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A REFORM STRATEGY FOR PRIMARY CARE IN EGYPT

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Partnerships for Health Reform

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A Reform Strategy for Primary Care in Egypt

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Abstract

Under its existing primary care strategy—universal access to comprehensive primary care through government and public sector delivery and financing of services—Egypt has made substantial progress in some aspects of primary care in recent decades. Deficiencies exist, however, particularly in routine provision of care to individuals and families by public providers, in disparities of care that exist across regions and socio-economic groups, and in prospects for the sector to respond well to emerging health challenges.

An examination of these deficiencies reveals a chronic shortfall between the promised comprehensive care and funding available to pay for that care; lack of appropriate incentives to improve efficiency and quality, and of mechanisms to introduce the incentives; fragmented and inefficient organization of services; and insufficient capacities in financing, management, planning, and research.

Egypt's current primary care strategy is not well-suited to remedy these problems, and so this paper proposes development of a new strategy, key components of which are a defined basic primary care package; adequate funding levels and mechanisms to provide them; new methods of organizing the financing and delivery of care to obtain efficiency, quality, and patient satisfaction; and improving system capacities. It suggests a new role for government and new approaches, including separating financing of services from their provision and reorganization and integration of care delivery. Two models for organization of services are presented.

This proposed primary care strategy and approaches must be reviewed for their suitability to the regions and demographics of the country, and to the broader health sector reform taking place in Egypt, and field-tested and refined before they can be implemented on a national scale. Nevertheless, several fast-track elements are recommended here that can be financed and implemented in the near term, which will contribute to reform regardless of the final strategy.

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This report was prepared with support from the United States Agency for International Development, through the Partnerships for Health Reform Project. The authors are Peter Berman, Maha El-Adawy, Jean-Jacques Frere, A. K. Nandakumar, Nabil Nassar, Sameh El-Saharty, and Hassan Salah.

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ACRONYMS

ARI	Acute Respiratory Infections
CAPMAS	Central Agency for Public Mobilization and Statistics
CCO	Curative Care Organization
CDD	Control of Diarrheal Disease
DDM	Data for Decision Making
DH	District Hospital
EDH	Endemic Disease Hospital
EDHS	Egypt Demographic and Health Study
EDL	Essential Drugs List
EHHUES	Egypt Household Health Utilization and Expenditure Survey
EPI	Extended Program Immunization
FH	Fever Hospital
FHC	Family Health Center
FHU	Family Health Unit
GH	General Hospital
GP	General Practitioner
GPC	General Practitioners Clinic
HIMO	Health Insurance Management Organization
HIO	Health Insurance Organization
HISO	Health Insurance Services Office
HO	Health Office
IEC	Information, Education, and Communications
IMR	Infant Mortality Rate
LE	Egyptian Pound
MCH	Maternal and Child Health
MIS	Management Information System
MOHP	Ministry of Health and Population
NGO	Nongovernmental Organization
ORS	Oral Rehydration Salts
PHC	Primary Health Care
PHR	Partnerships for Health Reform
RH	Rural Hospital
RHC	Rural Health Center
RHU	Rural Health Unit
RTI	Reproductive Tract Infection
SCS	Specialist Clinic
SHC	School Health Clinic
SHIO	Social Health Insurance Organization
UHC	Urban Health Center
USAID	United States Agency for International Development
WHC	Women Health Centers

Executive Summary

Egypt has made substantial progress in improving the health status of its population and in reducing unwanted fertility during recent decades. Despite these gains, wide disparities in health conditions persist. New health challenges are also emerging, which will increase the need for treatment of disease and for behavior change.

Health and health care are issues of high concern for Egypt's population and political leaders. Like many countries, Egypt faces difficult choices in trying to meet the rising demands and expectations of its population. The premise of this paper is that coverage of all Egyptians with an effective and efficient program of primary health care[1] should be a central objective of national health policy. Appropriate primary care is essential for Egypt to develop an efficient and equitable national health care system, as well as the best way of meeting many of the important health needs of the majority of Egyptians.

An Analysis of the Current Situation

Egypt has achieved significant progress in a number of aspects of primary care. Many of these accomplishments have been for problems or interventions where a discrete program of service delivery has been organized, e.g., childhood immunization, schistosomiasis control, family planning, and control of diarrheal diseases. Less success has been achieved in the routine delivery of primary care services through public providers who regularly serve individuals and families. For example, recent surveys show that antenatal care coverage remains insufficient, and that much of the care that is provided is given by private practitioners. There also remain large disparities in Egypt across regions and socio-economic groups. In addition, as Egypt moves further into a health transition, primary care will need to be more successful in integrating preventive, curative, and behavior change interventions, in adopting a family and community focus, and in fitting into a vertically organized health care delivery system.

An analysis of Egypt's current primary care strategy indicates that, without significant reform, it is unlikely to lead to the development of an effective national program. Several critical problems were identified.

First, there is a gross imbalance between the very comprehensive set of services which is intended to be provided and the resources available. This chronic underfinancing results in low salaries, lack of supplies, and substandard facilities. The ensuing lack of real access to services and

[1] *The working definition of primary health care used in this report includes three types of basic health care interventions:public health interventions for populations and groups; preventive, promotive, and population services provided to individuals; and individual treatment of disease. These services are provided on an outreach or ambulatory basis; in addition, a limited set of associated inpatient service is included. This "primary care package" should be provided in an integrated way, with a focus on and with the involvement of families and communities.*

poor quality has led to a situation where most primary care, especially ambulatory treatment of illness, is now produced on a fee-for-service basis by private providers.

Second, while in total Egypt spends over U.S. $20 per capita per year on primary care today—a sum which should be sufficient to provide a significant basic package of services to all—most of these resources are not organized or allocated in efficient ways. They mostly finance the fee-for-service private sector through out-of-pocket payments by households. The burden of these expenditures is very inequitably distributed, with the poor paying the largest share of income. This form of financing also results in lower levels of access by the poor and is unlikely to give the best health outcomes for the expenditure.

Third, the ways in which health care is paid for and organized today constrain the potential for efficiency and quality improvements. For example, both organized (e.g., Ministry of Health and Population [MOHP] and Public Organization for Health Insurance [HIO]) and unorganized (diverse private practitioners) providers lack incentives for appropriate effort, efficiency, and quality. Widespread multiple public-private roles of physicians reduce the ability of organized providers to achieve their goals. And MOHP primary care provision is fragmented across a large number of different types of facilities, each identified with a history of special programs. This system is poorly designed to integrate services and provide a family and community focus. All this makes it unlikely that simply increasing funds for primary care will be sufficient to remedy the current problems. Rather, substantial reforms in finance and provision of services are needed as a prerequisite to make additional spending worthwhile.

Reform Strategies for Primary Care

Based on this diagnosis of the current system, this paper proposes a set of reform strategies which can be used to develop a detailed plan of action to set Egypt's primary care program on a more promising course. These strategies include elements for which current knowledge and practice are well developed and on which action can begin immediately. They also include elements where significant new learning and development will be required in the Egyptian context.

The proposed reform strategies for primary care in Egypt are based on the following principles:

- Universality
- Quality
- Equity
- Efficiency

A key role of the state is in promoting and applying these principles in the development and maintenance of the new primary care strategies. The strategies proposed for primary care for Egypt are based on the goal of the state providing a defined set of basic primary care services to all Egyptians, but with particular responsibility to protect the interests of lower-income and other vulnerable groups, and to include those services for which private demand is likely to be deficient. To obtain this coverage, these services must be reasonably accessible (in terms of time and money costs and cultural acceptability) at an acceptable level of both perceived and technical quality.

The following four elements are proposed:

- A defined set of basic primary care services (the basic package), with associated science-based standards of quality.
- Sufficient financial resources in primary care, from within and outside government, to assure access to the basic package at an adequate level of quality.
- Adoption of new methods of organizing the financing and provision of health care services to obtain greater efficiency and quality of services and feedback from the population to health care institutions. Some of the specific elements of reorganization of health care systems include:
  - Increased reliance on a sub-national geographic or area approach, strengthening and employing local capacities in planning, finance, and management.
  - Separating the financing and provision of services to make more use of financial and performance incentives on both the supply and demand sides.
  - A central role for government in organizing the financing of primary care, assuring appropriate standards, and implementing policy, planning, and research.
  - Restructuring and rehabilitation of the current fragmented MOHP delivery system.
  - Encouraging development of new forms of private provision.
  - A greater role for private providers in meeting public sector goals for health care coverage.
  - A greater role for internal and market competition involving government, public, and private providers according to the different health care market conditions prevailing throughout Egypt.
- New investments to create new financing, planning, management and information systems and to upgrade the quality of facilities and staff.

Preliminary Analysis of the Reform Strategies

This paper presents the results of several preliminary analyses of elements of the reform strategies. These are provided in a *notional* way, to examine the feasibility of what is proposed and to suggest important areas for developing follow-up activities. Table 1 highlights the different elements and the key policy areas that need to be addressed. Following sections summarize key findings of the preliminary analysis.

Development of a basic primary care package

In collaboration with a team of senior MOHP colleagues, a proposed primary care package was drafted. It includes interventions which satisfy most of the perceived priorities of the MOHP.

Analysis of the financial feasibility of the primary care package

One critical problem identified in the current primary care strategy is the imbalance between the resources available and the scope of the services to which government providers are committed. The result is the apparent underfinancing and poor quality of the existing public delivery systems.

TABLE 1: STRUCTURE OF PRESENTATION OF REFORM STRATEGY

Problems addressed	Specific content of presentation	Policy issues that must be addressed
The "basic package": What should be the content of primary care?	Services included in the basic package	Defining content of basic package
Financing/resources: What resources are required? How does this relate to current spending levels and patterns? What are the prospects for financing the new strategy?	Current expenditures on basic package elements Estimate of finances required for universal coverage with package	Size and composition of new resources needed Development of a financing strategy. Balance of finance and content of package
New approaches to financing and provision: How will resources be used differently to assure efficiency, equity, and quality?	Separation of finance and provision Strategies for different types of areas characterized by market structure Restructuring and rehabilitation of government and private services Increased use of provider and consumer incentives to assure efficiency and quality	Legal and administrative feasibility of new strategies Feasibility of reforms to structure and staffing of facilities Feasibility of implementation of new approaches in different types of areas
Investments: What is needed to provide the necessary support to the new strategy?	Capacities at governorate and district levels Regulation and accreditation capacities Information systems	Training strategies for providers and managers Legal and administrative requirements to carry out new responsibilities Investments in new systems

This paper presents a notional analysis of the feasibility of financing the proposed primary care package. This analysis was based on the estimate of the current gaps in coverage and output for all interventions in the package. Two financial estimates of the cost of filling these gaps were developed. A "high estimate" accepts as given much of the current inefficiency of public provision, including excess staffing. It uses an increased estimate of cost per output, reflecting some additional payments for public providers. A "low estimate" is based on a simple model of efficient production. It also increases payments to providers, to a level approximating their current average earnings from public and private practice combined (a level at which they might be "indifferent" to public or private practice).

Conclusions from this analysis include:

- Under the low-estimate assumptions, Egypt might realize a saving from current total government, public, and private primary care expenditure levels, despite much better coverage. This suggests that *an efficient primary care system could realize both health and economic gains*. For the high estimate, resources required were substantially above current total spending levels.
- Estimates of the total national expenditures required for universal coverage using either method greatly exceed current government spending levels. *Any organized universal system of adequate primary care will require a substantial financing strategy to be developed*. This will certainly require a combination of methods, including new sources of public money, international assistance, capturing and organizing some part of private spending, and internal efficiency gains.

▲18While the financial requirements of a universal strategy remain daunting, a *gradual expansion of coverage, governorate-by-governorate, would be feasible and advisable* given the current likely levels of finance.

Reforms to the financing and provision of primary care services

The paper includes a number of specific strategies related to reforms in the financing and provision of primary care services.

In the areas of financing, the strategies are based on the notion of the separation of finance from provision. Government is proposed to have a central role in developing organized modes of health care financing and provider payment—a principal means for making better use of the large element of private out-of-pocket spending. A range of methods for introducing new incentives for effort, efficiency, and quality need to be explored, including structural, organizational, and management improvements; use of "internal market" (or "quasi-market") type incentives within public systems; and use of external public-private competition to develop incentives.

Various approaches are needed in Egypt, distinguished according to the types of services provided as well as the extent to which there is excess provision capacity and competition available in different parts of Egypt. Table 2 illustrates these considerations.

Table 2: Government Role in Health Care Provision According to Different Market Conditions and Types of Services

Service group based on degree of "publicness"	Area I: Little private provision or excess supply	Area II: Some excess supply and significant private provision	Area III: Highly pluralistic and competitive market
I. More public goods	Dominant government provision	Dominant government provision	Dominant government provision
II. Mixed goods	Dominant government provision	Mixed government and pluralistic provision	Limited government provision competing with nongovernment providers
III. More private goods	Mixed government and pluralistic provision	Limited government provision competing with nongovernment providers	Limited government provision competing with nongovernment providers

In this proposal, government will continue to play a central role in delivery of population-based public health services and an important role in delivery of those individual preventive and curative services where private demand is likely to be deficient. But as the market supply and potential for competition increases, there should be increased use of external market competition in developing finance-provision strategies.

This framework is used to develop several notional models of new organizational structures for finance and provision in rural and urban areas. The models show how the functions of finance, regulation, monitoring, and service provision could be separated under current conditions. The details of how health services would be organized and managed are also explored.

This discussion could be the basis for the development of a set of demonstration projects in different areas of Egypt, stratified according to market conditions.

New investment program

The paper acknowledges that there is substantial need for a new public investment strategy. This must not only address the requirements of the reform strategies, which include the development of new institutions, training, and information systems. There is also a need to upgrade the quality of many existing facilities and staff.

"Fast-track" elements of the reform program

Many of the recommendations in this report will take time to review and implement and need to be first tried and tested in the field. However, the report proposes a set of short-term, "fast-track" steps that can be financed and implemented, which will contribute to the reform process irrespective of the final strategy and direction. They include:

- Establishing a committee to plan, evaluate, and monitor the reform process
- Refining and defining the basic package of services
- Creating a national accreditation body that will establish the criteria for accreditation of providers
- Developing alternative strategies for creating information systems needed to register populations, monitor utilization and expenditures, and create linkages among agencies
- Developing a national drug policy and an essential drugs list to support the package of services
- Establishing a unit to deal with quality improvement
- Developing a five-year health financing plan
- Developing a detailed investment plan for upgrading facilities
- Developing primary care education curricula and an in-service training plan for physicians and nurses
- Formulating and implementing demonstration projects
- Separating the financing and provision functions
- Creating a restructured private market
- Expanding consultation with stakeholders to review reform strategy and set future course

In conclusion, this paper is not intended as a comprehensive program of the future change, but rather as a guide towards the development of such a program. It is expected that the next six to twelve months could be devoted to fleshing out many of the proposals contained here. This could be done in the context of new donor projects now being developed.

INTRODUCTION

Over the past several years, health system authorities in Egypt have been considering the prospect of significant reform to the health sector. Reform has been discussed in relation to different parts of Egypt's health care system, such as health insurance and the hospital sector. But it is primary care that has the greatest potential to improve the well-being of the majority of the Egyptian people.

Egypt has much to be proud of in its primary health care accomplishments in recent years. Infant and child mortality have declined rapidly, fertility is also down, and life expectancy is increasing. Significant and widespread benefits have been obtained from expanding immunization coverage, disseminating appropriate therapies for major childhood diseases, and implementing other basic public health measures.

Partly as a result of these accomplishments, health conditions in Egypt have been changing. This transition, along with economic growth, will increase the demand for health care services, especially for the treatment of illness. Emerging adult and chronic health problems require more extended and costly treatments. New priorities and an increasing role for health promotion and prevention are also becoming important. Primary care has a critical role to play both in meeting this demand as well as in helping to reduce the financial burden of future needs and demands.

While Egypt's government-financed, government-provided primary care services have done well in providing many of the mass public health services, they do not perform so well in the areas that are likely to be future priorities. Most primary illness care is obtained in the private sector, even by lower-income populations, despite the official offer of free, publicly provided services. The poor bear the largest financial burden for primary care as well. Even those entitled to the free services of the Public Organization for Health Insurance (also known as the Health Insurance Organization [HIO]) often use private services. Government primary care services are inefficient and widely perceived as lacking in quality.

To meet the challenges of the future, Egypt must develop an efficient and high quality primary care service that is financially affordable to the nation, provides a significant level of benefits to the population, and distributes these benefits and associated costs fairly according to ability to pay. While additional public funding may be needed, international experience shows that simply increasing public budgets will not be sufficient to remedy the problems of Egypt's current system. A new strategy is needed.

This strategy must focus the resources that can be made available on a defined set of service priorities. It must assure adequate financing to provide these services at a decent level of quality. And it must be based on organizations and incentives that can assure efficiency and quality in the provision of health care.

This "white paper" proposes the essential elements of such a strategy and outlines how they can be applied in Egypt. It was prepared by a collaborative team of Egyptian and international experts for the Partnerships for Health Reform (PHR) Project at the request of His Excellency, Professor Ismail Sallam, Minister of Health and Population of the Arab Republic of Egypt. It is submitted to His Excellency and the Steering Committee on Health Sector Reform. This paper follows on a "concept paper" prepared in collaboration with the World Bank, which outlines broad strategies for health sector reform in Egypt. It also builds upon the Data for Decision Making (DDM) project's work in Egypt, including a paper which analyzed health sector problems and potential policy solutions in Egypt.

