, the pharmaceutical market has been growing and pharmaceutical sales increased two and a half-fold by financial year

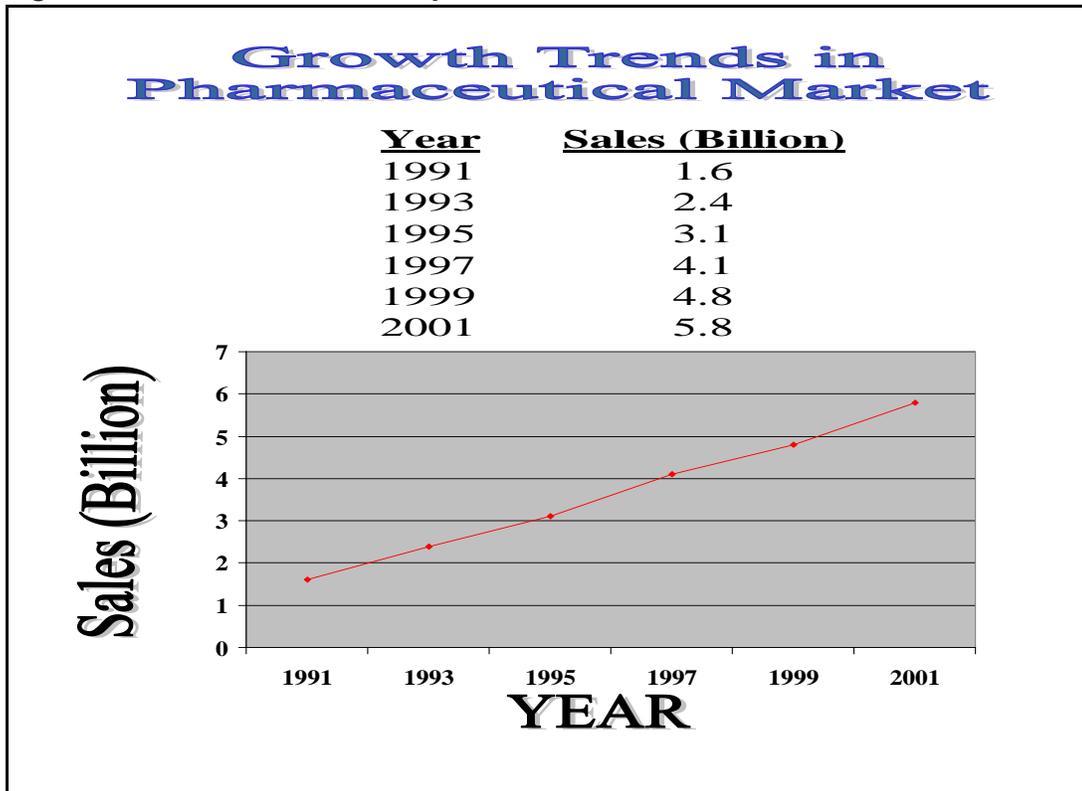
2001/2002. This increase is mainly due to high inflation and subsequent rapid devaluation of the Egyptian pound. However, during the same period, the volume of drug consumption in terms of sales units only increased by nearly one-fold. Data indicates slight increase annually by approximately 10%.

Table 8.7 Expenditure by type of provider and ownership

Type of facility	Expenditures (in LE)	Percentage
MOHP hospitals	2.217.519.079	9.6%
CCO hospitals	165.773.188	0.7%
THIO hospitals	473.868.920	1.9%
University hospitals	1.974.620.597	8.6%
Other ministries hospitals	222.283.529	1.0%
HIO hospitals	1.165.623.524	5.1%
Public hospitals total	6.183.688.836	26.8%
MOHP health centers	2.625.701.300	11.4%
HIO health centers	31.626.260	0.1%
Public clinics total	2.657.327.560	11.5%
Private hospitals	1.297.838.512	5.6%
Overseas hospitals (treatment abroad)	838.141	0.004%
Private hospitals total	1.298.676.653	5.6%
Office of physicians (private clinic)	5.746.653.026	24.9%
Pharmacies	5.360.745.709	23.2%
Private clinic total	11.107.398.736	48.1%
Administration	1.068.585.983	4.6%
Others	765.462.101	3.3%
Total	23.081.139.868	

Source: Egyptian National health account report 2001-2002

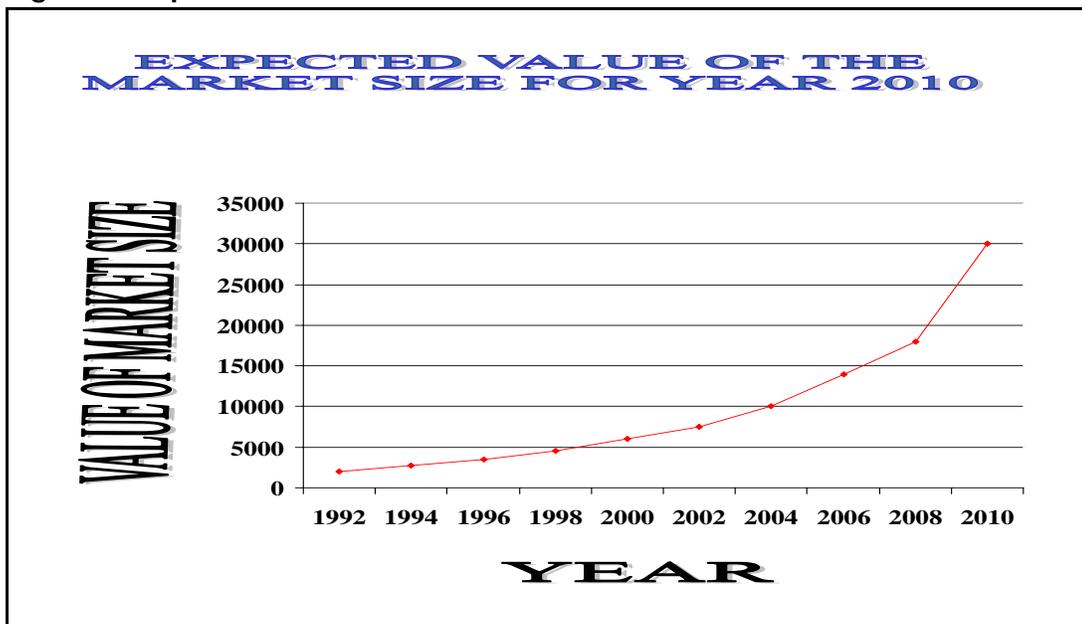
Figure 6: Growth trends in the pharmaceutical market