A working definition of primary care is used in this paper. This definition differs in some ways from that in routine use in the MOHP. In this paper, primary care includes a defined set of basic health care interventions. These should provide cost-effective remedies for important population health problems as well as prevent disease and promote health behavior. These interventions are grouped in three categories: public health interventions provided to populatio's or groups; preventive, promotive, and population services provided to individuals; and individual treatment of disease. All of these services can be provided on an outreach or ambulatory basis. In addition, a limited set of associated inpatient service should be included in the basic set of interventions. Such a "primary care package" should be provided in an integrated way, with a focus on and with the involvement of families and communities.

The next section of this report briefly summarizes the current situation in Egypt in terms of health status, health care financing, provision of health care services, and the population's use of health care. The third section proposes a definition of primary care services relevant to Egypt.

Following sections of the report present a diagnosis of the problems with Egypt's current primary care strategy; a new strategy for primary care; a defined notional package of primary care services which must be guaranteed to all Egyptians; estimates of the resources required and steps needed to bridge service gaps; new approaches to paying for health care services and organizing the provision of health care, linking government, public, and private resources according to different prevailing conditions in Egypt today; and operational issues in implementing the new strategy and areas where significant new investment will be needed to realize the implementation of the strategy. The final section of the report lists short- and medium-term "fast-track" steps which can be taken to initiate action to make this strategy a reality.

The work done for this report was completed in a short period of time with limited resources. While the underlying strategy proposed is based on sound principles and theory as well as on international experience, the analysis of the basic package, service gaps, and financing required is presented as a set of indicative, rather than final, estimates. The new approaches to paying for and organizing health care are proposals which need to be elaborated and tested under real conditions to determine how effective they may be, and what will work. The new strategy for primary care is a substantial program of reform. As with any such program, it will require careful review, further analysis, and real world experience to be made effective.

EGYPT'S HEALTH CARE TODAY

HEALTH CONDITIONS

Although discrepancies exist between the findings of the most recent Egypt Demographic and Health Survey (EDHS), issued in 1995, and the reports published by the Central Agency for Public Mobilization and Statistics (CAPMAS), the sources are complementary and confirm that during the preceding decades Egypt has made impressive progress in increasing life expectancy and reducing infant and child mortality and unwanted pregnancies. However, the differences among the various parts of the country are remarkable. Urban governorates and urban Lower Egypt present much better indicators than does Upper Egypt, this difference being particularly marked in rural areas. Some basic health indicators showing Egypt's successes are as follows:

- Life expectancy at birth is now 65.5 years (1992).
- The 1995 EDHS finds that there has been a 35 percent decline in the Infant Mortality Rate (IMR) during the past 15 years and that the decrease in the under-five mortality rate has been even more dramatic, representing a 40 percent reduction for the same period. However, the differences between EDHS and Ministry of Health and Population (MOHP) data are significant. The EDHS figures are much higher, 63 per 1,000 and 81 per 1,000 for the IMR and the under-five rate respectively; while according to the MOHP reports the IMR and the under-five mortality rate are 40 per 1,000 and 60 per 1,000.
- The maternal mortality ratio estimated by the 1992 National Maternal Mortality Survey is 174 maternal deaths per 100,000 live births which compares favorably with levels observed in the region but is very high in absolute terms.[2]
- Knowledge of family planning methods and sources is very widespread. Ninety percent of married women are in favor of contraception and 70 percent of married women have had some experience with a family planning method. According to the 1995 EDHS, almost half of married women were currently using contraception.
- Some vertical programs have received significant international support and have been very successful. Virtually all Egyptian children have received at least one vaccination, confirming universal access to the Extended Program Immunization (EPI) services. The proportion of children who were completely immunized against tuberculosis, poliomyelitis, diphtheria/pertussis/tetanus and measles is above 80 percent. Even for the hepatitis B vaccine, the most recently introduced antigen, the proportion of children having received a third dose is 57 percent, which can be considered as a remarkable achievement. Tetanus-toxoid coverage has also

[2] *Regional variations: between 117 and 544 per 100,000 live births*

increased rapidly: the proportion of births where the mother received at least one injection rose from 11 percent in 1988 to 70 percent in 1995.

- Compared with other countries, the Control of Diarrheal Disease (CDD) program in Egypt is a success story: The 1995 EDHS shows that 98 percent of all mothers know about oral rehydration salts (ORS) and the majority correctly believe that more fluids should be given when a child suffers from diarrhea. The EDHS found that overall 43 percent of children with diarrhea were treated with ORS and that 45 percent received increased fluids.

However, despite these undeniable achievements, the Egyptian health system presents some negative characteristics:

- There are wide differentials with respect to under-five, neonatal and maternal mortality and morbidity. The differences are profound between urban and rural areas and between Lower and Upper Egypt. Maternal age and birth spacing, mothers' educational levels, and maternity care during pregnancy significantly influence the risks of mortality, and particularly of early childhood mortality.
- Despite impressive reductions in under-five and infant mortality, these reductions seem to have reached a plateau and there is a need to concentrate more efforts on a reduction of neonatal mortality which now accounts for 50 percent of the IMR. This is all the more important as the causes of maternal mortality and neonatal mortality are interrelated and could be addressed by improvements in maternal health care and in care-seeking behaviors.
- The quality of care delivered by public facilities is perceived by the public as poor, which explains underutilization despite unusually good coverage. The utilization of some essential health services is critically low: Many Egyptian mothers do not receive antenatal care, and only 39 percent of births received antenatal care in the year period preceding the 1995 EDHS. In rural areas, this proportion is only 15 percent and, overall, 70 percent of deliveries take place at home with 46 percent of these receiving assistance by a trained professional. The Maternal Mortality Study reveals that about 60 percent of maternal deaths occur in medical facilities and that 90 percent of these deaths were associated with at least one avoidable factor: delay in seeking care, poor quality of antenatal care, or substandard delivery care.
- While acute malnutrition seems to be a marginal problem, stunting rates are disproportionately high and affect almost one third of Egyptian children under five, and 12 percent of children are underweight for their age. Anemia has been found highly prevalent: 38 percent among preschool age children and 22 percent among pregnant and lactating women. Iodine deficiency affects nine governorates, which represent a population of 2 million. In addition, deficiencies may be widespread for vitamins A, zinc, and maybe B6. Finally, although all Egyptian children are breast-fed for a certain amount of time, only 31 percent are exclusively breast-fed at four months of age.
- Previous Information, Education, and Communication (IEC) campaigns, particularly those using modern media such as television, have been extremely effective in reaching communities and promoting behavior changes related to contraception, utilization of ORS, or prevention of neonatal tetanus. However, experience shows that these benefits tend to rapidly erode when health providers do not amplify these messages by fostering appropriate changes in the delivery of care and improving face-to-face counseling.

▲ Egypt's population and epidemiological profile are evolving, which bears important implications for the changes in demand/need for health services. The population below age 15 is still very high (40 percent), but the population over age 60 already equals almost 6 percent and is likely to grow and increase the demand on expensive health care for the elderly. Sick adults already consume a high proportion of health sector resources, and health expenditures are expected to grow rapidly. Cardiovascular diseases, cancers, diabetes, tuberculosis, and injuries are major problems that remain largely neglected and need to be explicitly addressed. The epidemiologic transition characterized by the shift toward a greater importance of adults' illness, and the relative reduction in communicable diseases, is not taking place in a homogeneous way in all parts of Egypt. However, the changes in disease patterns and the age structures of the population are key parameters to be taken into account in the reform of the health system.

Utilization and Financing

Utilization of health care services

Table 3 shows that Egyptians used, on average, 3.5 outpatient visits per year (Egypt Household Health Utilization and Expenditure Survey [EHHUES], 1995, carried out jointly by the Data for Decision Making project and the Ministry of Health and Population). In comparison with other low- and middle-income countries, Egyptians are above average users of outpatient services. For example, Egypt consumed less outpatient services than China did, even though China's income was only half of that of Egypt. On the other hand, Egypt used more outpatient services than India and Thailand in the same year. Utilization rates vary significantly by region and urban/rural areas where individuals lived. Individuals in urban areas had 4.48 outpatient visits per year, compared to

Table 3: Annual Utilization Rate Per Capita

Category	Outpatient Visits
Total Sample	3.51
Urban	4.48
Rural	2.75
Regions	
Urban Governorates	5.17
Urban Lower Egypt	4.36
Rural Lower Egypt	2.90
Urban Upper Egypt	3.38
Rural Upper Egypt	2.57
Gender	
Male	3.25
Female	3.75
Income Quintiles	
Quintile 1: (<LE 560)	2.32
Quintile 2: (560–40)	2.91
Quintile 3: (804–1113)	3.40
Quintile 4: (1114–1704)	3.79
Quintile 5: (>1704)	5.11

2.75 visits for individuals in rural areas. In other words, individuals in urban areas used 1.6 times the number of outpatient visits as individuals in rural areas. Again, individuals in urban governorates had the highest number of visits per year (5.17), followed by individuals in urban Lower Egypt (4.36), with individuals in rural Upper Egypt having the lowest utilization rate (2.57).

Utilization of health services did not differ significantly in Egypt between men and women. Men used 3.25 outpatient visits per capita per year, as compared with women who used 3.75 outpatient visits. As expected, outpatient visit rates are positively correlated with income level. Individuals in the highest income quintile (annual per capital income higher than Egyptian pounds [LE] 1700) had the highest number of visits, 5.11 visits, which was 1.35 times as much as individuals in the fourth income quintile, the next highest users by income group. For outpatient care the richest used over twice as much as the poorest, pointing to the inequity in access to care. This discrepancy probably explains the urban/rural differences in utilization of health services.

Distribution of outpatient visits by type of provider

Table 4 presents the tabulation of outpatient visits by type of provider. The majority of outpatient contacts took place in the private sector. Less than 20 percent of outpatient visits took place in MOHP facilities. The HIO, between the programs for school children and workers, accounted for 14 percent of visits. Though not shown here, less than 10 percent of visits for children between the ages of 5 and 15 were covered by the school health insurance program. Clearly, neither government facilities nor the HIO were the preferred choice for outpatient contacts. Compared to their urban counterparts, rural residents were even more likely to go to private providers for outpatient care. Condition-specific analysis also shows that private providers are preferred over government facilities. While 48 percent of children with diarrhea were taken to a health facility or a health provider, 34 percent of caretakers selected private providers and only 14 percent went to a public facility. The proportion is similar in the case of Acute Respiratory Infection (ARI) or fever. Private providers also offer some preventive services: When provided, antenatal care is four times more frequently delivered by a private provider. The pill, the second most common form of family planning, is supplied by private pharmacies in 90 percent of the cases.

Table 4: Distribution of Outpatient Visits by Type of Provider

	Number of visits (millions)	Percentage
Total sample	210.6	100.00
MOHP	42.00	19.90
HIO Workers School	 15.6 13.8	 7.40 6.55
Private	111.60	53.00
Others	27.60	13.10

Source: *Egypt Health Household Utilization and Expenditure Survey, 1995*

Females are more likely to use private providers for outpatient services than males. One possible explanation for this might be that males are more likely than females to have insurance coverage through their employment. For each income quintile, private providers are the preferred provider for outpatient visits. Those in the highest income quintile were more likely to use private facilities than those with lower incomes. For individuals in the lowest income quintile, 41 percent of outpatient visits were at either MOHP or other government facilities. However, even for this income group, 44 percent of outpatient visits were to private providers, indicating the predominant use of private providers in outpatient care in Egypt, regardless of patients' income.

Current financing of primary, preventive, and outpatient personal illness care

Table 5 shows that in 1994–95, Egypt spent LE 4.5 billion on primary, preventive, and outpatient personal illness care. This translates to LE 76 per person per year. Household out-of-pocket expenditures amounted to LE 2,950 million or nearly 65 percent of total expenditures. Of this, LE 2,627 million was spent on services provided in the private sector, LE 243 million was spent on MOHP-related visits, and the remaining LE 80 million on visits covered by HIO. The MOHP accounted for less than 14 percent of total expenditures. Of this, LE 125 million was spent on population-based public health services such as vector control, environmental sanitation, and food inspection. This accounts for nearly all of the expenditures on these services. The remaining LE 501 million was spent on primary care and outpatient personal illness treatment. The HIO spent LE 624 million, almost all of it for personal illness care. The school health insurance program accounted for LE 233 million. As mentioned in the earlier section, less than 10 percent of outpatient visits for children between the ages of 5 and 15 were covered through the school health insurance program. This, coupled with current levels of expenditure, could threaten the long-term financial sustainability of the program.

Table 5: Sources of Financing (in millions of Egyptian pounds)

Source	Amount	Percentage
MOHP		13.73
Total	626	
Preventive	125	
Primary and outpatient illness	501	
HIO		13.70
Total	624	
School health insurance	233	
Workers etc.	391	
Households		64.70
Total	2950	
Private providers	2627	
MOHP facilities	243	
HIO	80	
Others	357	7.87
Total	4557	100.00

Sources: *National Health Accounts, 1994–95*
Budget Tracking System
Egypt Household Health Utilization and Expenditure Survey
Data for Decision Making Project

Per capita expenditures and utilization rates were used to calculate the cost per outpatient contact by type of provider. These are presented in Table 6. The average cost per outpatient contact was LE 21.65. Not surprisingly, the highest cost per outpatient contact was at the HIO. The HIO currently covers one-third of the population, provides fewer outpatient services per capita than the MOHP and yet spends more on outpatient illness treatment. At the same time it relies on contracting with private providers, which it cannot effectively monitor and control, to provide services to school children. It also has a generous drug benefit and inadequate cost containment mechanisms. The analysis points to the need to address the inadequacies within the HIO before it can be used as a vehicle to extend social insurance coverage to other segments of the population. The MOHP was the least expensive at LE 19.06 per outpatient contact. Of the LE 19.06 that it cost per outpatient contact at a MOHP facility, LE 6.69 came from households and the rest from the MOHP. The MOHP's costs probably reflect lower salaries than in the private sector. The cost per outpatient contact in the private sector was LE 27.07. Of this, nearly half was for drugs, 25 percent for doctor fees, and the rest for other expenses.

Table 6: Cost Per Outpatient Contact by Type of Provider

	Source of Financing			
	Total	**Household**	**MOHP**	**HIO**
Private	27.07	27.07	—	—
MOHP	19.06	6.69	12.38	—
HIO School health Workers etc.	 20.43 29.34	 2.77 3.45		 17.65 25.89
Average	21.65			

Health Care Institutions and Provision

Health services in Egypt are currently managed and delivered by three distinct sectors: government, public, and private. These three sectors are organized as follows:

- The government sector includes the Ministry of Health and Population, the Ministry of Education responsible for university hospitals, other ministries, and the Public Organization for Teaching Hospitals.
- The public sector (which refers to autonomous entities wholly owned by the government) includes the Public Organization for Health Insurance, the Curative Care Organizations (CCOs), and other public sector organizations that provide mainly hospital services.
- The private sector provides its services through private clinics, polyclinics or group practices managed by private physicians or nongovernmental organizations (NGO) and private hospitals.

Ministry of Health and Population

The organizational structure of the MOHP can be broken down into two functional structures: administrative and service delivery. There is no formal referral system in the MOHP system.

Administrative structure

Administratively, there are 230 health districts in Egypt. Each district has a director, sometimes the district hospital director, who supervises a health team composed of one or two physicians and a nurse supervisor.

Service delivery structure

The service delivery units are organized along different lines. These may be geographic (rural and urban); structural (rural health units, rural hospitals, urban health centers, etc.); administrative (health offices); functional (maternal and child health centers); or programmatic (immunization, family planning, diarrheal disease control).

The classification that is used predominantly is the structural classification. According to 1995 statistics, the health facilities that provide preventive and primary health care (PHC) services,[3] and that are is in "physical structure" classification are:

- Rural Health Units (RHU) provide curative and PHC services in rural areas at the outpatient level. There are 2,209 RHUs.
- Rural Health Centers (RHC) are mandated to provide curative and PHC services in rural areas at the outpatient and inpatient levels. There are 416 RHCs with 5,976 beds. Each RHC has 15 to 20 beds, but few of these beds are utilized; accordingly, there are no inpatient services provided in the RHCs. However, planned conversion of RHCs to Rural Hospitals continues to be implemented.
- Rural Hospitals (RH) provide curative and PHC services in rural areas at the outpatient and inpatient levels including surgery, clinical pathology, and radiology. There are 161 RHs with 4,021 beds. The number of beds per RH ranges between 30 and 60. The average occupancy rate of these beds is less than 4 percent.
- Health Offices (HO) exist in urban areas and are mandated to provide birth and death registration, food inspection and control, and other preventive services. There are 354 HOs.
- Maternal and Child Health (MCH) Centers exist in urban areas and are mandated to provide antenatal care, labor and delivery, postnatal care, and early childhood health services. In 1995, there were 244 MCH Centers with 334 beds (not all have beds). There are two ongoing plans for the MCH Centers: One plan, to upgrade them to Urban Health Centers, led to a decrease in the number of stand-alone MCH Centers to 194 in 1997. The other plan is to improve their functions by introducing delivery rooms. Of the current 194 MCH Centers, 112 are government owned and 82 are leased.
- Urban Health Centers (UHC) are mandated to provide integrated HO, MCH and outpatient services at the general practitioner (GP) level. In 1995, there were 167 UHCs. This number has increased recently to 196 due to the upgrade of MCH Centers to UHCs.