Source: CAPA, 2002, MOHP.

By 2010, the expected value of the market size will dramatically increase.

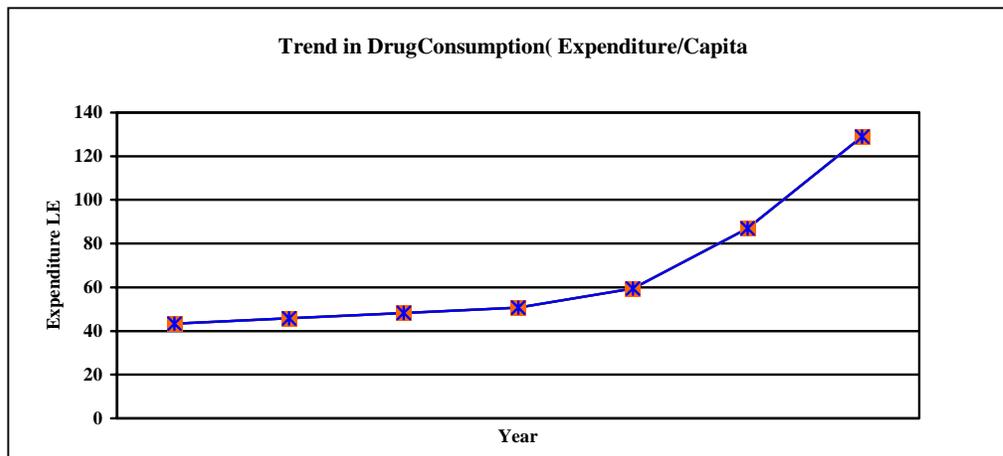
Figure 7: Expected value of the market size in 2010



Source: CAPA, 2002, MOHP.

By financial year 2001/2002, the drug consumption in Egypt was approximately LE87 per capita (at retail prices), having increased from LE43 in 1991 to LE87 in 2001. The real number is slightly higher due to imported non-registered pharmaceuticals allowed for approved personal use.

Figure 8: Trend in drug consumption as expenditure per capita

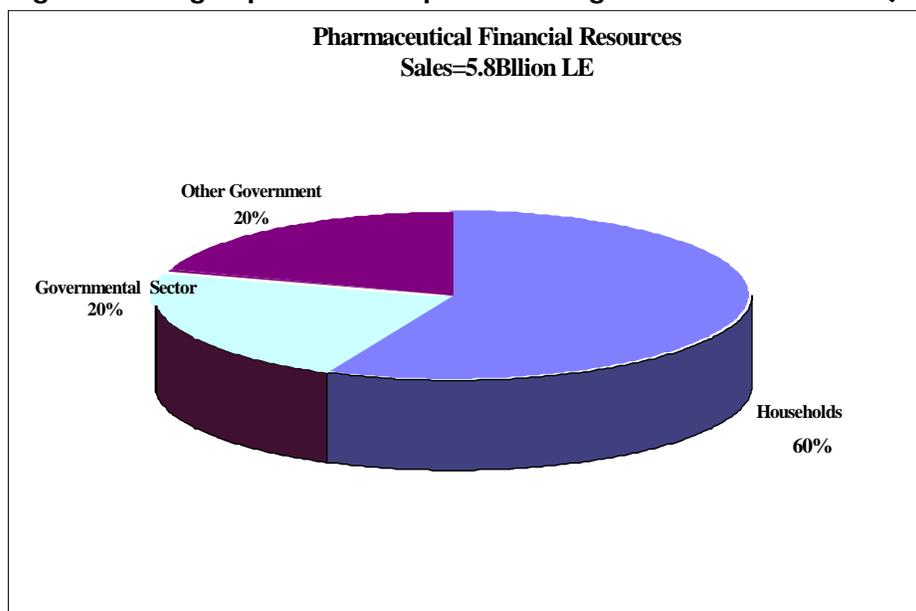


Source: CAPA, 2002, MOHP.

In terms of volume, drug consumption has increased from 16 to 19 units per capita. In a comparative study, the average number of drugs prescribed per outpatient encounter is 3.5 items per prescription.

Drug consumption falls into two main areas of private and public sectors. The private sector consumes approximately 60% (LE3.6 billion) of the total consumption, with the remaining 40% (LE2.2 billion) attributed to the governmental sector.

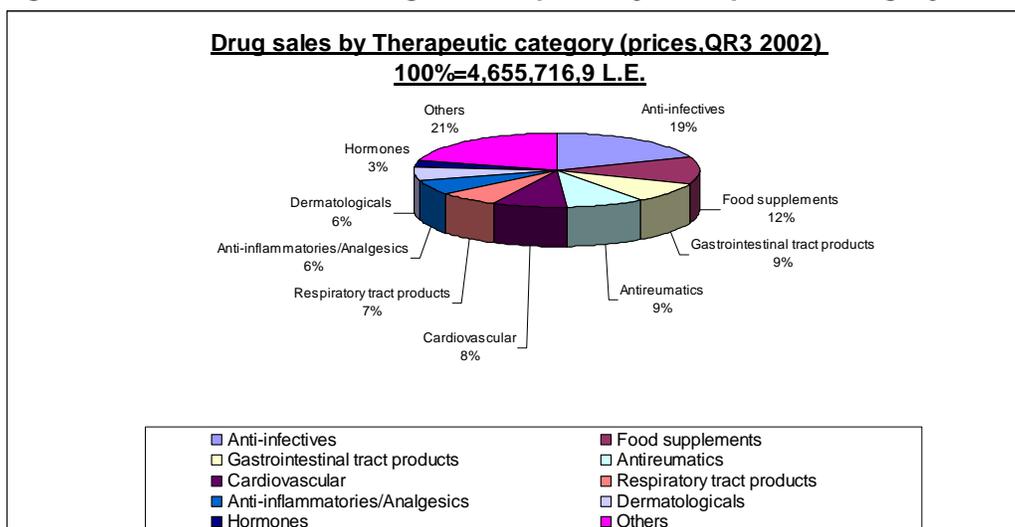
Figure 9: Drug expenditure in private and governmental sector (2001–2002)



Source: CAPA, 2002, MOHP.

To finance the demand of public sector (MOHP and HIO) expenditures on pharmaceuticals, a provision is made by the Treasury of up to LE500 million. The part apportioned to HIO is approximately LE200 million. Drug consumption pattern is almost constant. The percentage of drugs consumed differs according to the therapeutic category. The most commonly consumed drugs are anti-infective drugs (19%), followed by vitamins and minerals (12%), the other groups showed almost equal percentages (6%–9%).

Figure 10: Distribution of drug consumption by therapeutic category (2001–02)



Source: DPPC, 2002, MOHP.

Pharmacists in the private sector have an incentive to sell the more expensive branded drugs as they result in higher profit margins. In addition, patients are generally unaware of generic type drugs. It is therefore not surprising that nearly the top ten drugs sold in Egypt are branded drugs. Besides the excessive use of brand names, inappropriate drug therapy is considered the other component of irrational therapy. To rationalize drug use health professionals require continuous education programs and sufficient academic training, as well as development of standard treatment guidelines and drug protocols.

MOHP purchases almost 70% of the total drug quantities required centrally through tender, 20% from the governorate funds through local pharmaceutical suppliers and 10% of the total purchase from multinational manufactures. Cost of national drugs is determined according to the exchange rate between the US dollar and the Egyptian pound. This is in respect of the necessity of importing raw materials and other products required for the manufacturing process.

Egyptian companies imported 85% of all raw materials, as producing these materials requires both high technology and huge investments. To cover these costs there must be viable market for these drugs. These problems are exacerbated by the fact that the majority of imported materials are cheaper than those locally produced. The price of generic drugs is at the most less (60%) than that of the patent.

Essential drugs list: by level of care

The availability of drugs and medical supplies, according to the essential drug list, for the family health facilities is a top priority to maintain the sustainability of high quality of

services for Health Sector Reform Program. The essential drug list for primary care level was developed by HSRP and updated annually. It is the drugs needed for treating patients with any of the Basic Benefits Package contents. MOHP essential drug list that has been used for the outpatient facilities. It is much larger because it covers all specialization

Planning criteria for drugs and medical supplies aim to ensure that the required types and quantities of drugs and supplies are available in all health units when needed. The criteria for planning of drugs and medical supplies availability are based on the following principles:

- Use of generic (INN) names for drugs and consumable supplies
- Based in basic benefits package for every level care
- Conformity with the National Drug Policy
- Conformity with the National Essential Drugs List
- In accordance with Standard Treatment Guidelines
- Procurement of good quality supplies at economical cost
- Conformity to a high standard of Rational Prescribing
- Conformity to high standards of Good Storage and Supply Practice

Manufacture of Medicines and Vaccines

Most of the products, measured by value, sold in Egypt are derived from licensed technology, most of which are from multinationals of European and US origin besides biotechnology based products, and a few technologically advanced products. Almost all other products are manufactured locally, including bulk importation of raw materials.

The national pharmaceutical industry in Egypt has achieved great progress, as most of domestic consumption of drugs is covered by the local industry (93% of drugs are locally manufactured). The NDP aims at encouraging and supporting the national pharmaceutical industry to continue to fulfill the needs of the domestic market and to achieve a surplus of competitive products that can be exported. On the other hand, about 92% of new materials are imported. NDP supports the local production of new material.

The local drug industry has been prolific. In the period 2001–2002, Egypt imported about 15% of total marketed products by value. The number of manufacturing companies in Egypt has grown rapidly and is currently about 82 manufacturing companies, of which about nine are public, eight are multinational and the remaining are private. There are about 200 scientific offices (local and foreign companies) within Egypt. These offices are not involved in manufacturing, but operate as conducting clinical trials, registration of drugs, and marketing of products to physicians and pharmacists. VACSERA is one of the principal holding companies. It produces biological products and vaccines as well as blood products and parental nutrition products. Recently it began producing high technology products such as insulin.