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[3] *This classification system places a more restricted scope of services into "primary health care" than does the working definition used elsewhere in this paper.*

- Maternal and Child Hospitals provide antenatal care, labor and delivery, postnatal care, and early childhood health services. There are four such hospitals, with 390 beds.
- Fever Hospitals (FH) are mandated with the isolation and treatment of infectious diseases. There are 86 FHs with 7,323 beds.
- Endemic Diseases Hospitals (EDH) provide inpatient services and treatment of endemic diseases. There are eight EDHs with 81 beds.
- General and District Hospitals (GH and DH) provide outpatient and inpatient services in rural and urban areas for general surgery, general medicine, obstetrics and gynecology, and pediatrics. There are 214 GHs and DHs with 32,591 beds.

In addition to the above units, there are other service delivery centers such as:

- Health Education Offices
- General Practitioner Clinics (GPC): for outpatient services in urban areas at the GP level
- Polyclinics: for outpatient services in urban areas at the specialist level including pharmacy
- Quarantine Units and Centers
- Bilharziasis Control Units, Groups, and Inspection Centers
- Malaria Control Units, Groups, and Inspection Centers
- Filariasis Control Units, Groups, and Inspection Centers
- Women Health Centers (WHC) are being established in rural areas. Construction of 357 new WHCs by 1998 is expected.

Health Insurance Organization

The HIO is organized into three structures, for management, service delivery, and referral.

Management structure

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

Service delivery

HIO statistics in 1995 listed different types of health units for service delivery in Egypt. They include the following four types:

In 1995, there were 639 General Practitioner Clinics inside factories and 22 GPCs outside of factories; the number of GPCs outside factories increased to 49 in 1996.

In 1995, there were 129 Specialist Clinics (SC) or polyclinics in Egypt. This number increased to 138 in 1997.

There are 263 School Health Clinics (SHC) outside the schools in addition to a greater number inside the schools.

There are 27 hospitals with 5,640 beds in urban areas, and 4 School Hospitals with 595 beds throughout Egypt.

REFERRAL SYSTEM

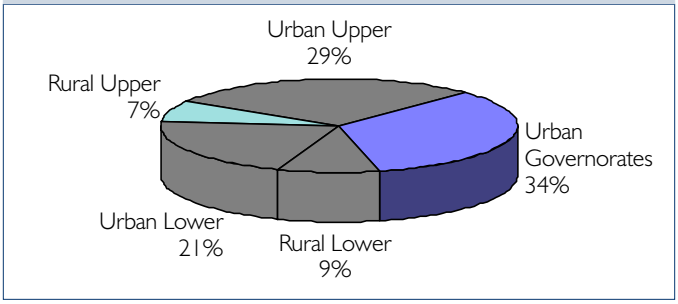
While there is a formal HIO referral system from the GP to polyclinic specialists and then to the hospital, it is not strictly followed. However, the referral system is strictly followed in the school health insurance system.

PRIVATE SECTOR

Physicians in private clinics provide a significant proportion of private outpatient services in Egypt. The DDM National Provider Survey defines private clinics as single doctor practices.[4] A national estimate of private clinic providers was estimated using a field listing of all such providers in a selected sample area covering 83 *shiakhas* (city subdistricts) in 12 governorates and 167 villages in 8 governorates. Low and high estimates were calculated for each region based on shiakhas or villages with a low number of private clinics and those with moderate numbers of health providers relative to other shiakhas or villages in the region, respectively. The low estimate of private clinics is 34,447 and high estimate is 48,403.

A national survey of physicians in private clinics was carried out by DDM in collaboration with the Directorate of Planning at the MOPH. This survey provides the relevant information necessary to obtain a description of the current private provider market. The distribution of the national sample of 802 physicians in private clinics is heavily biased towards urban areas: 34 percent are located in urban governorates, 29 percent in urban Upper Egypt and 21 percent in urban Lower Egypt. The number of private clinics in rural areas is very small: 9 percent in rural Lower Egypt and 7 percent in rural Upper Egypt. Figure 1 illustrates this distribution.

FIGURE 1: PERCENTAGE DISTRIBUTION OF PRIVATE CLINIC PROVIDERS BY REGION

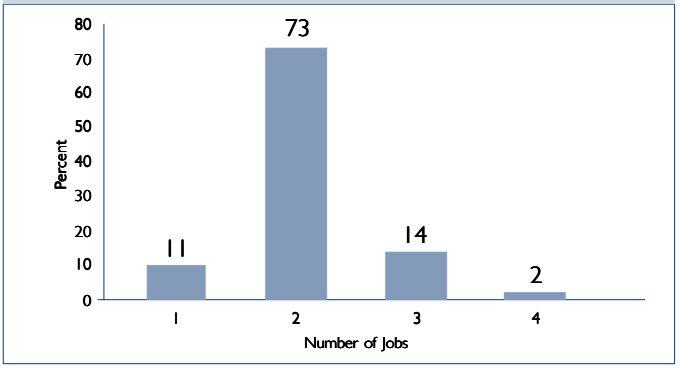


Ninety-two percent of the physicians sampled in private clinics are male and 8 percent are female. Even among the 8 percent of female physicians, the majority are located in urban areas. The highest percentage of female physicians is found in urban governorates with 40 percent of female physicians, followed by 34 percent in urban Upper Egypt, 19 percent in urban Lower Egypt, 5 percent in rural Lower Egypt, and 2 percent in rural Upper Egypt. The distribution of male physicians by region is identical to that of females.

[4] *In some cases there may be other physicians and support staff employed by the owner of the clinic.*

Multiple employment is a common feature among private clinic physicians; 89 percent of the sample have multiple jobs. The remaining 11 percent of physicians work only in the private clinic. Seventy-three percent of physicians in the sample have two jobs, that is, they have another job outside of their private clinic, 14 percent have three jobs and 2 percent have four jobs. This implies that 1,702 is the total number of jobs for the 802 physicians, yielding an average of two jobs per physician. Figure 2 shows the physician distribution by number of jobs.

Figure 2: Physician Distribution by Number of Jobs



Urban-based physicians are more likely to work only in the private clinic than those based in rural areas; according to the survey, 12 percent of urban-based physicians work only in their private clinic in comparison with only 3 percent of rural-based physicians. Rural-based physicians are more likely to have two jobs; in the the survey, 85 percent of all physicians working in rural areas have a second job, in comparison with 71 percent of urban-based physicians. However, there is not much difference between urban and rural physicians in the likelihood of having a third or fourth job. Fifteen percent of urban and urban governorate physicians and 11 percent of rural physicians have a third job, and 2 percent of urban and urban governorate physicians and 1 percent of rural physicians have a fourth job.

Overall, MOHP facilities employ 53 percent of physicians with multiple jobs, followed by universities with 14 percent, others with 12 percent, HIOs with 11 percent, private with 9 percent and CCOs with 1 percent. Government and public agencies are the main employers of private clinic physicians with multiple jobs, with the private sector providing a very small proportion of multiple jobs. Although the MOHP is the main employer of physicians with second jobs, private facilities employ 34 percent of those with third jobs and 47 percent of those with fourth jobs. Not surprisingly, urban areas are the main location of multiple employment. Eighty-three percent of multiple jobs held by physicians are in urban areas: 33 percent in urban governorates and 19 percent and 31 percent in urban Lower and Upper Egypt. Nine percent of multiple jobs are in rural Lower Egypt and 7 percent in rural Upper Egypt.

In rural Lower Egypt 76 percent of physicians with private clinics have a second job working in the MOHP, while 89 percent of private clinic physicians in rural Upper Egypt also work for the MOHP. Therefore, in rural areas the physician providing private care and the physician providing public care are usually one and the same. This implies that there is no effective distinction between the private provider market and the provision of public care in rural areas. In contrast, only 45

percent of physicians with private clinics in urban governorates also work in the MOHP. The percentages for urban areas are as follows: 66 percent in Lower Egypt and 63 percent in Upper Egypt. This indicates that there is more differentiation between public and private providers in urban areas and hence more competition within the private market.

Health manpower

Egypt's public health sector has a rich and broad human resource and manpower base. According to the MOHP national statistics in January 1996, there are 117,831 physicians, 14,938 dentists, 33,770 pharmacists, 5,488 nurse supervisors, 1,034 nurse technicians, 109,027 registered nurses, 8,417 nurse assistants, 2,603 nurse midwives and 3,735 school health visitors.

Ministry of health and population

The MOHP employs a large number of physicians and nurses. In the MOHP, there are 39,900 physicians, 40 percent of whom work in PHC and preventive health services (13,465 in PHC and 2,356 in preventive health). There are 64,837 nurses, 52.5 percent of whom work in PHC and preventive services (30,714 in PHC and 3,291 in preventive services). The physician/nurse ratio is 1.63 for the total, 2.24 in PHC, and 1.4 in preventive services. Table 7 shows the distribution of physicians and nurses by governorate. Table 8 gives the distribution of technicians by governorate.

Table 7: Distribution of MOHP Physicians and Nurses by Governorate

Governorate	Physicians				Nurses			
	Total	PHC	Preventive	Curative	Total	PHC	Preventive	Curative
Cairo	7,362	2,958	266	3,872	4,696	1,609	457	2,495
Alexandria	3,743	1,044	282	2,347	4,107	1,696	190	2,043
Port Said	522	127	43	344	1,015	270	67	635
Suez	284	54	19	197	521	276	40	190
Ismalia	359	115	17	233	858	292	44	471
Damietta	809	133	38	613	2,253	1,007	45	1,113
Dakahleya	3,494	1,556	86	1,765	5,042	2,386	219	2,204
Sharkeya	1,936	565	5	1,287	3,611	1,961	1	1,596
Kalioubeya	1,261	369	73	777	2,950	1,618	153	1,049
Kafr El Sheikh	1,218	328	19	845	4,323	1,872	67	1,350
Gharbiya	3,462	870	177	2,393	8,497	4,454	442	3,240
Menoufiya	1,078	342	63	622	2,604	1,389	152	990
Behera	1,931	623	106	1,071	4,773	2,648	41	1,653
Giza	3,930	1,203	551	2,157	3,657	1,315	316	1,912
Beni Souef	247	457	22	757	2,631	1,248	120	1,173
Fayoum	785	274	18	473	1,756	949	44	686
Minya	1,743	508	104	924	3,888	1,396	192	2,220
Assiout	1,451	350	155	908	2,826	1,833	405	543
Sohag	1,271	509	77	672	905	470	116	318
Kena	1,035	507	28	473	967	505	37	410
Aswan	998	330	177	467	1,184	717	61	400
Matrouh	213	78	6	120	275	117	13	125
El Wadi El Gedid	87	32	2	1	450	257	32	146
Red Sea	197	33	4	150	263	104	3	136
North Sinai	243	70	5	151	525	232	6	270
South Sinai	24	2	3	13	111	43	0	62
Luxor	217	28	10	169	149	50	28	68
Total	39,900	13,465	2,356	23,801	64,837	30,714	3,291	27,498

Source: *Ministry of Health and Population, 1997*

TABLE 8: DISTRIBUTION OF MOHP TECHNICIANS BY GOVERNORATE

Governorate	X-Ray	Dental	Medical Registration	Maintenance	Health Assistant	Lab
Cairo	175	51	148	58	487	233
Alexandria	6	95	104	0	614	716
Port Said	32	3	3	0	38	46
Suez	17	5	3	0	27	36
Ismalia	54	6	7	2	41	63
Damietta	52	9	37	0	70	108
Dakahleya	299	42	396	47	621	1,154
Sharkeya	178	100	148	0	441	316
Kalioubeya	59	21	15	3	124	44
Kafr El Sheikh	45	10	28	7	301	125
Gharbiya	352	19	191	17	323	352
Menoufiya	78	6	69	5	188	88
Behera	127	58	98	0	675	308
Giza	119	47	83	32	314	151
Beni Souef	57	20	17	5	149	101
Fayoum	69	24	25	3	154	116
Minya	168	82	72	8	312	253
Assiout	281	97	229	54	670	468
Sohag	118	49	88	12	365	200
Kena	74	20	48	9	356	155
Aswan	15	4	6	4	29	118
Matrouh	24	1	9	1	66	41
El Wadi El Gedid	14	3	8	7	19	16
Red Sea	29	5	5	1	27	19
North Sinai	40	11	24	2	53	57
South Sinai	24	2	15	1	0	18
Luxor	15	7	1	0	16	21
Total	2,521	797	1,877	278	6,480	5,323

Source: *Ministry of Health and Population, 1997*

Primary Health Care

In 1978, a historic World Health Organization conference in Alma-Ata called for "Health for All" by the year 2000. Health was asserted as a human right and health care was to be made accessible, affordable, and socially relevant. This basic strategy was termed "Primary Health Care" and involved not only the provision of promotive, preventive, and personal curative services but also education and socio-economic development services. The PHC concept also included community participation, social relevance of interventions, the use of simple and effective technologies, and the active involvement of paramedics.

The core components of PHC were initially defined as: health education, environmental sanitation including food and water, maternal and child health programs, immunization and family planning, prevention of local endemic diseases, appropriate treatment of common diseases and injuries, provision of essential drugs, promotion of sound nutrition, and traditional medicine.

Today, almost 20 years after Alma-Ata, it is clear that although the strategy sounded promising, for most countries, including Egypt, it was impossible to put PHC into action as defined.

As in many other countries, the Egyptian PHC system aimed at ensuring physical access to virtually the entire urban and rural population. All services provided at the primary level are, in essence, free of charge.

In reality, the current system has not been able to meet its promises and the population living in some remote rural and desert areas or in periurban slums has, in practice, no access to public health services although coverage by physical infrastructures is excellent. The type of services provided in public facilities depends on the availability of resources, a highly variable characteristic, and does not address the need to deliver a standard range of quality services. Many facilities are critically short of trained personnel, basic equipment, and essential drugs; and clients using the public PHC services often have to pay out-of-pocket for medicine and, whenever necessary, for investigations.

The predictable result has been a shift to private providers, who appear to be more sensitive to client needs and respond to the population's expectations in terms of quality of care. This tendency to prefer private providers includes the rural poor, which strongly suggests that the perceived quality of care received in public facilities has fallen far below the acceptable level or that services are simply not available.

Another negative characteristic of the system is that referral procedures, which should, in principle, be a key component of a primary health care system, are noticeably dysfunctional.

Moreover, the general thrust in favor of vertical activities, such as child survival or family planning programs, has produced some spectacular results. But this has had negative effects by creating an environment in which services are organized and delivered in a fragmented rather than

an integrated manner and by generating incentives for the health personnel to focus on some narrow activities, thus neglecting many crucial aspects of individual preventive and curative care. The current system has not been able to address inequities, a fact reflected in the obvious differences in most health indicators between Upper and Lower Egypt and between rural and urban areas.

Finally, as already mentioned, household knowledge is insufficient and community participation, a process by which people gain control over the factors affecting their health, is weak.

As a result, the current system is plagued with inefficiencies and inequities, and has an insufficient impact on people's health. In response to this diagnosis, the essential purpose of this document is to establish a foundation for a definition of primary care appropriate to the Egyptian context, to propose important strategic options, and outline the premises of an implementation framework.

A practical definition of primary care is proposed by Starfield (Starfield B. 1992. *Primary Care*. New York: Oxford University Press). This definition encompasses the four fundamental principles of universality, quality, equity, and efficiency. PHC is described as "the basic level of care provided to everyone. It addresses the most common problems in the community by providing preventive, curative and rehabilitation services to maximize health and well being. It is care that organizes and rationalizes the deployment of all resources directed at promoting, maintaining and improving health."

It includes curative and preventive interventions that should be available at government health facilities but can also, to a large extent, be provided by private providers. In addition, certain services such as high quality maternity care must be available in first-level referral units. Primary care must not be confined within the walls of peripheral facilities, and it should incorporate interventions aimed at involving communities, changing care-seeking behaviors, and promoting "best practices" at the household level.

A primary care policy should have two main objectives: first, to improve access to and quality of essential preventive and curative services in order to achieve defined health goals; and second, to reduce inefficiencies which are widespread in the public (and also the private) sectors. Comprehensiveness of care is important and implies that services should address all important health needs, including prevention of illness. However, the range of services cannot be determined by needs only: Resources for health care are limited and sometimes compete with those allocated to other social services. All services cannot realistically be available at all levels of the system. The question is to determine which services *must* be available directly at the primary care facility or indirectly by referral from this facility. The notion of "package" constitutes a practical way to address this issue and is the basis for policy decisions, restructuring, resource allocation, financing, and investment plans to come.

Development of Reform Strategies For Primary Care in Egypt: The Diagnosis

What is the current primary care strategy and what ails it?

As a basis for a new strategy for primary care in Egypt, there needs to be a sound diagnosis of the deficiencies of the current strategy and an analysis of the priorities for change.

Egypt's current primary care strategy relies on a classic public investment approach, emphasizing government and public sector finance and delivery of services. The intention was to establish universal access to comprehensive primary care for two groups in the population. For the majority of the population, especially the lower-income and rural population, a government-funded system of clinics, outreach programs, and hospital-based outpatient departments would provide complete services. For the middle-income, largely urban population, and for certain special groups, a system of social health insurance facilities would provide the services, with a combination of contributory finance from beneficiaries and employers and some government subsidies. Over time, it was expected that the share of population enrolled in insurance would expand. Table 9 summarizes the main characteristics of the current strategy.