Regulatory Authority: Systems for Registration, Licensing, Surveillance, quality control, pricing

Only drugs which are registered in Egypt may be imported, produced, stored, exported, and marketed. All companies, persons or agencies that apply for the registration of products to be marketed in the country, are granted licenses if all registration requirements and Good Manufacturing Practices (GMP) requirements are met. All licenses are reviewed periodically. The current drug registration procedure is adapted to meet needs within the policy framework. Formal registration is based on quality, efficacy and safety, and a ten-year re-licensing system for drugs is followed. The Medicines

Control Technical Committee (MCTC) establishes guidelines for provincial inspection services for drugs and medical devices. The national quality control organization, in cooperation with MCTC is setting up guidelines for quality assurance for drugs and medical devices. Clinical trials of drugs are carried out in compliance with good clinical practice

pricing

To promote the availability of safe and effective drugs at the lowest possible price, cost is achieved by rationalizing the drug pricing system in the public and private sectors, and by promoting the use of generic drugs

selection.

- The selection of drugs on the national multi-level EDL is based on the following criteria:
 - must meet the health needs of the majority of the population
 - sufficiently proven scientific data must be available regarding the effectiveness of any such product
 - products should have a substantial safety and risk to benefit ratio.

The National Organization for Drug Control and Research (NODCAR) represents the empowered national regulatory authority for quality control.

- NODCAR is entrusted with the quality control of pharmaceutical and biological products, raw materials, cosmetics, veterinary products, medical devices, household insecticides, medical plants and natural product as well as raw materials, and packaging and filling materials.
- In the last few years, the counterfeit medicine and smuggled drugs are considered an international problem. To combat this phenomenon the Egyptian government implements the following measures.
 - appropriate legislation that identifies the import, national transit, and export of counterfeit or smuggled goods into across and out of their customs
 - new legislation that strengthens the penalty for persons who are involved in this activity
 - inspection and enforcement of control
 - laboratory facilities for analytical tests of the products.

Reforms over the last 10 years

The Pharmaceutical Sector is an important component of the Health Sector Reform Program (HSRP). Over the last two years, several activities have been completed as part of reform of the Pharmaceutical Sector. The following is a summary of them:

- Develop new organogram for Pharmaceutical Sector.
- Develop new organogram for the National Organization for Drug Control and Research (NODCAR).
- Establish a new building for the MOHP Pharmaceutical Sector.
- Develop PHC Essential Drug list.
- Introduction of the new pharmaceutical system in MOHP facilities
- Introduction of clinical pharmacy service in MOHP hospitals
- Develop Essential Drug List manual for family health facilities.
- Complete national survey for drug consumption at MOHP facilities.

- Review the national drug list.
- Develop job description for pharmacists working in the primary health care facilities.
- Establish training programs for pharmacists working at the five pilot governorates.
- Develop achievement indicators for staff working at the MOHP Pharmaceutical sector.
- Provide registration and pricing system program, recommended by WHO (SLAMED).

Globalization

Egypt has signed of the TRIPS agreement and became a full member (with no exemption) since January 2005 . this implies putting on additional burden in introducing new generic medicine specially with the long potency period given to the new pharmaceutical inventions

Fortunately TRIPS agreement contains solutions for some problems under certain conditions

The number of newly inverted drugs that needed till now is very few

Egypt should not sign for the TRIPS plus agreement otherwise the breakthrough points with the TRIPS agreement will no longer exist

Privatization

The international trend of merge between the multinational pharmaceutical companies represents an extra burden on the smaller national companies Egyptian local manufactures should find way to overcome this challenge

Planned reforms

Pharmaceutical sector reform and the National Drug Policy (NDP) aim to make drugs affordable, safe, efficient, and available to the entire population based on the real needs at the time needed. The pharmaceutical sector reform strategies focus on the following.

- a. National Drug Policy
- b. Essential Drug List
- c. Legislations and regulations
- d. Rational drug use
- e. Pharmaceutical industry
- f. Human resources development

(A) National Drug Policy

The NDP was formulated and issued in 2001 and is integrated into the overall National Health Policy. The NDP must continue to evolve over time, therefore the following tasks must be accomplished;

1. Dissemination of NDP strategies and concepts among individuals in the health sector and other stockholder
2. Monitoring implementation of the NDP in terms of presenting approaches to achieve the goals of the policy, and ensuring commitment by institutions and health professionals.
3. Periodical review of the NDP and strengthening the updating process.

(B) Essential Drug List (EDL)

The national EDL was approved in 1998. The drugs included in the EDL are quoted in generic terms, and are classified according to type of providers. The list of essential drugs needed for the basic package of services have to be made universally available. The

pharmaceutical sector (MOHP) adopted the implementation of the EDL principles. The following actions are in process.

1. Develop the National Drug Formulary Manual that contains drug information relevant to prescriber, dispenser, and other medical professionals.
2. Encourage hospitals to establish hospital drugs lists, therapeutic committees, and the publication of hospital formulary.
3. Develop an efficient system for the updating process of EDL, including all levels of the health system.
4. Incorporate the essential drugs concept in managing drug supply and EDL.
5. Periodical review, and regular updating EDL, based on the needs and treatment guidelines and protocols.

(C) Legislations and regulations

Legislations and regulations support the objectives and active implementation of the NDP through the following items listed below.

1. Strengthening the regulatory authority role in facilitating the harmonization of drug regulation control between different concerned bodies.
2. Support drug legislations and regulations through developing functioning quality assurance system.
3. Support the drug inspection services with adequate number and well-trained inspectors, where personnel are the key resource for making effective drug regulations possible. Strengthening the control system by setting penalties.
4. Gradual implementation of the OTC drug list. Laws and regulations must be enacted to empower the implementation.
5. Revising and updating the existing legislations and regulations concerning drug registration, re-registration procedures, and pricing in order to improve the registration, and pricing system to compile with the economic situation (TRIPS agreement).

(D) Rational drug use

Rational drug use means that patients receive medications appropriate to their clinical needs, in doses that meet their individual requirements, for an adequate period of time and at the lowest cost to them and their community. Therefore, steps should be carried out as follows.

1. Continuous assessment for drug-use pattern among prescriber, dispenser, and consumer to identify the reasons for irrational use of drugs.
2. Update the standard treatment guidelines and protocols according to the needs.
3. Appropriate training for the medical staff, regarding good prescribing practice and ethical drug promotional practice.
4. Ensure effective implementation of standard treatment guidelines.
5. Support patient and public education regarding proper use of drugs, improved self-medication, and healthy lifestyles.
6. Develop system indicators to monitor and assess the implementation of rational drug use, concerning the provider as well as the consumer.
7. Establish drug information centers serving medical and non-medical professionals at the governorate level.
8. Developing a national drug information bulletin or newsletter.
9. Promoting the use of generic drugs by physicians.

10. Conducting drug utilization studies and studies to document existing prescription and consumption patterns, with periodic follow-up to enable monitoring and evaluation of interventions.

(E) Pharmaceutical industry

The national pharmaceutical industry has achieved great progress, as it covers 93% of market needs. The policy is to encourage the growth of production sector for the export market, allow for competition and as a result a decrease in prices. The executive plans are as follows.

1. Encourage the local production of the raw materials necessary for the drug industry.
2. Strengthening the post-marketing surveillance system.
3. Improve existing drug quality assurance and quality control practices by enhancing the efficiency of registration, inspection, and licensing structures and processes, including implementation of GMP standards.
4. Increase research in order to improve production of drugs, vaccines, sera, biological, and herbal medicine.
5. Adapt all activities relating to drug handling to the Environmental Protection Act.
6. Ensure safe and sufficient blood and blood product supply to meet domestic needs.
7. Harmonization and networking between the activities of DPPC, CAPA, and NODCAR.
8. Improve skills through continuous training on GMP, inspection, and quality control aspects.

(F) Human resources development

1. Update postgraduate studies and continuous education training programs.
2. Develop new professional careers in the field of pharmacy practice.
3. Planning for the short- and long-term needs of human resources.
4. Encourage collaboration between the drug regulatory authority and higher education institutions to maximize exchange of expertise and resources.

8.8 Technology

Historically, the MOHP has not used or developed IM&T as a strategic asset in delivering and managing healthcare. While there were good, usually local, IM&T initiatives sponsored by some vertical projects, these were outweighed by the overall lack of funding and development priority given to IM&T at all levels. Good experiences were not captured, and successful implementations were not scaled from their local beginnings to MOHP-wide application.

Now, the MOHP recognized that IM&T had a major role to play in healthcare, and want to define the strategic approach for the use of IM&T.

However, there remain a number of critical barriers to the effective use of IM&T as a strategic tool in the delivery of healthcare by the MOHP, including:

- Small amounts of protected IM&T funding that has had low priority leading to very low levels of investment;

- Lack of a organized, nationally-led IM&T architecture for data and system standards that allow information and processes to follow the patient's journey through the MOHP effortlessly;
- The need to improve coordination of IM&T resources and procurements to increase the pace of implementations and provide fast, better value for money IM&T projects;
- Low levels of secure, high-bandwidth connectivity for MOHP staff, backed by means of authenticating users to access sensitive patient information.

Reforms in the last 10 years, and results

As part of the Health Sector reform Program, Patient-Based System (PBS) is the current information system used at 354 family health facilities; it has been designed by the National Information Center for Health and Population (NICH). Further upgrading of PBS was done by Health Sector Reform Program team in Alexandria and additional pharmacy module was added to the system and was developed by FHFMS team in Alexandria. Patient-Based System is using a local area network with a minimum of three workstations, one in each of registration, family physician clinic and filing room. Source of data for the PBS come from the various forms enclosed in the family folder. The system is extremely flexible and easily adaptable to the conditions and needs of each facility; this is achieved through flexible setup menus for all main variables within the system.

The system produces weekly reports that contain the following data: number of visits per physician, number of visits by age group, list of prescribed drugs, number of cases for a specific diagnosis, number of laboratory investigations, number of x-ray investigations, number of referral cases.

The system is deigned to produce the following data upon request: number of registered families per clinic, number of patients by name and date of visits, number of children and specific age group, number of insured patients.

The system is going under continuous upgrading process according to the gained experience and feedback from field implementation in the HSRP family health facilities.

Current issues and concerns

- Balancing rapid progress at a national level with user acceptance and implementation capacity in the MOHP and IM&T industry at the local level.
- Ensuring that MOHP achieve best procurement value while accelerating the business case and procurement processes, and reducing the level of choice for the local implementations.
- Ensuring that MOHP efficiently capture and re-use the experience and knowledge in IM&T design and implementation of the Strategic Program at all levels.
- Building and maintaining the IM&T capacity and capability of the MOHP through a period of rapid change.

Planned reforms

THE FUTURE VISION

- The vision of the MOHP-HSRP Plan focuses on a redesigned care system. Bridging the gap between the health services now and the vision of fast and convenient care delivered to a consistently high standard requires a greater sense of urgency in delivering visible and workable information and IT solutions.
- The vision for information and IT is to connect delivery of the MOHP Plan with the capabilities of modern information technologies.

- The core of the strategy is to take greater central control over the specification, procurement, resource management, performance management and delivery of the information and IT agenda. We will improve the leadership and direction given to IM&T, and combine it with national and local implementations that are based on ruthless standardization.
- Each MOHP central administration should appoint a Central Information Officer (CIO) and have a key role in ensuring implementation and use of the core IM&T solutions determined at national level.
- Work should be done on developing the MOHP IM&T management structure, capacity and capability. We will also define the data, and data interchange standards we will require in the future.
- We must not lose sight of the fact that the purpose of improving the use of information and IT is to ensure that people receive the best possible care, and through making quality outcome data available we will monitor the continuing effectiveness of that care.