The government component of the system has relied on tax-generated government funds and international assistance to the government of Egypt. These funds finance the training of medical, paramedical, and nursing personnel and also pay for construction and equipment for the national network of primary care facilities, which includes various types of rural and urban government-owned clinics as well as the outpatient departments of government and public sector hospitals. Most of these facilities belong to the Ministry of Health and Population, the Health Insurance Organization and the Ministry of Education. On the recurrent expenditure side, tax and aid funds finance the salaries and operating costs of these facilities, as well as the expenditures associated with a variety of disease- or intervention-specific programs, such as Extended Program Immunization, Control of Diarrheal Disease, family planning, schistosomiasis, and tuberculosis control.

Social health insurance also finances primary care for about 33 percent of the population. Most of the services provided to this insured group are delivered through a similar strategy of public investment. However, the delivery system created by these investments is, to a large extent, separate from and parallel to that of government services and belongs to the HIO. It is financed primarily by earmarked contributions from beneficiaries and employers, and a tax on cigarettes, although there is also a significant component of government financing. There is little emphasis in this health insurance system on the disease- or intervention-specific programs found in the government delivery system; rather, services are largely provided through the general primary care contacts with physicians and staff in HIO clinics and outpatient departments. It is important to note that, since 1993, most school-age children are eligible for care through these services.

As shown in Table 9, in theory both systems are intended to provide comprehensive primary care services to their respective covered populations. In practice, since resources have been limited on the government side, there has been a strong emphasis on assuring coverage with certain specific interventions, such as EPI. Over time, a more limited set of priority interventions related to child survival, safe motherhood, family planning, and infectious disease control has become the de facto program, as compared to the stated primary care program. Neither government nor insurance systems make significant use of either demand- or supply-side incentives, assure cost-effective practice, or engage in explicit priority setting.

Table 9: Egypt's Current Primary Care Strategy

Element of strategy	Government-provided services	Insurance-provided services
Covered population	All those not covered by insurance (minority of wealthy will probably seek private services)	Formal sector workers, school children, other special groups (about 33 percent of population in 1995)
Services covered (benefit package)	All primary care: personal preventive and curative services, and population-based public health and promotion interventions for whole population	Personal preventive and curative interventions for the covered population that can be provided at primary level facilities
Finance sources	Government budgets and international assistance	Health insurance contributions from employers and employees, earmarked taxes, general government subsidies
Service provision	Government-owned clinics and hospital outpatient departments	HIO-owned clinics and hospital outpatient departments. Limited contracts with government and private providers
Provider payment	Facility budgets, staff salaries	Facility budgets, staff salaries, fee-for-service
Supply-side incentives	None (salaries are low, there is almost no use of performance-related pay or even enforcement of work rules)	Few (salaries are somewhat better than government, but little use of other incentives)
Demand-side incentives	None	Few (some co-payments introduced for drugs recently, premiums)

It is critical to note that Egypt's primary care efforts are part of the larger national health care strategy. This strategy is constructed on the same general principles: comprehensive services through government facilities for the uninsured, mainly lower-income population; social insurance financing and provision for the formal sector employees and certain other groups; and private services for those willing to pay.

The approach to the non-primary care services—which for simplicity can be defined as all inpatient as well as secondary and tertiary services, typically more sophisticated technology, and interventions for chronic illness—is similar to that outlined in Table 9. That is, the stated strategy is to provide comprehensive care (all medically appropriate interventions) to all, according to the different population groups, through a set of vertically financed and owned facilities. Providers are financed largely by budgets and salaries, and there are few demand-side incentives.

These two components of the national health care strategy are linked, however, through the constraints on total finance and provision capacity. To the extent that the MOHP uses limited funds

to finance inpatient services or to assign physicians and nurses to hospitals, there will be fewer resources to support primary care. A similar linkage exists for insurance-based health services.

Finally, a critical element in the national strategy concerns private sector services. While there is little private ownership of hospitals, all physicians are permitted to engage in private practice and the vast majority do so. The Egypt Household Health Utilization and Expediture Survey shows that, on average for the whole population, about 65 percent of all primary care contacts for illness treatment are with private providers. Private providers are an important source of treatment for all population groups, not just the wealthy urban population.

What has been the result of several decades of reliance on this strategy and what are the causes of this result? The following sections summarize key findings of our review under several relevant headings.

Financing

- Government spending on primary care is low, about 40 percent of total MOHP health spending or LE 12 per capita (about U.S. $3.50) in 1995.
- Due to pressures to maintain hospital services and a declining MOHP share in total spending over time, MOHP primary care spending has not increased significantly in percentage or real terms.
- Household spending on treatment and drugs makes up the largest part of total spending. Most of this is for primary care from private providers, financed out-of-pocket on a fee-for-service basis. A disproportionate burden is borne by the lower-income groups.
- While government and insurance spending is low, it is plausible that total spending on primary care, including household spending, may be sufficient to finance a substantial package of services.

Coverage

- High coverage levels—and significant health benefits—have been achieved with a few, mainly vertically provided primary care interventions such as EPI and CDD.
- Government services provide only 35 percent on average of primary treatment of illness. Even the lower-income and rural population reports significant levels of private primary care service use, and the frequency increases with income and urban residence.
- Insured groups also report significant levels of private primary treatment of illness, despite their entitlement to free care through insurance facilities. Insured groups report much higher levels of service use than the uninsured, combining both free and paid services. It is unclear whether this higher level of service use is clinically appropriate.

Package of Benefits

- Despite a strategy to provide a comprehensive package of primary care services to all, in reality a much smaller package is usually accessible to the population. This more limited package is determined by staff and supply availability and variations in the technical competence of staff.

This results in significant departures from the most appropriate and cost-effective service package and ad hoc variability according to location. Nonetheless, in the last decade there has been a concerted and successful effort to extend coverage with a limited set of child survival, disease control, and population interventions. Other important aspects of primary care, e.g., treatment of some serious diseases of public health importance and health promotion, have not been adequately addressed.

- Within the current comprehensive package, a number of interventions that would likely comprise a core or basic package are already being provided. However, there are probably significant departures in technology (treatment protocols, drugs used, etc.) from the least cost- or most cost-effective treatment strategies for many basic health problems.
- The current comprehensive package may not include, or not adequately emphasize, specific health promotion and behavior change interventions that could significantly reduce future burdens that are now predictable as a result of health transition processes.

Service Provision

- Government and insurance facilities pay very low salaries to too many physicians. On average in MOHP hospitals there are 2.19 doctors per bed on salary.[5] In MOHP primary care facilities, on average, each doctor sees about seven patients per day. Many physicians are paid despite the fact that they do little work or may not even be physically present.
- Government doctors face little incentive to work effectively in public service delivery. Salaries are very low and the government's contract with employed physicians has little in the way of enforceable performance standards. The result is poor quality and inefficient services.
- Government-employed physicians generally hold multiple jobs, including private practice. This increases the disincentives for better public performance and introduces substantial incentives for conflict of interest between their public and private roles. It is likely that the low use of public services and the high financial burden of primary care on families can be traced to these causes.
- Similar problems exist for insurance-owned facilities.

Management

- Despite decentralized fiscal structures to governorates, in practice almost all aspects of the system are determined centrally. Salary expenditures account for the largest item, and staffing levels and assignments are largely controlled by the Central Organization for Administration.
- There is little effective management information available, and few incentives to managers or providers to make use of it.

Health Impact

- Significant impact on mortality and fertility has been achieved through a few successful primary care programs.

[5] *DDM household and provider surveys*

- Current structures and processes are poorly suited to sustaining these gains as the disease burden shifts, requiring primary treatment interventions and health promotion rather than vertical disease control interventions.

Evaluation of Current Strategy

It is our view that the current strategy does not function well in the Egyptian context despite some recent important accomplishments. The strategy is poorly designed to meet the future requirements for effective, efficient, and equitable and financially sustainable primary care for Egypt. The key problems are:

- *Lack of appropriate priorities* which will result in the best use of limited resources.
- *Limited government and insurance finances* for primary care, as well as the competing demands of non-primary care facilities, have resulted in an imbalance between resources available and the promised benefit package. This imbalance must be corrected, so that a true and feasible package of services is promised and can be provided at an adequate level of quality.
- *Lack of appropriate incentives* for efficiency or quality for government and insurance organizations and the absence of mechanisms for introducing such incentives. Public organizations receive poor value for money in terms of both the quantity and quality of services provided by their employees. They are often overstaffed and make little or no use of well-known incentive mechanisms to achieve better performance. They are unable to control or to compete with private incentives available to their employees.
- *Poor incentives on the demand side.* Beneficiaries of both government and insurance services are already receiving much, if not most, of their primary care from private providers outside of the formal systems they are supposed to be part of, despite the fact that they pay substantially for these services.
- *Fragmented and inefficient organization of services* in the government, public, and private sectors.
- *Insufficient capacities in health care systems* areas such as financing, management, planning, and research to support significant restructuring of the system.

There exists at present no comprehensive strategy for breaking out of the current system.

Principles, Goals, and Elements of a Strategy for Primary Care in Egypt

Principles Underlying the Strategy

The proposed strategy for primary care in Egypt is based on the following principles:

- Universality: All Egyptians should be assured coverage with the same basic set of primary care services.
- Quality: The covered primary care services should be provided according to accepted standards of scientific and clinical practice and at a level that will be perceived as adequate by beneficiaries.
- Equity: The financial burden of providing the covered services should be shared fairly. No one should be denied covered services for want of ability to pay.
- Efficiency: Services should be provided in a cost-effective way both at the level of the unit of service as well as in the structure of the system, in keeping with the principles of universality and quality.
- Sustainability: There should be enough resources to adequately finance the basic set of services in the short and long term.

A key role of the state is to promote and apply these principles in the development and maintenance of the new primary care strategy. The state has a particular responsibility to assure that the interest of the poor and other vulnerable groups are protected. The strategy is based on a pragmatic approach to the roles of the government and nongovernment actors in the health care system that will be developed and maintained by the state.

Goal and Key Elements of the Strategy

The new strategy proposed for primary care in Egypt is based on the goal of assuring coverage for all Egyptians with a defined set of basic primary care services (the basic package). To obtain this coverage, these services must be reasonably accessible (in terms of time and money costs and cultural acceptability) at an acceptable level of both perceived and technical quality. Government efforts should emphasize, as a priority, meeting the needs of lower-income and rural populations and providing those services for which private demand is likely to be deficient. The following four elements are proposed as the building blocks of this strategy.

- *A defined set of basic primary care services (the basic package), with associated science-based standards of quality.* This package should emphasize cost-effective interventions to maintain and improve the population's health, reduce the burden of illness especially on the least privileged members of the population, and provide satisfaction to families and communities.

- *Sufficient financial resources in primary care to assure access to the basic package at an adequate level of quality.* These may be derived from a number of sources both within and outside government. Significant increases in public funding for primary care will be required. Increased funding must increase the scope and improve the quality of the basic package of services that can be guaranteed to all. Increased public funding should also reduce the inequitable financial burden on the poorest Egyptians resulting from the current high use of private fee-for-service care. It is likely that the financing of increased government expenditures on primary care will require some impact on government financing of non-primary care services. An appropriate balance must be found between the breadth and depth of the service package and the financial resources available. Public assurance of coverage must be feasible at an adequate level of quality, that is, the promised service package must be a real service package.
- *Adoption of new methods of organizing the financing and provision of health care services to obtain greater efficiency and quality of services and feedback from the population to health care institutions.* Egypt's current government, public, and private sector health care services lack appropriate structures and incentives to assure efficiency and quality of services. Paradoxically, there is substantial waste and inefficiency in a health care system characterized by insufficient coverage and lack of resources. Simply increasing public spending on health care, that is, expanding the current "pure public investment" strategy, is unlikely to result in value for the additional expenditure or to repair the significant dysfunctions of the current system. Substantial and profound reorientation of the existing services is required. Plausible and specific strategies to achieve this reorientation should be required as a condition of receiving additional financing under the new strategy. Some of the specific elements of reorganization of health care systems include:
  - Increased reliance on a sub-national geographic or area approach, strengthening and employing governorate and district capacities in planning, finance, and management.
  - Development of appropriate means for separating the financing and provision of services to make more use of financial and performance incentives on both the supply and demand sides.
  - A central role for government in organizing the financing of primary care, assuring appropriate standards and regulation, and implementing policy, planning, and research.
  - Restructuring and rehabilitation of the current fragmented MOHP delivery system.
  - Encouraging development of new forms of private provision, including not-for-profit and for-profit providers.
  - Greater role for private providers in meeting public sector goals for health care coverage.
  - Greater role for internal and market competition involving government, public, and private providers according to the different health care market conditions prevailing throughout Egypt.
- *New investments to create new financing, planning, management, and information systems and to upgrade the quality of facilities and staff.* Health care systems in Egypt today reflect years of struggling to get by with too much of some things and not enough of others. Restructuring must be accompanied by new investments to upgrade the elements of the system that will be retained, including both facilities and staff, as well as to put in place the essential supporting elements needed by new finance and provision strategies. These include: capacities for

regulating and managing the new system, such as capabilities in accreditation; volume and quality monitoring; management information systems; policy planning management and health services research; and logistics.

Presentation of the Strategy

The following sections will present in greater detail some of the specifics of this strategy, including a preliminary analysis of the composition of the basic package, the financing of the new strategy, recommended reforms and models for the finance and provision of services, an initial exploration of the operational aspects of service delivery under the new strategy, an outline of new public investments needed to support the strategy, and a set of specific "next steps."

Much of the specific details in this presentation should be taken as *notional*. That is, it is the result of discussions and analysis developed in a short period of time by a small team. External review and elaboration by colleagues at the MOHP and elsewhere is still needed. Some of the estimates, for example those of the costs and finance requirements for the primary care package, should be taken as *examples* of the kind of analysis and conclusions required to elaborate this strategy. If the basic approach is acceptable, more careful analysis will be required to develop the specifics of the reform program.

Table 10 shows the structure of presentation in subsequent sections. The four rows in the table correspond to the four elements above. For each element, policy issues to be resolved are highlighted. Thus, the strategy and analysis presented here can be pursued by follow-up efforts to review and elaborate on specific policy areas, and ultimately to lead to decision making and action.

Table 10: Structure of Presentation of Reform Strategy

Problems addressed	Specific content of presentation	Policy issues that must be addressed
The "basic package": What should be the content of primary care?	Services included in the basic package	Defining content of basic package
Financing/resources: What resources are required? How does this relate to current spending levels and patterns? What are the prospects for financing the new strategy?	Current expenditures on basic package elements Estimate of finances required for universal coverage with package	Size and composition of new resources needed Development of a financing strategy. Balance of finance and content of package
New approaches to financing and provision: How will resources be used differently to assure efficiency, equity, and quality?	Separation of finance and provision Strategies for different types of areas characterized by market structure Restructuring and rehabilitation of government and private services Increased use of provider and consumer incentives to assure efficiency and quality	Legal and administrative feasibility of new strategies Feasibility of reforms to structure and staffing of facilities Feasibility of implementation of new approaches in different types of areas
Investments: What is needed to provide the necessary support to the new strategy?	Capacities at governorate and district levels Regulation and accreditation capacities Information systems	Training strategies for providers and managers Legal and administrative requirements to carry out new responsibilities Investments in new systems

A Notional Package of Basic Health Services

The package of basic health services described in this document encompasses most of the constituents of primary care and also takes into account specific components of the Egyptian environment in order to respond to the changing needs of the Egyptian society. It will help define essential health services and will address child, maternal, and adult health needs.

The choice of services to be included in a "basic package" must be realistic and should consider the burden of the selected health problems, the cost effectiveness of the interventions, and the accessible resources. In the process of designing the package it is necessary to consider the current inequities in access to health services: Under the present situation the poor may have critical health needs but are less likely to seek and receive care from either public or private providers than the better-off.

In the absence of a burden of disease analysis that would combine the costs of premature mortality with those of non-fatal health outcomes, it is necessary to rely on whatever information is made available from surveys and routine reporting to define what services should be available in primary-level facilities. The components of a basic package of essential services should be selected on the basis of cost effectiveness, prevalence, and severity. Data available from the most recent Egypt Demographic and Health Survey and the Ministry of Health have been used to prepare the example of a package presented in this document. Further work with a panel of Egyptian experts will be necessary to tailor the package to the needs of different segments of the Egyptian society, to test and measure the effectiveness of various interventions in the package, and to assess health outcomes. As changes occur in needs in the capacity to deliver additional services and supplementary resources become available, additional elements can be included in the future.

Given the differences in the availability of services and in the health needs identified between governorates/regions, a certain flexibility in adapting this package is necessary. Given the current distribution of socio-economic and epidemiological characteristics it may be necessary to modify the package in order to satisfy the most important health needs of all segments of the Egyptian population, including the poor. This flexibility may be essential to achieve some form of characteristic or geographic targeting.