Vision for Egyptian IM&T Program Architecture

- Create an IM&T management capability that provides greater leadership, competence development, co-ordination and direction, allowing the MOHP to capitalize on the power of IM&T to integrate data and processes across organizational and physical boundaries;
- Manage funding to ensure IT receives the investment it requires;
- Capture knowledge of best practice and drive it into the national, regional and local IT environment;
- Work with industry to ensure they can provide the capacity and products to ensure we obtain quickly the advantages offered by compliance with national data and systems standards;
- Coordinate procurement to ensure we achieve best value, rapid progress and compliance with data and systems standards;
- Develop core national services that can be used throughout the MOHP (e.g. Electronic Health Record Service, Booking Service, Prescriptions Service);
- Develop a compliant choice of systems for a portfolio of critical local applications (e.g. Electronic Patient Record, EPR);
 - Build connectivity, so that all staff have the bandwidth and access devices they need;
 - Create national standards for data quality and data interchange between systems at local, regional and national levels.

9 HEALTH SYSTEM REFORMS

9.1 Summary of Recent and planned reforms

Egypt's system displays some structural characteristics, such as centralized control, extensive infrastructure, state responsibility for health care for all individuals, and extensive state involvement in the pharmaceutical sector. At the same time, the system has many of the characteristics (e.g. multiple public and private sources of finance and delivery, limited government oversight of the private sector) of more open-ended market-based systems. This complex system has significant strengths and weaknesses resulting from its continuing evolution.

The basic goals of a health care system reform are as follows.

- Improving population health status and social well-being.
- Ensuring equity and access to care.
- Ensuring microeconomic and macroeconomic efficiency in the use of resources.
- Enhancing clinical effectiveness.
- Improving quality of care and consumer satisfaction.
- Assuring the system's long-term financial sustainability.

In early 1996, the MOHP initiated a re-assessment of the health sector situation and recognized a need to explore alternatives for a comprehensive reform. As a result of these discussions, the Government adopted the HSRP for Egypt, which lays out a framework for undertaking a comprehensive reform of the health sector over the medium- and long-term.

One of the key objectives of the HSRP is to achieve universal insurance coverage for all Egyptians.

In addition to the reform and expansion of the social health insurance functions, the HSRP includes the following elements:

- Redefine the role of the MOHP to develop its regulatory functions, notably to establish quality norms and standards and to establish a mechanism of accreditation and licensure to enforce those standards, and to consolidate the multiple vertical public health programs.
- Strengthen the program for training and retraining of family health care doctors, nurses and allied health professionals, with greater emphasis on preventive health care.
- Decentralize management of the government health delivery system to the governorate and district level, and introduce greater managerial autonomy at the facilities level.
- Rationalization of the public investment in health infrastructure and health manpower based on Governorate and District Health Plans that identify the actual needs and availability of resources to sustain the investments.

Chronology and main features of key reforms

The Government of Egypt has embarked on a major restructuring of the health sector. This reform was deemed necessary because the MOHP and its main partners had identified fragmentation in the delivery of health services, excessive reliance specialist care and low primary care service quality as the main constraints to achieving universal coverage.

The Egyptian Health Sector Reform Program (HSRP) was officially launched in 1997. The World Bank (WB) started its contribution by designing the Master Plan for Montazah Health District in Alexandria Governorate, in May 1998. By the following year, in 1999, United States Agency for International Development (USAID) was the first donor to begin field-level operations, while the European Commission (EC) joined the HSRP in November 1999. The African Development Bank (ADB) initiated its work through designing Master Plans for three health districts in June 2003. The most recent partner at HSRP is the Austrian Government, which directs its participation to improving the district hospitals as part of health district approach.

The overall aim of the HSRP is twofold. Firstly to introduce a quality basic package of primary health care services, contribute to the establishment of a decentralised (district) service system and improve the availability and use of health services. Secondly to introduce institutional structural reform based on the concept of splitting purchasing/providing and the regulatory functions of the Ministry of Health and Population. Coverage would be provided by a National Social Insurance System. The ultimate goal of health sector reform initiatives is to improve the health status of the population, including reductions in infant, under-five, maternal mortality rates and population growth rates and the burden of infectious disease.

The HSRP has meanwhile initiated a new primary care strategy in accredited facilities, known as Family Health Units (FHU's). Facilities are being contracted by a purchasing agency -the Family Health Fund (FHF) - to provide services to the population. It is envisaged that the HSRP will gradually extend its scope to the secondary level by establishing "District Provider Organizations". The FHF will consequently develop in the direction of a full purchasing agency of services from the public and private sector. The newly introduced Family Health Model (FHM) constitutes one of the cornerstones of the reform program. It brings high quality services to the patient and will integrate most of the vertical programs into the Basic Benefit Package of services. To date the FHM has been introduced in over 400 health facilities, which present 10% of the total public primary health care facilities. HSRP has an ambitious five years plan, by the end of year 2009, to cover the entire public primary health care facilities with the Family Health Model.

The Health Sector Reform Program is made up of Egyptian experts from within the Ministry of Health and Population, individuals across the Egyptian health care system and international advisors.

The Egyptian Health Sector Reform Program went through several stages, including the preparatory stage from 1994 to 1996. During this stage, several valuable studies were conducted and used later to develop the "Strategies for Health Sector Change" study. This was an analytical report on the Egyptian health sector. This was followed by designing the health Master Plans stage for the five pilot governorates. Experimenting stage of the Family Health Model took place in one of the primary health care facilities, which took about two years to implement. This was followed by piloting stage of the Model in five governorates and included activities such as: Building staff pattern, designing the contents of the Basic Benefits Package and Essential Drug List, and other

components of the Family Health Model. The Program has shifted its strategy in March 2003 from health facility oriented approach to the district approach, which was called the District Provider Organization. As of 2005, the HSRP has gradually expanded its operations to ten additional governorates, pushing the total number of involved governorates to 15, which presents more than 50% of the country coverage.

Process of implementation: approaches, issues, concerns

It has been seven years since the Government of Egypt (GOE) initiated the pilot phase of the HSRP: the Family Health Project. The service delivery component of the Project has been implemented with success, where a large number of PHC facilities were upgraded, new management systems were implemented and family health staff was trained. By September 2005, 500 family health facilities have been accredited, around two third of them entered into contractual agreements directly with the Family Health Fund or through the District Provider Organization. It is envisaged that in the course of year 2006, 500 additional family health facilities will be accredited. This will add a total of 1,000 by mid 2006 presenting 25% of the total public primary health care facilities.

However, while the original project design emphasized involvement of health care providers from all sectors (government, public, non-governmental and private) to ensure consumer choice and provider competition, most FH centers and units are MOHP, with only 15 Health Insurance Organization, and very limited number of private and NGO facilities.

Three major innovations in service delivery were introduced:

- The Family Health Model was adopted for the first time in Egypt, where integrated services were provided under the same roof for the entire family requiring less time and transportation and offering better quality. Both physicians and patients valued the concept of continuity of care and the unified medical record.
- Performance-based incentive systems were also adopted for the first time in Egypt and succeeded in increasing provider accountability for quality standards and reform goals. The Family Health Pilot Project thus demonstrated that health provider behavior can be favorably modified to serve national health sector goals. While this experiment has been limited to mostly public providers, it can also be used to harness private provider participation in the health sector reform in Egypt.
- Rationalization of health infrastructure investment was introduced based on Master Plans in the three pilot governorates, where rehabilitation, extension and construction of health facilities were undertaken based on the health needs of the poor population in the catchment areas, thus improving access, efficiency and equity in service provision.

The successful implementation of the service delivery component of the Family Health Pilot Project resulted in:

- Increased provider satisfaction and productivity, as demonstrated by the rise of physician encounters from 3 to 16 per day.
- Increased patient satisfaction and demand for FH services, as demonstrated by the long waiting lists at FH facilities that were previously under-utilized.

The development of the FHF's, the financial component of the Family Health Pilot Project, has been constrained by the legislative environment governing the health sector in Egypt, which prohibits any agency outside the HIO from collecting premiums or capitated payments from individuals or families. The FHF's were thus established in the five pilot governorates with the legal status of bank accounts under the respective HIO

branches (Ministerial Decree 294 of the year 1999). From an institutional perspective, the five FHF are managed by the MOHP, with the central FHF being fully integrated into the Ministry's Sector for Technical Support and Projects. As such the FHF ended with an awkward legal and institutional status. Currently, the only flow of funds through the FHF is the disbursement of incentives to contracted providers based on performance criteria. The costs of the FHF's administration and incentive disbursement are primarily covered by HSRP funds from the European Commission (EC) and the Ministry of Finance (MOF). The costs of providing BBP services go directly from the MOHP and the HIO to their FH facilities. Also, nominal collections from patients (visit fees) go directly from providers to the MOHP or the HIO without passing through the FHF. As such, the Family Health Pilot Project failed to model the separation of financing from provision.

Ministerial decree 147 of the year 2003 was issued to increase the revenue -generating ability of the FHF by authorizing FH units and centers to collect user fees and drug copayments from beneficiaries. While the decree has not been yet operationalized, its implementation is not anticipated to yield substantial revenues since the proposed fee structure covers only a small portion of the actual cost of providing BBP services. Drug copayments are also set at one-third of the market price of the drug. Moreover, only a portion of collections from patients will be retained at the FHF to assist in covering their administrative costs. The other limitation of the decree is the fact that it does not provide any risk pooling mechanism as fees are collected at the time of service provision. Thus, while the decree represents some improvement, its potential to make the FH program financially sustainable is very limited.

Progress with implementation

On July 6th, 2005 President Mubarak has announced the six dimensions of the National Plan for Improvement of the Health Sector. The Presidential announcement reflects the Health Sector Reform Program (HSRP) objectives. The six dimensions of the National Plan for Improvement of the Health Sector is aiming to universal converge of the Egyptians with health insurance by the year 2010 through:

1. First dimension: "Improving the managerial and administrative capacity of Health Insurance Organization through separation between financing and providing of health services".
2. Second dimension: "Establishing of Family Health Fund at each Governorate".
3. Third dimension: "Include the uninsured population, with the health insurance system".
4. Fourth dimension: "Rolling Out of Family Health Model on the nation wide with participation from the private and NGO".
5. Fifth dimension: "Improving the health services for the secondary care".
6. Sixth dimension: "Integrating all the current health care providers under one entity to provide universal health insurance by the year 2010".

The Minister of Health and Population has announced, on several occasions, the MOHP plan for Rolling out the model. On August 10 of last year, HE has presented the five-year plan to the Prime Minister. The estimated plan cost is 2.9 billion L.E. for the next five years. Forty eight percent of this number represents the annual recurrent cost to maintain the quality of PHC services.

The Prime Minister has followed up and presented the new Government Plan to the People's Assembly on December 12, 2004. For the national health services, The Prime Minister affirmed Rollin Out the Family Health Model and stated the number of

PHC's in Phase One with a five-year plan to improve PHC services on the national level.