The main causes of morbidity and mortality for infants and children are ARI and diarrhea. Early neonatal death (before the seventh day) is thought to contribute as much as 38 percent of infant mortality. It includes direct causes such as asphyxia, hypothermia, general sepsis, tetanus, pneumonia, birth trauma, and prematurity. Poor neonatal care at home and in health facilities, and inappropriate care-seeking behaviors are aggravating factors. These causes are strongly associated with poor maternal health and nutrition, high risk fertility behavior, low birth weight, and complicated delivery that can effectively be addressed by maternal health programs, linking reproductive health and child health services. Although not substantiated with data, a study

carried out by the United States Agency for International Development (USAID) in 1993 suggests that injuries account for almost 20 percent of all deaths for children one to four years old. According to MOHP data from 1995, maternal mortality is predominantly caused by ante- and post-partum hemorrhage (almost 60 percent of deaths), puerperal sepsis (13 percent), and hypertensive diseases (16 percent). While some of these causes can be detected and managed by regular prenatal care like pre-eclampsia, infection, and obstructed labor, others, such as hemorrhage, require treatment by a trained provider and sometimes hospitalization.

There are gaps in the knowledge of adult morbidity and mortality. Available information stresses the prominence of cardiovascular diseases (46 percent of all deaths) while "intestinal infectious diseases" represent 7 percent of mortality and cancers 4 percent. In Africa, the incidence of tuberculosis varies between 1 and 4.5 smear positive cases per year with a case fatality rate of 50 percent in untreated cases; but in Egypt the magnitude of this problem is not reflected in routine reports coming from the MOHP. (Additional data may be available from the tuberculosis control program.) In addition, specific illnesses such as hepatitis B and C and schistosomiasis are highly endemic in rural areas and require specific prevention and control measures.

Services have been grouped into four categories: public health interventions that benefit the entire population, preventive and promotive activities focusing on the individual, personal curative/outpatient services, and selective inpatient treatments. However, certain interventions such as vaccination benefit both the individual and the community by reducing the spread of infectious diseases. Similarly, treatment of tuberculosis obviously improves the health status of the patient but also constitutes the only effective way to halt the transmission of the disease. Health education is another type of intervention aimed at the community that also promotes individual behavior changes. As a result, this classification may appear somewhat arbitrary, but it has been retained to ensure consistency with the financial analysis presented in this document.

A notional package of services is presented in Table 11. This was developed through discussions with the MOHP and a rapid analysis of current health needs. The package is "illustrative" and will need to be refined through a process of further analysis and review by the MOHP and other experts.

Table 11: Notional Package of Services

Basic Preventive Services	Individual Preventive Services	Basic Curative Services	Basic Inpatient Services
Control of water supplies and sanitation	**Women** ◬ Family planning ◬ Health education and counseling ◬ Antenatal care (including immunization and nutrition) ◬ Delivery and emergency obstetric care ◬ Postnatal care **Children** ◬ Periodic examination and growth monitoring ◬ Immunization ◬ Health education, nutrition counseling ◬ Prevention of diarrhea: i.e., breast-feeding, safe weaning practices ◬ Prevention of micronutrient deficiencies **Adults** ◬ Screening for common noncommunicable diseases: hypertension, diabetes, cancers ◬ Occupational hazards	**Women** ◬ Management of reproductive tract infection **Children** ◬ Case management of diarrheal diseases ◬ Case management of acute respiratory infections ◬ Treatment of malnutrition ◬ Treatment of endemic (parasitic) diseases **Adults** ◬ Treatment of acute ailments (eye infections, skin diseases, gastrointestinal infections and parasitic infections) and minor traumas ◬ Treatment of chronic diseases: diabetes, hypertension, cardiovascular diseases and chest conditions, complications of long standing schistosomiasis ◬ Tuberculosis treatment ◬ Emergency services in case of animal bites/poisoning **Others** ◬ Alleviation of pain and treatment of minor traumas ◬ Dental services ◬ Care of the elderly	◬ Emergency obstetric care ◬ Care of the neonate ◬ Minor and common surgery: tonsillectomy, appendectomy, hernias ◬ Emergency management of accidents, traumas, and burns

Gaps in Service Delivery and Utilization

To estimate the cost of the proposed health benefits package, the gaps in the number of client visits to service providers have been calculated. Each proposed service was allocated a number of recommended visits according to suggested international standards. The number of actual client visits taking place in the currently existing primary care services was calculated and the difference between recommended and actual visits constitute service gaps.

To reduce the total number of required visits, some of the services which, in practice, can be provided simultaneously were combined to be delivered during a single visit. The target population refers to those clients who form the largest group exposed or in need of a specific service.

The following sections discuss estimates derived for screening for high prevalence conditions, and for women's health, child health, and curative care.

Screening

Screening for high prevalence conditions for early detection is an integral component of the basic package.

Screening for hypertension and diabetes mellitus needs to be done twice every year for all men and women above the age of 40 years. The two conditions can be screened for in a single visit. Women over 35 years should be also screened for breast and cervical cancer at least once a year. Hence, in a single visit a woman age 40 years or more can be screened for hypertension, diabetes, and cancer. Since the screening activities currently taking place are virtually non-existent, there is a gap of two visits per client per year.

Infections and parasitic diseases are still common, particularly in rural areas. In general, they are more common in the young age groups (children and young adults). Hence, an assumption was made to consider regular annual screening for the group of population below the age of 30. Screening for problems like rheumatic fever will be included in this category.

Women's Health

Family planning services are currently available at the basic health care level. Family planning targets all married women of child-bearing age, 15 to 49. Based on studies showing that 20 percent of couples are infertile and that almost 15 percent of women are pregnant in any year and adding a small factor of 5 percent for those who want to become pregnant or who are divorced or widowed, the target is 60 percent of women 15 to 49. Taking into account visits required for counseling and initiation of use, and follow-up, a minimum of two visits is required. The current level is one visit.

Antenatal care is required for the 15 percent of women of child-bearing age who are pregnant, with a standard recommendation of four visits. The current level is 0.4 visit per pregnancy per year, which implies a gap of 3.6 visits. Antenatal care visits will also include nutrition education.

Delivery requires one contact only as it is a single event for the same 15 percent of the women of child-bearing age who are pregnant in a given year. It includes all forms of pregnancy termination (abortion, normal delivery, and cesarean section). The current contact rate is 0.46, suggesting a gap of 0.54 visit per pregnant woman.

Post-partum care visits have been combined with family planning visits and child immunization visits. Earlier home visits may still need to take place.

Estimates of the percentage of women who need care for reproductive tract infections (RTI) were taken from the "Giza Morbidity Study." The study showed 60 percent of the cohort of women 15 to 49 suffering from some degree of RTI. Therefore, it is assumed that services are required for 60 percent of women at the rate of at least one visit for diagnosis and treatment. Since studies show that the current rate of utilization is 0.39 of RTIs, the current gap is 0.61 visit.

Child Health

During the first year of life an infant visits a health provider five times for compulsory immunization. The current level is four visits, with a gap of one visit.

Periodic examination and growth monitoring of children under five require nine visits over the five-year period with an average of one to eight visits per year. The current level is minimal.

Malnutrition is a common, yet neglected problem among children. In defining the package, the weight-for-height indicator was selected because of its sensitivity and rapid response to nutritional management. It is also more common among children 18 to 36 months of age. The recommended number of visits is four to include follow up and education of mothers. The current number of visits is negligible.

On average, each Egyptian child under the age of five suffers from three episodes of diarrhea every year. Only an estimated 16 percent of the children with diarrhea would be expected to require medical care as most cases can be dealt with at home. A minimum of two visits is recommended for cases needing medical care. The current level of 1.93 visits is very close to that level.

By contrast, many forms of acute respiratory infections require medical care. Almost 23 percent of children with ARI are currently taken to a health provider. A minimum of two contacts is recommended per episode, to include a follow-up visit. The current level is 1.24 visits.

Curative Care

Other basic personal curative services to cover the entire population of 60.24 million will require 2.81 visits per person per year, a figure equivalent to the difference in the current number of outpatient visits and the number of visits necessary to provide all the other services included in the package.

Care of the elderly, added to the proposed package to take into account the demographic transition happening in Egypt, will require an estimated 2.5 visits per week for 10 percent of the population over 65 years old. Table 12 shows the gaps in the number of client contacts.

Table 12: Gaps in the Delivery of Basic Package of Health Services

Individual Preventive Services	Characteristics of Target Population	Target Population Number (millions)	Recommended Contacts Per Year Unadjusted	Recommended Contacts Per Year Adjusted	Current Contacts Per Year	Population Gaps Contacts
Women						
Family Planning	60 percent of women 15–49	8.07	2.00	2.00	1.00	8.07
Antenatal Care	15 percent of women 15–45	1.19	4.00	4.00	0.40	4.30
Pre-marital Counseling	All women 15-35	0.80	0.50	0.50	0.00	0.40
Delivery	15 percent of women 25–49	1.19	1.00	1.00	0.46	0.65
Post-partum Care	15 percent of women 15–49	2.02	3.00	0.00	0.28	-0.56
Nutrition	Pregnant women	1.19	4.00	0.00	0.40	-0.48
Children						
Immunization	All infants under age 1	1.20	5.00	5.00	4.00	1.20
Growth Monitoring	All children under age 5	7.70	1.80	1.80	0.00	13.85
Rheumatic Heart	Children 5–15	26.65	1.00	0.00	0.00	0.00
Adults						
Screening for Non-communicable Diseases						
Hypertension	All men & women 40+	12.78	2.00	2.00	0.00	25.55
Diabetes	All men & women 40+	12.78	2.00	0.00	0.00	0.00
Breast and Cervical Cancer	All women 35+	8.32	2.00	0.00	0.00	0.00
Common Infections & Parasitic Diseases	All individuals under 30	42.37	1.00	1.00	0.00	42.37
Occupation Hazards						0.00
Care of the Elderly	10 percent of population 65+	0.30	130.00	130.00	0.00	39.00
Personal Illness Care						
Women						
Reproductive Tract Infections	60 percent of married women 15–49	8.40	1.00	1.00	0.39	5.12
Children						
Diarrheal Disease	16 percent of children under 5	1.23	3.00	2.00	1.93	0.09
ARI Needing Medical Care	23 percent of children under 5	1.77	2.00	2.00	1.24	2.00
Neonatal Care	20 percent of newborns	Hospitalization				0.00
Treatment of Acute Malnutrition	5 percent of children 18–36 months	0.19	4.00	4.00	0.00	0.77
Treatment for Endemic Parasitic Diseases	50 percent of children under 5	3.85	1.00	1.00	0.20	3.08
Treatment of Other Minor Ailments	Entire population	60.24	2.80	2.80	2.80	0.00
Total Annual Contact Gap (millions)						**144.75**

Financing Required to Fund the New Package of Benefits

With any health sector reform initiative, adequate financing is an important criterion for long-term sustainability. The new strategy for primary care in Egypt should be based on this criterion. The purpose of this section is to provide preliminary estimates on the financing that will be required to fund the "notional package of benefits" at an acceptable level of quality. Total expenditure requirements for the envisaged package of benefits were estimated using two methods. The first method was based on current staffing patterns and levels of efficiency (or inefficiency) in the public and private sectors and used as the unit cost per visit the average between current government and private cost. This yielded the "high end estimate." The second set of estimated costs was computed using efficient staffing patterns, realistic earnings for physicians and other staff, and rationalizing expenditures on drugs. This yielded the "low end estimate." Both methods produce only rough estimates and a much more detailed analysis will only be possible when all the input variables are more clearly defined. Even with these shortcomings the estimates highlight two important points. First, they focus attention on how important it is to develop a well-reasoned financial plan, and, second, they show that significant gains can be achieved through improved efficiency and restructuring the financing and provision of health care services.

The DDM National Provider Survey shows that nearly 90 percent of physicians in private practice have two or more jobs. Most of these jobs are either in the government or public sector. The survey also shows that a physician sees on average 3.5 patients per day in private practice and over twice as many in his government job. Thus, in both the public and private sectors there are high levels of inefficiency and underutilization of human resources. Data from the MOHP shows that it currently employs 39,900 physicians and 64,837 nurses. Of these, 15,821 physicians and 34,005 nurses are in primary and preventive care. Detailed costing studies carried out under the DDM project show that the average monthly salary of a physician at a primary care unit (including incentives) was LE 175 and that of nurses and support staff LE 160. The National Provider Survey was combined with the Household Health Survey to estimate total earnings (both public and private) of physicians. In 1994–95, the average physician in private practice earned approximately LE 1000 per month from all sources of employment.

In addition to the 15,821 physicians employed by the MOHP, outpatient services are provided through approximately 35,000 private practices. Thus, between the public and private sectors there are nearly 50,000 physicians serving the preventive, primary, and outpatient personal illness needs of the people. The low levels of per physician contact in both the public and private sectors might be a reflection of the overall excess supply of physicians in the country.

Quantity of Services Required to Provide the Basic Package

The first step in computing total expenditure requirements was to estimate the quantity of additional services (contacts and programs) needed to provide the package of services. A detailed discussion of the services and gaps (both unadjusted and adjusted) in current provision and utilization are contained in the preceding section. Table 13 shows that it would take an additional 144.75 million contacts to cover the entire population. Of these, 134.35 million additional contacts will be required for personal preventive services. This represents a tenfold increase from current utilization. This is because many of the services contained in the package, such as screening for breast and cervical cancer, hypertension, diabetes, etc., are not available today. Activities under personal preventive services have concentrated more on immunization and family planning. Even for the limited services currently available the analysis shows lower than optimal levels of utilization.

Egyptians consume a fairly high amount of personal illness services. Hence, the provision of new services leads to a marginal increase in the total number of contacts. It is assumed that individuals will continue to use the same levels of outpatient care for services not covered under the package. With regard to population-based public health services it is assumed that expenditures will have to be doubled from current levels to both strengthen existing services and to provide the new services envisaged in the package of benefits.

Table 13: Quantity of Services Required to Provide Package of Services

Types of Service	Unit of Measurement	Unadjusted Needed Quantity (millions)	Adjusted Needed Quantity (millions)	Current Quantity (millions)	Gap in Quantity (millions)
Population-based public health services	Programs	Twice current level	Twice current level		
Personal preventive services	Contacts	228.93	143.28	14.93	134.35
Personal illness services	Contacts	188.91	187.68	177.28	10.40
Limited associated inpatient treatment	Admissions				

Financing Requirements

Financing requirements using method 1: the high end estimate

Table 14 shows that it will cost LE 8 billion or LE 133 per capita per year to fund the new package of services. This represents an increase of LE 3.4 billion from current levels of total expenditures. It also represents a twelvefold increase over current MOHP expenditures on population-based public health, personal preventive, and outpatient personal illness care services. It is also over six times the combined expenditures of the MOHP and the HIO on these services and 2.75 times household out-of-pocket expenditures on outpatient health services. Quite clearly, the approach of merely adding new money to the current system without redressing its shortcomings will be both expensive and nonsustainable in the long run.

Table 14: Financing Required to Provide Package of Services (in millions of Egyptian pounds)

Types of Service	Unit of Measurement	Unit Cost	Current Expenditure	Projected Expenditure	Resource Gap
Population-based public health services	Programs		125.53	251.07	125.53
Personal preventive services	Contacts	23.06	344.37	3,442.46	3,098.10
Personal illness services	Contacts	23.06	4,088.02	4,327.92	239.90
Limited associated inpatient treatment	Admissions				0.00
Total			4,557.92	8,021.45	3,463.53

Financing requirements using method 2: the low end estimate

Costs under this method were calculated by estimating the number of physicians and other staff that will be required to produce the required number of contacts. To do this it was assumed that physicians, nurses, and other staff would work 270 days per year, five hours per day, and see four patients per hour. These assumptions are based upon discussions with the MOHP. It is conceivable that physicians, nurses, and other staff might be able to work longer hours and see more patients than assumed. This will only lower the cost of financing the package. Since many of the services in the new benefit package are preventive in nature it was assumed that only 40 percent of contacts would be provided by physicians. The remaining 60 percent would be provided by nurses and other staff. Based on these assumptions Table 15 shows it will take nearly 25,000 physicians and 37,000 nurses and other staff to provide the personal preventive and illness services contained in the package of benefits. As mentioned earlier, between the public and private sectors over 50,000 physicians currently provide preventive and outpatient care. Most of them are the same physicians showing up on the public and private markets. While more rigorous analysis is required, these preliminary estimates show that, at reasonable levels of efficiency, there is an

Table 15: Number of Personnel Required for Providing Package of Benefits

Number of working days per year	270
Number of hours worked per day	5
Number of patients seen per hour	4
Total number of contacts (millions)	337
Total personnel required	62,401
Number of physicians required*	24,900
Number of nurses and other staff required	37,400

Note: **Assumes 40 percent of contacts provided by physicians*

oversupply of physicians in the market. One reform option would be to use incentives to make physicians work full time in either the public or private sector. Similarly, there are adequate numbers of nurses and other support staff. However, they are poorly trained and do not have the capacity to effectively deliver these services at a reasonable level of quality.

Table 16 shows that the normative cost of providing the package of services, increasing earnings to a reasonable threshold, providing adequate resources for drugs and medical supplies, and doubling expenditures on population-based public health services would cost less than LE 3 billion per year. For purposes of these calculations physicians were assumed to earn LE 1,000 per month, which is their current earning from all sources of employment. Nurses and other staff were assumed to earn LE 500 per month, which represents a tripling of their current wage. It was assumed that a more efficient use of drugs would result in drug costs of LE 8 per outpatient personal illness contact and LE 4 per personal preventive contact. As in the previous method, outlays on population-based preventive services were doubled. While these are necessarily rough estimates, improved management of the health system could actually lead to significant savings overall.

Table 16: Financing Required to Fund Basic Package: Method 2
(in millions of Egyptian pounds)

Category	Cost
Physician salaries	300
Salaries for nurses and other staff	224
Drugs and medical supplies	2,099
Cost of providing population-based public health services	250
Total financing required	2,873
Current expenditures	4,557
Net expenditures	-1,684

Financing Strategies

The macro-economic environment in Egypt is not conducive for significant increases in public funding to finance the package of benefits. Egypt is in the midst of restructuring its economy, and fiscal policy emphasizes deficit reduction and containment of consumption expenditures. This means that government will tightly control its own expenditures in the health sector. Any recommendations regarding funding should be made in this context.

Table 17 shows that it will require a four- to twelvefold increase in current MOHP expenditures on primary, preventive, and outpatient personal illness care to fund the package of benefits. Even considering the total amount spent by the MOHP and HIO it will require between a two- and sixfold increase. The estimation of financing costs demonstrates that real increases in funding will be required if improvements in the accessibility and quality of services are to be realized.

Table 17: Resource Requirements as Percent of Current Public Financing these Services (millions of Egyptian pounds)

	High End Estimate	Low End Estimate
Total resources	8,021	2,873
Percentage current MOHP expenditures	1280 percent	460 percent
Percentage current MOHP and HIO expenditures	640 percent	230 percent
Percentage current household expenditures	270 percent	97 percent
Percentage projected donor assistance	2.1 percent	6 percent

Some of the alternative funding mechanisms that might be considered include:

▲ Using some of current household spending to finance new programs

Financing the package of health services will require mobilizing some of current household expenditures to pay for these services. Table 18 presents data on annual per capita expenditures on health care by region. It shows large differences in health care spending across the different regions. Urban individuals spent LE 98.79 per year on outpatient health care, compared with LE 39.58 in rural Upper Egypt. Individuals in urban governorates spent nearly twice as much as individuals in rural Lower Egypt and 2.5 times individuals in rural Upper Egypt. Even though these variations are significant it should be noted that even in rural Upper Egypt individuals spent nearly LE 40 per year on outpatient health services.

Table 18: Annual Expenditures Per Capita on Outpatient Care by Region (in Egyptian pounds)

	Total Sample
Urban Governorates	98.79
Urban Lower Egypt	81.35
Rural Lower Egypt	52.14
Urban Upper Egypt	64.06
Rural Upper Egypt	39.58

Source: *EHHUES*

In Egypt the level of health expenditures is positively related to income level with individuals in the highest income quintile spending five times that of the lowest income quintile individuals. However, Table 19 shows that the burden of out-of-pocket health expenditures is very regressive. Individuals in the lowest income quintile spent the highest share of their income on health care. From an equity point of view, the poor bear the bigger burden of health care than the rich.

Table 19: Percentage of Per Capita Income Spent on Health Care

Income Quintile	Percentage
First Quintile	9.9
Second Quintile	8.7
Third Quintile	7.6
Fourth Quintile	7.1
Fifth Quintile	7.4

Source: *EHHUES*

Resources from households can be mobilized through insurance, user fees, co-payments, and deductibles. Given the burden on the poor and regional inequity in household health expenditures, user fees may have an adverse effect on the poor and vulnerable sections of society. A major focus of the package of services is on personal preventive services. Currently, there is very little demand for these services, and this is more so with individuals in Upper Egypt and those with lower incomes. Imposing user fees for these services might act as a deterrent and further exclude the poor from accessing these services. Social insurance, on the other hand, allows for financing to be based upon "ability to pay." A properly designed social insurance program that redistributes the burden of paying for health services might be the preferred option in Egypt.

▲ Mobilizing new public resources using earmarked taxes

Earmarked taxes to fund specific health programs might be another avenue to raise resources. A tax of 50 *piastres* per packet of cigarettes is being used to finance part of the costs of the school health insurance program. While raising taxes across the board might conflict with current fiscal policy there might be greater support for some form of a "health tax" to fund specific activities.

▲ Reallocating resources from other sectors including hospital-based services

The MOHP spends over half its budget on hospital-based curative services. Hospitals operate at very low occupancy rates, employ excess staff, and use resources inefficiently. There is evidence to suggest that there is an oversupply of hospital beds in at least the urban areas of the country. Rationalizing the number of beds, staffing, and associated costs in this sector can potentially release funds to cover some of the costs of the primary care package.

In Egypt, a third of total health expenditures are spent on pharmaceuticals. There is ample evidence to suggest that these expenditures are driven by inappropriate prescribing and consumption practices. Defining and implementing an "essential drugs list" (EDL) and rationalizing prescription can potentially lead to significant savings. Some of these savings can then be used to fund the package of services.

▲ External donor assistance

Donor assistance is another resource that could be used to fund the creation of the institutions, information systems, and capacity building that will be required to adequately provide the basic package of services. Properly harnessed, the Social Fund for Development can play a key role in this area.

▲ Reducing costs by using internal and external incentives to improve productivity

The largest gains in terms of reducing costs and thus making the funding of the package affordable could come from improvements in the efficiency of both the government and private sectors. These efficiency gains should use internal incentives where markets are less developed and external incentives where markets are developed. Internal incentives could take the form of paying physicians a threshold wage which combines a basic salary with performance-based incentives and can be used in rural areas where there is no effective market competition. On the other hand, in large urban areas, like Cairo, with many private physicians, external incentives in the form of market competition and allowing patients to choose their primary care provider can potentially lead to improved efficiency at reduced costs. Incentives will need to be combined with effective monitoring, regulation, and other administrative measures to enforce the government's contract with physicians in both the public and private sectors.

Implications of the Analysis

Even though the estimates presented above are only rough, some key implications emerge. First, financing the package of services will require significant additional resources. Second, an efficient system might lead to overall savings. Third, no matter how efficient the system there is a need to develop a financing strategy that pools new public and private funds. Fourth, each of the alternative funding mechanisms will eventually have to be selected on its distributional and political implications, and in the terms of its ability to be sustainable in the long run. Finally, an appropriate strategy might be to phase in the implementation of the primary care package. This could be done by initially covering populations in selected geographic areas and then gradually extending coverage to the entire country.

New Approaches to the Financing and Provision of Health Care

The preceding two sections proposed a defined package of services and explored the potential for Egypt to finance universal access to this package at an acceptable level of quality. They argued that the primary care strategy needs to be based on a feasible balance between resources available and what is promised to the population. Two estimates of resource requirements were developed. These reflect both the substantial inefficiencies already built into the current system as well as uncertainty about what the costs and resource requirements of the new strategy will actually be. Under either scenario, it is clear that a viable financing strategy is needed to make universal primary care a reality in Egypt.

This section puts aside for a moment the question of adequacy of resources. Assuming that a financeable primary care package can be had, what can be done to assure that the money is indeed available and will be spent well? The inefficiencies in Egypt's current system suggest that addressing this question is critical to the success of the new strategy. Despite numerous, perhaps sufficient, health personnel in public employment, productivity is terribly low. Government-employed physicians have few incentives to perform better in their public jobs and strong incentives not to. Other public resources are not used in very productive ways. Patients have little power to demand better service in public facilities and so use their market power in the private sector. Whether the current primary care system lacks resources overall is debatable, depending on how widely one casts the net. What is clear is that the public system lacks incentives for efficiency and quality for both providers and patients. It also lacks the institutions and capacities to apply such incentives and make them work.

Even if adequate financial resources were available to the MOHP, a strategy based entirely on offering the proposed primary care package through the existing finance and provision arrangements would not give satisfactory results. Higher physician and nurse salaries, more training, more buildings, drugs, and supplies would not, by themselves, dramatically change the efficiency and quality of the system. What is needed are new approaches to financing and provision which will change the behavior of providers and patients.

This section puts forward the concepts and approaches needed to create new incentives for efficiency and quality in the proposed new primary care strategy. The approach is based on the separation of the financing and provision functions in health care. It proposes specific roles for government and nongovernmental organizations, taking into consideration the different functions, services, and local conditions in Egypt.

The approaches described here are based on international experience that must be applied in new and innovative ways in Egypt. This will require time, resources, and creativity. While there is indeed substantial uncertainty about how to do these things in Egypt, potential investors in primary care ought not to neglect the need to find some new ways of doing things to remedy the ills of the current primary care system.

Separating Finance From Provision

A number of the problems of Egypt's government and public sector health services have been discussed above. Such problems as overstaffing, low productivity, inadequate supplies, and poor quality services are not unusual in vertically financed and organized systems such as those of the MOHP and HIO. Similar problems have also plagued large centralized bureaucratic organizations in the private sector.

One of the main methods for improving the performance of such systems is to introduce greater separation between the functions of financing or payment for health care and the actual provision of services. This approach, which has been commonly used in the United States, Canada, and some other industrialized countries, is now being adopted in several European countries which have national health service-type structures, such as the United Kingdom and Sweden.

The *separation of financing from provision* allows greater use of financial incentives to stimulate restructuring of health care facilities, and efficiency and quality improvements. New payment methods other than the classic use of facility budgets and salary payments to staff can be employed. Payment methods can be structured to reward desired behaviors, such as increasing output or improving quality, and to discourage undesired behaviors such as overtreatment or overstaffing.

These tools can also be used internally by government or public sector organizations (e.g., "internal market" approaches in the United Kingdom) or to generate and manage external competition between government, public, and private providers.

While these tools can generate significant efficiencies in health care, they are also accompanied by costs. Developing and managing payment systems may require significant development of new information resources and management capabilities by both payers and providers. This increases the administrative costs of the whole system. Whether these costs are worthwhile or not depends on the gains from the new approach.

Separating finance from provision of health care services is a fundamental method that needs to be applied widely in Egypt's primary care reform. However, as a new approach, there needs to be a process of learning and experimentation to find the right solutions. The extent to which these tools can be applied may differ in various parts of Egypt, depending on administrative capacities and local conditions.

▲ Government as the main organizer of primary care financing

Government should play a key role in *organizing the financing of primary care* in Egypt. This does not mean that all primary care should be financed from government budgets. Rather, it means that government must plan the primary care strategy to assure adequate financing is available. It must also establish appropriate structures to carry out the finance functions of resource mobilization and provider payment. Experience has shown that these functions may be best kept outside the immediate purview of the MOHP, to avoid political pressures on the payers as well as the temptation to use government budgets to live beyond one's means. Thus, some type of "health care financing organization" is needed. In the initial stages of the reform, this type of organization should be established at the geographic or administrative level at which experiments or pilots will be carried out. National structures could be developed or adapted from existing institutions once sufficient experience is gained.

▲ Primary care providers and market structure in Egypt

There are three main types of health care providers producing primary care services in Egypt: MOHP facilities, HIO facilities, and facilities and practitioners in the private sector, including both for-profit and non-profit groups. (In large cities, there are also other providers, such as university and teaching hospitals and the Curative Care Organizations, but, for simplicity, they are not included here. They are limited in number and coverage and in any case introduce no particular problems in the analysis). For each of these three types of providers, there are facilities of different levels of complexity and sophistication, ranging from individual practitioners to large tertiary hospitals with outpatient departments. However, for the most part, hospitals other than those of the MOHP are found only in the larger cities.

With the envisaged central government role in organizing the financing of primary care, the principle of separating finance from provision permits the financing of a variety of different types of providers who are capable of delivering some or all of the basic package.

Opening up publicly organized financing to pluralistic provision offers significant potential benefits in efficiency, equity, and quality for Egypt. As noted earlier, private provision is already dominant for many services included in the basic package, including both preventive and curative interventions. This dominance probably reflects better access and higher perceived quality of private providers in many settings. However, it also places a substantial financial burden on lower-income Egyptians—a burden which could be reduced or alleviated by socially organized financing.

The role of government providers in delivering primary health care should not be uniform throughout Egypt or for all elements of the basic package. While the specifics of different approaches must be worked out according to local conditions, the proposed framework is based on two factors: the extent to which a competitive health care market (and, by implication, some excess supply) exists in different locations in Egypt and the "public goods" nature of different services in the basic package.

Health care market conditions in Egypt range dramatically from the remote settlements of New Valley or Sinai to the dense urban neighborhoods of Cairo and Alexandria. In the former, government clinics and hospitals are the main if not the only source of services. If private care exists at all, it is provided by the same doctors who staff government facilities. They probably find it difficult to generate much demand for private services. In Egypt's dense urban areas, there are highly pluralistic and competitive markets for much primary care. Patients can choose from individual private providers; private clinics owned by for-profit groups and NGOs; public sector facilities belonging to the HIO, CCOs, teaching hospitals, and public enterprises; and government providers belonging to different ministries (health, education) and different levels of facilities.

As an example, this variety is simplified into three types of areas: those with little private provision and excess supply, typically rural districts with mainly government provision; those with moderate levels of pluralistic provision and some excess supply, typically rural towns and districts close to large cities; and those with highly diverse and excess supply of providers, such as the large urban areas.

The availability of diverse and excess supply of services is not relevant to all elements of the basic package. These services can be differentiated by the extent to which the private *demand* for services is likely to be sufficient for socially optimal coverage, as follows:

Degree of "publicness"	Type of primary care service
Group I: More public goods (insufficient private demand)	Most population-based public health and promotion services Some personal preventive services
Group II: Mixed goods (some private demand, but not socially optimal for specific services or groups)	Some personal preventive services Some personal curative services
Group III: More private goods (adequate private demand)	Most personal curative services

Based on these three classifications, Table 20 presents a notional topology of different strategies for providing the primary care package that might be appropriate for different parts of Egypt.

TABLE 20: NOTIONAL TOPOLOGY OF PRIMARY CARE PACKAGE STRATEGIES

Service group based on degree of "publicness"	Area I: Little private provision or excess supply	Area II: Some excess supply and significant private provision	Area III: Highly pluralistic and competitive market
I. More public goods	Dominant government provision	Dominant government provision	Dominant government provision
II. Mixed goods	Dominant government provision	Mixed government and pluralistic provision	Limited government provision competing with nongovernment providers
III. More private goods	Mixed government and pluralistic provision	Limited government provision competing with nongovernment providers	Limited government provision competing with nongovernment providers

This framework implies the need for a range of strategies for reforming financing and provision that must be applied in different parts of Egypt and to different elements of the basic package. Throughout, government should remain the major organizer of financing for the basic package. However, different organizational strategies may be appropriate for different areas. For example, in remote rural districts, financing may need to be managed from nearby urban centers or governorate offices. On the other hand, in large cities, government may establish separate departments or even contract with private organizations to manage finance.

For provision, for those areas and services in which government provision is dominant, the main tools for improving efficiency and quality will be those of improved public management and, to some degree, "internal market"-type approaches. As the government and private supply becomes larger and more diverse, and for those services where private demand becomes stronger, it will be more possible to rely on internal market mechanisms and external market competition. In the large cities, it may be possible to emphasize competitive market mechanisms entirely, allowing the government role in primary care provision to be significantly reduced.

The following sections outline some of the other strategies for organization of financing and provision, concluding with several notional models of how these systems might look in different parts of Egypt.

Models of Roles and Functions in the Proposed New System

There are four basic and distinct functions that will be required in order to operate the system. These are financing, regulation and planning, personal service delivery, and public health services provision.

- Financing: This function will include collecting funds, setting up an MIS for provider and client registration, contracting with service providers, and disbursing payments to service providers.
- Regulation and planning: This function will include planning; managing a health information system; setting standards of health care provision for personnel, facilities, and services; monitoring quality; accreditation; and licensing.
- Personal Service Delivery: This function will comprise all the medical services included in the package that are delivered at health units for individuals, such as immunization, family planning, and treatment for illnesses.
- Public Health Services Provision: This function will comprise all the public health services included in the package that are needed for the community rather than individuals, such as food inspection and control, water sanitation, vector control, bilharziasis control, and immunization campaigns.

In a new arrangement separating finance and provision, how should these functions be organized institutionally?

The answer to this question will depend on a number of variables, including which institutions are available, the capacities of the institutions, the ability to monitor and regulate their behavior, etc.

A related question is the administrative level of the functions. Recently, there is much interest in district-level primary care development in Egypt. Is it feasible to organize these functions at the district level, when most districts have only a couple of administrative staff concerned with health care? Is it feasible to organize only some of the functions in districts (for example, integrated management of the individual service provision units) and others (for example, financing) at a higher level, such as the governorate? It is unlikely that the same model would be appropriate in Upper Egypt, Lower Egypt, and urban governorates.

These and other questions will need to be addressed in the detailed design of new programs to implement separated finance and provision in the Egyptian context.

Organization of the Service Delivery Function

As described earlier in Section 2, the service delivery system is fragmented. There exist several health care organizations (MOHP, HIO, CCOs, NGOs, Ministry of Education) and a wide range of different types of service delivery units. In primary care there is, in addition, a lack of standard definitions for what constitutes a particular type of facility in the different sectors and what standards it must meet. For example, what is a “clinic,” “health center,” or “medical center”? (This problem is reduced in hospitals, where some standards exist). What mix of services, including both curative and preventive care, is implied by these names?

In part this is a regulation problem, especially as it affects the private and NGO facilities. But there are a sizable number of different types of MOHP facilities whose names and functions reflect

the history of different specialized programs. Some consolidation of these government and public sector service delivery organizations into a unified structure is needed to avoid duplication and reduce inefficiency and should be considered in the advanced stage of reform.