During an official interview in October 2004, the Prime Minister stated the following "there is this great program that we all should stand behind and support, which is primary health care for all Egyptians. In previous phases, many investments were directed towards what is called advanced health care and the establishment of hospitals for performing surgeries or specialized hospitals such as Cancer and Heart Institutes. That's why most of our investments were consumed into this course of direction; including both private and public sectors, while investments for primary health care had less investment. Nowadays, MOHP is conducting a pioneer project to extend and expand these services all over the Egyptian rural villages through a new model called the integrated health unit, which is working economically and autonomously, and providing a complete record for each family in Egypt. The cost of improving the services per primary health care unit is LE 2 million on average including the annual operational expenses. In fact it is a great national project that we should all stand behind and support".

Process of monitoring and evaluation of reforms

Measuring of HSRP impact, through assess its five main objectives on the district level, is mandatory in this stage. In mean time, establishing a causal relation between HSRP and activities and a change in health status is risky. There are logistical problems in measuring impact (large sample sizes, costly and time consuming). On the other side, HSRP does not have yet complete district population coverage to evaluate the effect on population health status (morbidity and mortality) as result of HSRP implement on district. HSRP is developing a quarterly measure for HSRP five objectives' achievements on the district level. This will be accomplished through modifying the developed list of indicators by the program (with technical support from KIT in the year 2003).

The Family Health Model review has been a jointly-led exercise between Sector of Technical Support and Projects Sector, and the different sectors within the Ministry of Health and Population. The reviewing Steering Committee has been composed of representatives from European Commission (EC), Ministry of Health and Population (MOHP), World Health Organization (WHO), United Nations Population Fund (UNFPA) and United States Agency for International Development (USAID). The review process went through a rigorous evaluation procedure for several documents produced by the program as well as having interviewed several officials at the MOHP central and peripheral levels. The reviewers have visited all pilots Governorates to assess the implementation of the Model at the family health facilities level.

Reviewing of the Family Health Model concluded that there is no alternative option to this strategy followed by the family health program in Egypt to improve access to health, make effective disease control programs and strengthen the health system.

- The project represents a successful initial step of a complex program aiming at reforming the entire health system. To be successful, it is pivotal that there be stability with the (CDTSP, other MOHP structures and technical assistance) teams in charge of the project.
- In the future, all administrative levels will need to be involved in the process. The creation of a small national team endowed with the responsibility of bringing technical support to DPO officers is both a priority and a challenge.
- The continuous political support of the Government will be pivotal for the success of this enterprise.

The Health Sector reform Program has started in the mid 90's focusing on primary health care on its first phase. The Program will continue for 15 – 20 more years, to be concluded, as forecasted, by the year 2015.

10 REFERENCES

- (1) NICHP Report, Ministry of Health and Population, 2005
- (2) NICHP Report, Ministry of Health and Population, 2004
- (3) Egypt Human Development Report, 2004
- (4) Central Agency for Public Mobilization and Statistics, Report 2002
- (5) Egypt Interim Demographic and Health Survey, 2003.
- (6) Egypt Demographic and Health Survey, 2000.
- (7) Egypt Demographic and Health Survey, 1992.
- (8) NICHP Report, Ministry of Health and Population, 2001
- (9) Egypt Human Development Report, 2003.
- (10) Ministry of Foreign Trade, Egypt, Monthly Economic Digest, February 2005.
- (11) WHO Web Site, August 2005
- (12) Egypt National Health Accounts, for the year 2001-2002, published in 2005.
- (13) Egypt's Health Sector Reform and Financing review, World Bank Report. Feb 04.
- (14) Budget Tracking System, Final Report, MOHP, 1996.
- (15) Egypt Health Sector Analysis and Future Strategy, MOHP.
- (16) Egypt Demographic and Health Survey, 1997.
- (17) Egypt Human Development Report, 1999.
- (18) Egypt Human Development Report, 1995.
- (19) Gender Stats, Database of Gender Statistics, WB.
[HTTP://devdata.worldbank.org/genderstats/genderRpt](http://devdata.worldbank.org/genderstats/genderRpt)
- (20) The Burden of Disease and Injury in Egypt (Mortality and Morbidity). 2004
- (21) Egyptian Board Fellowships, Ministry of Health and Population.
- (22) D&B Country Report, Egypt. March 2004
- (23) Transitions to adulthood, A national survey of Egyptian Adolescents, 1999.
- (24) The state of Egyptian Children, 1988
- (25) Egyptian population in the 20th century, 2004.
- (26) Primary Health Care Manual, Ministry of Health and Population. 1999.

- (27) Development of Health Management, Ministry of Health and Population. 1998.
- (28) Planning the family in Egypt. 2002.
- (29) Berman, P et al. "Egypt Health Care Utilization and Expenditure Survey", 1995, PHR Technical Report No. 25, January 1998.
- (30) Egypt Maternal Mortality Survey, 2000.
- (31) El Zanaty and Associates, "Egypt Household Health Service and Utilization Survey", 2002.
- (32) Helsinki Consulting Group. "Master plan of Facility -based Health Services in Sohag Governorate", February. 2002.
- (33) Nandakumar, AK et al. "Findings of the Egyptian Health Care Provider Survey", PHR Technical Report No. 26, May 1999.

11 ANNEXES

11.1 Ministry of Health and Population Organogram

See the attached file

The Regional Health Systems Observatory is an undertaking of the WHO Regional Office for the Eastern Mediterranean. The Observatory supports and promotes evidence-based health policy-making through comprehensive and rigorous analysis of the dynamics of health systems in the EMR. Its primary goal is to contribute to the improvement of health system performance and outcomes, in terms of better health, fair financing and responsiveness of health systems. The aim of this initiative is to provide relevant comparative information to support policy-makers and analysts in the development of health systems and to serve as repository of information on health systems.

This document is part of a series of in-depth health systems profiles, produced and updated by the Observatory using standardized approach that allows comparison across countries.

They provide facts, figures and analysis and highlight reform initiatives in progress.



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