Related to this is a change in programmatic focus, from the "vertical" or specialized programs that proliferate today, to a more "integrated" family and community service model. The model of the "family physician" or "family practitioner" has been discussed as a new paradigm for primary care services in Egypt, integrating the different personal preventive and curative services and linking it to community organization with some degree of local feedback and control. The family practitioner could act as the first contact primary caregiver, as well as the gatekeeper for referral to specialist and inpatient services. Population-based public health services and mass outreach services could coexist with this model, with separate delivery organizations.

Further exploration of reorganized service delivery structures in the different sectors follows.

In the Ministry of Health and Population

One strategy for reorganizing the health infrastructure of the MOHP would be through a holistic "family health" approach which would provide the primary care package to all family members for all age groups. Only three types of service delivery facilities might result from the consolidation of the different types of MOHP health facilities. These would be:

- Family health units (FHU) will be the basic health infrastructure unit in the primary care system in all districts and will be the primary contact between the beneficiary and the health system. It will be staffed by one or two family physicians, two to five nurses, and an adequate number of paramedics and administrative staff. This type will evolve from existing rural health units. It will provide the general outpatient services as defined in the primary care package.
- Family health centers (FHC) will be another level that will provide limited specialist outpatient/inpatient services defined in the primary care package. It will be staffed by at least six specialists (internist, surgeon, obstetrician/gynecologist, pediatrician, dentist, and radiologist) in addition to 10 to 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 independence and integrity.
- General hospitals (GH) will provide all the specialist outpatient/inpatient services defined in the primary care package. A general hospital may include within the same facility an FHU which is administratively separate. This type would evolve from current MOHP/GHs and DHs.

The beneficiaries would 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 general hospital.

In the private sector

In order for the private sector to play an effective role in a competitive market, the government should establish standards for service provision not only for the public but also for the private sector. These standards should detail the accreditation requirements for private health units including the physical facility, staff qualifications, equipment and supplies, as well as record-keeping and reporting/recording requirements. Meeting these requirements should be a prerequisite to receiving payments from the financing entities under a new primary care system.

The private sector should be encouraged to establish more uniform private clinics that can function as the primary contact with beneficiaries for receiving the general practitioner outpatient

services of the package. 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.

Where government seeks to use organized financing to purchase primary care services from private providers, it may need to promote this type of organization and accreditation.

Examples of different organization models

How would the type of structures described look in the Egyptian context? Two models are presented to illustrate how the administration of the four functions may be organized. As mentioned earlier, there are many different ways and certainly the two presented here are just two examples.

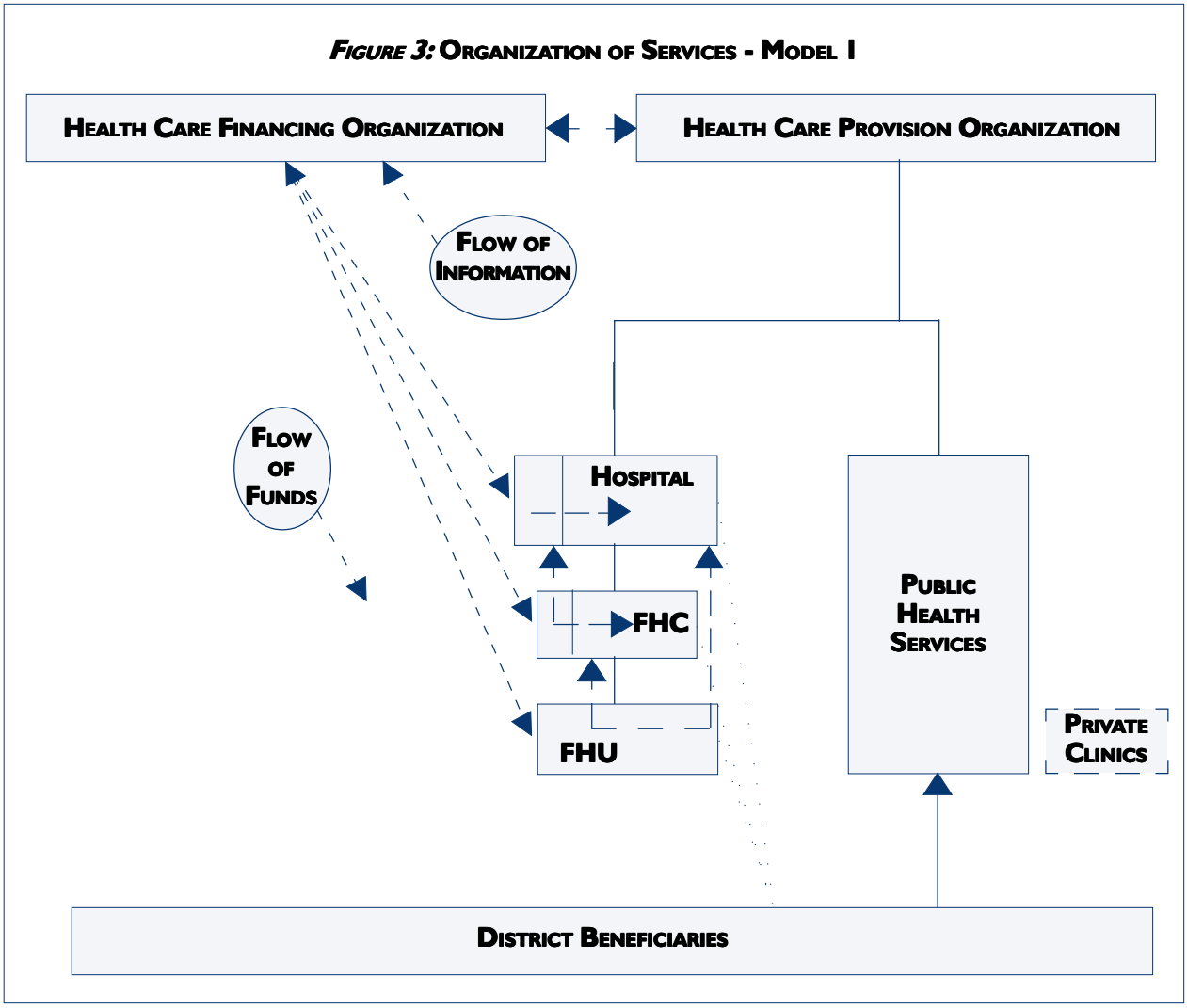
In rural areas with limited private markets and overall supply

Model 1 can be implemented in rural or remote areas characterized by the absence of exclusive private sector providers since in such areas, small private clinics are run by government-employed physicians. In such markets, services are predominantly provided by the MOHP. These settings rely mainly on *internal (quasi-market) incentives, reorganized and rehabilitated services,* and *improved training and management* to achieve efficiency and quality improvements.

In this model, the financing and regulation functions are combined together into one single entity while the public health services and the service delivery functions are combined into a different entity. Either or both of these roles may be performed by organizations not affiliated with the MOHP, even on a contract basis. However, it is likely that government will retain a significant role in many such areas, since there will be limited alternatives. Model 1, presented below, has the following elements:

- A health care financing organization will be the district-level office responsible for the financing and regulation functions. It will contract services, monitor quality, and pay service providers. Also, it will be responsible for the regulatory functions such as accreditation, licensing, quality assurance, and managing the district health MIS including client and provider registration.
- A health care provision organization will be responsible for the other two functions. It will manage the now integrated "service delivery" units of the MOHP and will also provide the "public health" services in the primary care package, such as birth and death registration, food inspection and control, endemic disease control, and water sanitation.
- Private clinics in the district will be regulated to provide personal services other than the ones included in the package. That is, where government physicians practice privately, they may be forbidden from providing covered services in their private clinics but may be allowed to provide other, non-covered services, which should not, conversely, be provided in government clinics.

As the chart shows, the financing organization could fund the individual facilities, say on a capitated basis, and receive information from them. Individuals/families would be able to choose the units to which they are affiliated, although it is likely that there would be limited selection of units distant from their residence. It may not be necessary to have the financing organization with a formal office presence in every district.



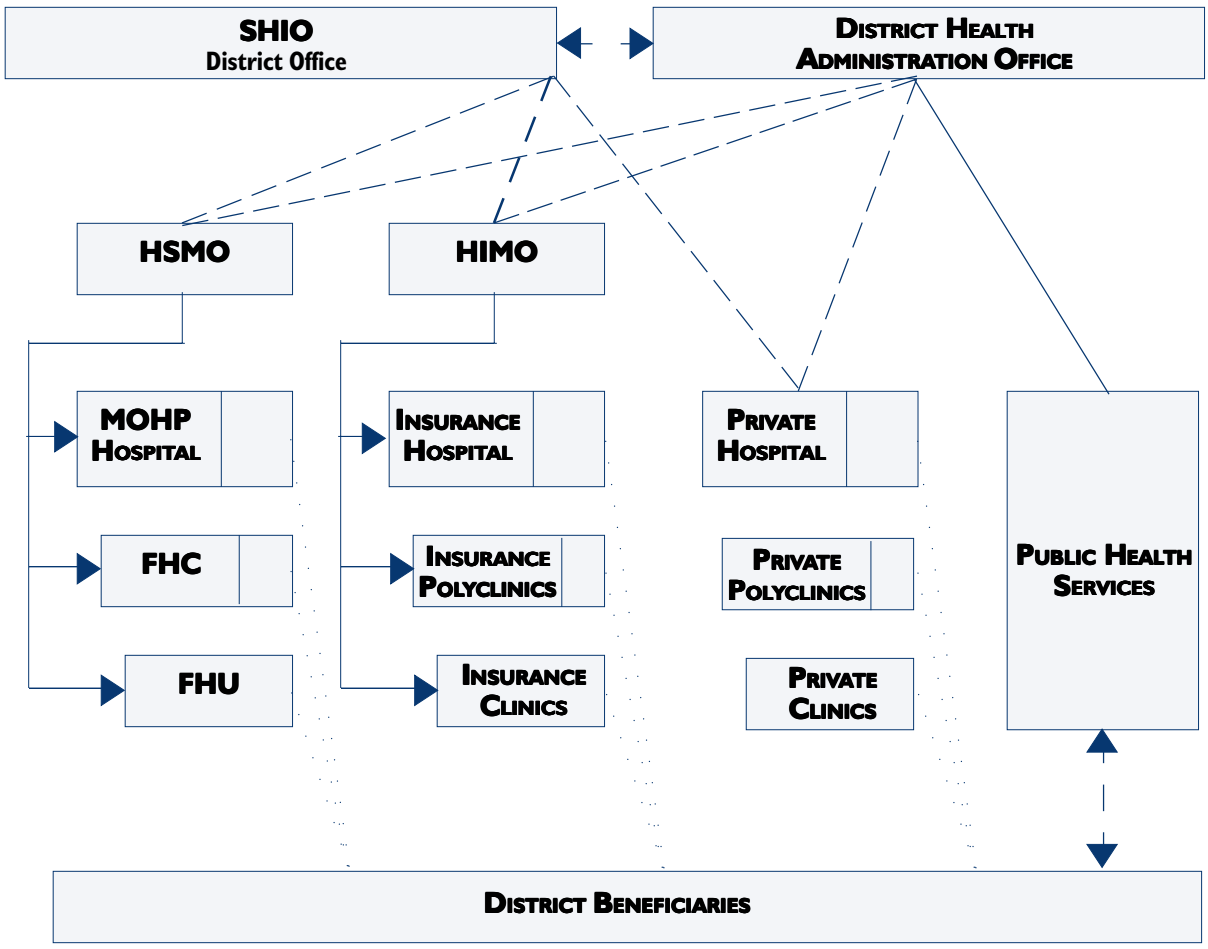
In large cities or urban areas with highly diverse provision sectors and excess supply

Model 2 can be implemented in large cities or urban areas in the governorates characterized by the existence of a mixture of government, public, and private sector service delivery units. In such markets, the services are predominantly provided by the private sector, including both personal preventive and personal curative services. Government primary care is more dominated by hospital-provided services, as the government urban primary care infrastructure is not so well developed. Population-based public health services remain a government responsibility. Both for-profit and not-for-profit groups operate in the private sector.

To what extent should government be a major provider of personal primary care services in this environment? The answer should come from their ability to continue to attract patients, when much of the financial constraint on the use of alternative sources of package services is removed.

In this model, the financing function is separate, the regulatory and public health services functions are combined and the service delivery function is separate since large service delivery organizations such as the MOHP and HIO will have to develop an independent department to manage the service delivery units. Model 2 has the following elements:

***Figure 4:* Organization of Services - Model 2**



- The social health insurance organization (SHIO) will be a newly created body responsible for the "financing" function and managing the insurance funds. It will be responsible for contracting services, monitoring the quality and paying service providers. It will also maintain an information system for client and provider registration which should be closely coordinated with the MOHP/primary care administration office.
- The MOHP/primary care administration office will evolve from the current MOHP; however its role and functions will differ. It will be responsible for two functions only: regulation, including accreditation, licensing, quality assurance, and the primary care information system; and provision of "public health" services in the primary care package, such as birth and death registration, food inspection and control, endemic disease control, and water sanitation. It will not be responsible for the service delivery units. The office will report to the governorate-level MOHP Directorate.
- The health services management office (HSMO) will be the independent department evolving from the MOHP and will have the service delivery function including the management and organization of the MOHP service delivery units. The director might report directly to the

governorate level and not the district level to ensure segregation of duties and avoid conflict of interests. It is suggested that there could be two distinct divisions, one for FHUs and one for specialized services in the FHCs and GHs.

- The health insurance management organization (HIMO) will be the independent body performing the service delivery function by managing the service delivery units of the former HIO which will report to the regional-level offices.
- A licensing/accreditation board at the governorate level will also play a role in licensing, conflict mediation, ethics, and technical assistance in setting service delivery standards and protocols.

This type of structure could be established at district or higher levels in urban areas. In order to encourage competition, it would probably be best to have a large enough area to offer families sufficient choice of providers. The full range of interventions to promote new types of health care organization in all sectors could be considered.

These models are presented as preliminary examples of different approaches that could be developed in Egypt. Within these types of models, there are still many questions about how the health care services would function and how the transition could be made from the current model to such new designs. This is discussed in the next section.

Proper development of these approaches may take some time and should be done in the context of adequately financed demonstration projects. Associated with these projects, it will probably be necessary to consider new investments to develop capacity as well as to upgrade deficient facilities. This also is discussed in the next section.

Operational Issues in Implementing the New Strategy

This section identifies the issues affecting the implementation of the new strategy at the operational level. It attempts to raise the potential problems and issues rather than prescribe solutions so that the Ministry of Health and Population can respond appropriately.

Issues Related to Organizing the Functions

The system would operate through four basic functions: financing, regulation, public health services provision, and personal health services delivery. In theory, it will be easier to develop those functions that do not already exist because it is less threatening to the current status of organizations and positions.

Financing

In the area of financing, the government of Egypt should determine whether the Social Insurance Organization, the Health Insurance Organization, the MOHP, or a newly created organization will be responsible for financing the package of services. This will need a broad discussion and careful analysis since it will entail changes in legislation. As an intermediate step, the HIO may reorganize itself internally into two separate departments; one to handle the financing and contract management and the second to manage the service delivery units.

Regulation

The regulatory function would remain the primary role of the MOHP. This role would entail, among others, the responsibility for the health MIS, quality improvement, licensing and accreditation.

The MIS will depend on four primary databases: client, provider, facility, and services. For client registration, any attempt to develop an MOHP-specific client registration system such as the Child Health Card, could not be comprehensive. The MOHP should consider using the National Security Number assigned to each citizen. This would facilitate the maintenance of a health profile for each citizen wherever he/she moves. This would probably be a prerequisite for implementing the new strategy. As for the services, it would be important to develop performance indicators in order to monitor the progress toward improved management and efficiency of the primary health care system. The suggested indicators may include, among others, costs, staffing, drugs, utilization, and diagnosis indicators.

The quality improvement function at the national level does not currently exist. A quality improvement unit may need to be established in the MOHP with a defined role and clear relationships and authority with regard to other service delivery organizations including the

private sector. One major weakness in the current system is the lack of drugs and medical supplies in public facilities. Drugs and medical supplies accounted for on average between 3 and 22 percent of total cost per visit. The DDM/MOHP Egypt Household Health Utilization and Expenditure Survey showed that a significant amount of out-of-pocket expenditures are spent on drugs. An essential drugs list at the facilities needs to be developed, adequately financed and made available. Also, maintenance has important implications for the overall technical efficiency of the service. The total costs of maintenance in heath facilities never exceed 1 percent of the annual recurrent cost. This maintenance cost is unfortunately directed mainly towards repairing equipment rather than routine and preventive maintenance. The level of required maintenance depends on the operating environment, but the international average percentage of such maintenance cost ranges between 10 and 15 percent of the annual recurrent costs (Mills, Anne. 1990. "The Economics of Hospitals in Developing Countries. Part I: Expenditure Patterns." *Health Policy and Planning* 5, 2: 107–17). Again, a decision should be made regarding sustaining a minimum budget for maintenance.

Licensing is currently a joint responsibility of the MOHP and the professional syndicates (physicians, nurses, dentists, and pharmacists). The issue of relicensing of practitioners should be considered to ensure the competency of the service providers.

Accreditation of health facilities is not currently performed. Accreditation and licensing should be the primary responsibility of the government. Serious consideration should be given to establishing a national accreditation board to develop criteria and guidelines for accrediting providers.

Public health services provision

In Egypt, health care organizations, whether public or private, have their own criteria for organizing health facilities. Under the notional primary health care model, the MOHP as the regulator of the sector faces two challenges. The first would be to standardize the types of facilities that will be responsible for delivering the package of services in the new strategy. The second would be to develop a plan for transforming and consolidating the current facilities into the proposed ones.

In preceding sections, a package of services was suggested and three types of facilities were proposed to deliver the personal health services of the package. Table 21 illustrates the different types and levels of services that are envisaged to be provided by the three facilities as well as their staffing patterns and population coverage. As a first step, it is recommended that this proposed structure be carefully reviewed and modified by the MOHP because this will constitute the basis for consolidation.

There exist several types of health facilities in the MOHP with different configurations, staffing patterns, and supplies and equipment that fall under different departments within the MOHP. The fragmentation is compounded by the fact that each type of these facilities varies across the country in terms of physical conditions, availability of staff and supplies, and functioning of the equipment. Moreover, the MOHP is investing in upgrading these facilities according to the specifications set by the different departments. It would therefore be crucial for the MOHP to revise its investment plans and develop a feasible consolidation plan to physically and functionally integrate its facilities.

In the HIO, an option might be to develop comparable facilities. The general practitioner clinics will be upgraded to function as FHUs. The GPCs inside the factories may need to be relocated outside but within the premises of these factories to allow access to the workers as well as other walk-in beneficiaries. This would be particularly useful if the HIO decides to extend the health

Table 21: Outpatient Services According to Type of Facility

Type of Facility	Preventive Services	Curative Services	Staff	Population Coverage	Services
Family Health Unit	◬ Health education ◬ Family planning ◬ Ante- and post-natal care ◬ Periodic examination and growth monitoring for children ◬ Immunization ◬ Screening for communicable and noncommunicable diseases	◬ Diagnosis and treatment of reproductive tract infections ◬ Case management of diarrheal diseases, acute respiratory infections, malnutrition ◬ Treatment of endemic diseases ◬ Treatment of some acute ailments ◬ Emergency services in case of animal bites/poisoning ◬ Care of the elderly	◬ One physician (family doctor) ◬ Two community nurses ◬ Registrar ◬ Janitor	1,000–1,250 families (5,000 citizens)	Outpatient only
Family Health Center	Same services as above	◬ Same services as above Plus: ◬ Delivery and emergency obstetric care ◬ Dental services	◬ 7–10 physicians: one obstetrician/ gynecologist, one pediatrician, one internist, one anesthesiologist, and family doctors ◬ 15–20 nurses ◬ Health educator ◬ Registrar ◬ Bookkeeper ◬ Janitor	10,000–13,000 families (50,000 citizens)	Outpatient and inpatient for the corresponding discipline
General Hospital	Same services as above	◬ Same as above for outpatient and inpatient services Plus: ◬ Outpatient and inpatient services for other specifications to be determined by MOHP	◬ 30–35 physicians to cover the same specializations as before as well added specializations recommended by MOHP	30,000–38,000 families 150,000 citizens	Outpatient (independent of other services in the hospital) Inpatient (referral from FHU, FHC and hospital outpatient clinic)

insurance umbrella to the families of the current beneficiaries. The polyclinics may be upgraded to function as FHCs; however, an assessment would be needed to determine which ones may be upgraded depending on the status of the building and the space available. HIO hospitals would continue to function as general hospitals for referred cases from the FHUs.

In the private sector, it would be necessary to establish the standards of practice particularly for private clinics and group practices. The challenge however would be to motivate the private practitioners to change their behavior and comply with the new standards, not only by enforcing the regulation but also through the development of incentive mechanisms.

Referral System

In order to achieve a balance between demand and service availability at each level of health service, a good referral system would be needed. This may depend on a system of relative prices, fee penalties for non-referred entry at higher referral levels, and enforcement of referral that is in balance with the quality of services.

Issues Related to Community Participation and NGOs

Community participation

It is evident that the success of the new system will not be possible without community involvement. There are three possible ways to involve the community: service administration, financing, or service provision.

Community participation may be organized through representatives who may participate in assessing the health services needs of the community, participate as members in hospitals board of directors/trustees, monitor the quality of services, join the accreditation board, and possibly assist in conflict mediation.

The Minister of Health and Population was recently successful in raising funds from community leaders and businessmen for constructing new health facilities. This trend should continue and the supporters should be recognized for their contribution. In addition to involving the community in financing the construction or the renovation of health facilities, incentives should be determined to encourage the community to support and sustain the operating expenses of the health facilities.

Nongovernmental organizations

The role of NGOs in delivering the package of services will be important particularly in rural and periurban areas; this role needs to be identified. Meanwhile the NGOs' capacity needs to be developed in different areas such as financial management, reporting requirements and quality of services.

Issues Related to Human Resources

While there are staffing norms in the MOHP facilities, they are not implemented in practice. This has resulted in the maldistribution of manpower in governorates, sectors, and health facilities. An examination of staffing ratios reveals variation in the total number of staff and its composition.

Existing staffing norms need to be received, and a time-bound program established to implement the revised norms.

The family physician is key to the long-term success of the reform. Today the family physician specialty exists only in one medical school. Efforts should start immediately to encourage medical schools to establish a one-year diploma in family medicine. The MOHP will need to develop incentives to encourage its physicians to specialize in the areas where there are shortages such as in anesthesia, radiology, and orthopedics. Also, the nurses in the MOHP will need to be retrained and licensed to provide specific services, such as immunization and follow-up family planning

services, in the absence of the physician, particularly in rural areas. This will improve the utilization of the existing health resources.

In order to fill the need for family physicians during the transitional period, it would be advisable to establish an accredited two-to-three month intensive training course for the GPs working in primary care to upgrade their skills in diagnosing the common diseases in different specialties, emergencies, deliveries and other areas as needed. With this extra training, these GPs could function as family physicians.

One further consideration is that allocation of human resources may be decentralized to the district level to determine manpower needs and to guide manpower planning at the central level until the new system is fully implemented.

Finally, there is a need to develop mechanisms to pay the physicians and other service providers based on performance. The main constraint is that the maximum amount that can be paid as incentive equals 300 percent of the basic salary. This issue should be resolved and the mechanism tested in the pilot study.

New Investments in Underdeveloped Capacities and Upgrading of Facilities and Staff

Primary care reforms of the magnitude proposed above cannot be implemented without substantial investments for the future. These investments can be classified into two types: 1) development of new institutions and capacities needed to plan, implement, monitor, and evaluate the reform; and 2) upgrading of existing facilities and staff, especially in the areas of health care provision.

Development of New Capacities

The proposed reforms will require new capacities in a number of areas. These include:

- MOHP capabilities in policy development and analysis, for example, in defining and costing the basic package, developing and monitoring finance strategies, and revising policy strategies in light of experience in implementation.
- MOHP capabilities in health services research, for example, to design and carry out studies of the process and impact of pilot projects implementing new finance and provision strategies.
- Capabilities in provider accreditation and regulation, to be associated with new finance and provision strategies.
- Revamping medical education to ensure that physicians and nurses with the adequate technical capabilities will be trained to provide these services.
- Finance institutions, which will, under MOHP guidance, organize the collection of funds for the primary care program and make payments to various provider organizations. These institutions may be built on existing capabilities, such as those of the HIO, where those exist and are suitable. However, it may also be necessary to develop new capabilities in governorates or districts.
- Governorate- and district-level capabilities in planning, budgeting, and finance, to organize and implement restructuring of MOHP health care provision.
- Capabilities in health care delivery institutions, or in institutions managing groups of health care providers, to respond to new payment systems. Facilities need to be able to monitor costs, identify efficiencies, monitor quality, etc., in order to respond to new payment methods and incentives.
- Creating information systems that will be needed to register populations, monitor utilization, expenditures, and create linkages between the various agencies involved.

For most of the above, there will be a need for significant new investments in human resources, including training, and in institutional development, including new information systems and the capacities to make use of them. A detailed investment plan will need to be developed, reflecting the scope and pace of the reform to be implemented.

Upgrading of Existing Facilities and Staff

The reforms proposed should gradually result in a more efficient and higher quality primary care delivery system than that which exists today. Substantial restructuring of MOHP provision is recommended. In addition to administrative measures to bring about such restructuring, the use of greater internal incentives and external competition should also lead to changes in staffing patterns and reorganization of existing facilities.

Activities in this area might include the following measures:

- Reducing the fragmentation of MOHP services by consolidating functions and facilities.
- Many of these facilities today suffer from years of under investment in maintenance and essential equipment. Significant new investment in upgrading these facilities will be necessary if they can provide the services contained in the package. Upgrading facilities will also be essential if they are to compete effectively with private providers.
- Whatever the degree of restructuring, there is sure to be significant need to upgrade the technical skills of the staff who will be retained. A strong emphasis on in-service training will be necessary to ensure that the services are provided at a reasonable level of quality.

Investing in creating the private market

In Egypt the private market for outpatient services essentially consists of individual doctor practices. Many do not have the capacity to ensure that registered families will receive the "package of services," nor are they able to maintain patient records and collect information on utilization and costs. Just as in the public sector, appropriate incentives to restructure and reorganize must exist for reforms to be effective. One form of incentives could be significant new investments in strengthening the capacity of the private sector to provide the package of services at a reasonable level of quality. Some of the investment activities could include:

- Assistance to private providers in upgrading practices to meet the minimum standards required for accreditation.
- Assistance to set up the information and record keeping functions that will be required under the new system.
- Investments in training and upgrading skills of physicians in the private sector. Most of the physicians who work in the private sector also work for the government. Thus, if they do not have the capacity to provide the services contained in the package at a reasonable level of quality in the public domain, they will lack the capacity to do their work in the private domain.
- In many parts of the country the private sector (including NGOs) is non-existent. Significant investments will be required to create the environment in which private providers, including NGOs, can develop and participate effectively in delivering services.

Fast-track Elements of the Reform Program

This document proposes a new strategy for primary care in Egypt. It specifies four major elements of the strategy and for each has provided some specific suggestions and examples of what can be done. The analysis developed here was done in a limited time and with modest effort. If the broad areas of action proposed are accepted, what are some concrete next steps?

The proposed strategy is complementary with the processes of new health sector reform project development currently taking place between the MOHP and USAID, the World Bank, and the European Union. These projects will address areas of reform outside of primary care, but they will likely want to include primary care in their scope.

The primary care strategy encompasses a substantial agenda of investment in existing facilities and staff; development of new capacity; policy, planning and analysis; and development of demonstration activities in a variety of locations in Egypt and at different components of the health care system. This should provide an ample focus for new project funds, if there is a consensus about the objectives and content of the strategy. Thus, a first step is to determine MOHP support for the contents of this document and to try to develop government-donor consensus on an overall primary care reform strategy.

If such a consensus can be achieved, different parties may wish to focus their efforts on different components of the strategy. This could be the basis for specific project development.

It is recognized that many of the recommendations will take time to implement and need to be first tried and tested in the field. The final direction of change in the organization and financing of primary care also will be affected by the social, political, and economic environment. However, there are a set of short-term steps that can be taken which will contribute to the reform process irrespective of the final vision and strategy. Some of these "fast-track" recommendations are discussed here. As always, these are only a set of recommendations and will need to be modified and adjusted based upon an internal review of this document by the Ministry of Health and Population as well as other experts.

The following are "fast-track" activities that could be financed and implemented:

▲ Establish a committee to plan, evaluate and monitor reform

Reform in the primary care sector will probably form part of the overall health sector reform being launched in the country. It is recommended that a senior coordination and oversight committee assisted by a technical unit be established. The committee should adequately represent the key players as well as representatives of ministries that will be involved in the health sector reform process. The role of the committee will be to design, coordinate, and evaluate the reform process. The technical unit should serve as the analysis arm of the committee and will assist in

activities such as defining and costing the basic package, developing and monitoring financing strategies, and revising policy strategies in light of experience in implementation.

One of the first tasks the committee could undertake would be to more clearly enunciate the goals of the government in primary care including maternal and child health, nutrition, etc., and to develop a strategy for achieving these goals.

▲ Define the basic package of services

A key element of the reform is defining the basic package of primary health services to which every Egyptian will have access. What has been proposed in this paper is a "notional package" based upon our discussions with the MOHP. It is suggested that a senior group of Egyptian experts be constituted to review and revise this package. The review should be based upon more detailed technical analysis of health needs and interventions and should reflect the health improvement goals of the MOHP.

▲ Design mechanisms for provider accreditation and regulation

Currently, no effective way exists to accredit providers and regulate their practice. It is suggested that the MOHP begin discussions with appropriate representative bodies on the institutional structure for the accreditation process. One possibility might be to establish a national accreditation body that will establish the criteria for accreditation of providers. Once these criteria are established there will be a need to establish the mechanism and timetable for the implementation of accreditation of private and public providers.

▲ Create information systems

For the reform process to be effective it should be possible to monitor health care utilization and expenditure by individual beneficiaries. This will require the establishment of an individual-based health sector database. This is particularly important if individuals will be permitted to choose their primary care provider and if providers will be reimbursed either on a capitated basis or on the basis of services provided. It is suggested that discussions be initiated on planning alternative strategies for creating information systems needed to register populations, monitor utilization, expenditures, and create linkages between various agencies involved.

▲ Define and implement an essential drugs list

The analysis shows that one of the factors contributing to low quality of service in government facilities is the lack of drugs and medical supplies. At the same time nearly a third of national health expenditures is spent on drugs. An element important to the success of the primary care reform strategy is to ensure that adequate drugs are available to support the package of services. It is suggested that an essential drugs list be finalized for the package of services; pharmacy, medical, and clinical nursing staff in the government be trained in the principles and options of the EDL system; and planning begun to ensure availability of EDL medicines at all government facilities within a stipulated time frame.

▲ Formulate a national drug policy

The development of the EDL should form part of a larger effort of preparing a national drug policy. This should deal with issues of developing treatment standards, rationalizing prescription, pricing, and improvements in the production, procurement, and distribution of drugs.

▲ Establish a unit to deal with quality improvement

Improvements in quality of services is an important thrust of the proposed reforms. To some extent this will be achieved through accreditation, improved training, appropriate allocation of resources, drugs, and equipment. However, it is important to deal with quality in its entirety. This includes among other things compliance with standards of case management, referral, counseling and preventive activities, improved management support systems, monitoring-evaluation, and supervision. Standards need to be developed and models tested. This is an area where there will need to be a significant amount of applied research. It is recommended that a unit be established at the MOHP to deal with quality management. This unit would then be responsible for the research, development of protocols, and monitoring and evaluation. Through the committee the unit will help the MOHP enunciate a national strategy for quality management.

▲ Develop a five-year health financing plan

One of the tasks the committee could undertake is to develop a five-year health financing plan. This should be based on better analysis of the cost of the package, a phased implementation plan, assessment of revenue sources—including government tax, resource reallocation, household contributions, donor funds, and other sources—and harmonizing the finance potential with the basic package.

▲ Formulate an investment plan to upgrade facilities

The reform process should result in a more efficient and higher quality primary care delivery than that which exists today. One recommendation is that the MOHP provision be restructured. Today, many MOHP facilities suffer from years of underinvestment in maintenance and equipment. In their current state they may not be able to adequately provide services contained in the basic package (in areas with little or no private markets) or compete effectively with the private sector (in areas with more developed markets). It is recommended that in those areas where the MOHP reduces fragmentation by consolidating functions and facilities, a detailed assessment is made of the investment needed to upgrade these facilities. Based upon this assessment a time-bound investment plan should be developed and implemented.

▲ Develop a plan to upgrade skills of doctors and nurses

Current staff technical skills are inadequate. Whatever the degree and nature of restructuring, there is an urgent need to upgrade the capacity of the staff who will be responsible for providing services contained in the package. The MOHP should consider planning and implementing a national primary care training program that could include short-term in-service training in clinical skills for doctors and nurses working in primary care.

▲ Develop medical education curricula

In the longer term, the success of the reform strategy will require revising medical curricula to graduate doctors and nurses who will be capable of effectively providing these services. Today Suez Canal Medical School and the Assiout Medical School have programs in community medicine. However, the major emphasis of medical education is on training specialists who then have little incentive or desire to practice family medicine. Discussions should be started on modifying the curricula in medical schools to reflect the national priority of reforming primary care. Similarly, nursing education needs to be strengthened to allow nurses to play an important role in service provision and patient care.

▲ Test reforms in demonstration projects

It is strongly recommended that the reform initiatives be first tested in selected districts and governorates. This will require the formulation of detailed proposals for demonstration projects with new financing and provision strategies corresponding to different market types outlined in this document. Depending on resources available and implementation capacity, this could be four to six demonstrations, each covering populations of several hundred thousand to a half million. As part of the project development process attention should be paid to institutional arrangements, information systems, contracting, internal and external incentives, training and quality improvement, planning, monitoring and evaluation and investments to upgrade facilities.

▲ Separate financing and provision functions

It may take a long time to create institutions and capacities that will allow effective separation of the financing and provision functions. However, the HIO offers a unique opportunity to accomplish this without too much difficulty. It is recommended that the government develop and implement a plan to separate the HIO into two organizations, one responsible for financing health care and the other for delivering health services.

▲ Invest in the private market

The reform suggests building a strong public-private partnership to address the primary care needs of the population. In Egypt physicians in private practice do not have the capacity to ensure that families registered with them will receive the package of services. They also do not maintain patient records or collect information on utilization and costs. The private sector will need to be restructured and strengthened if it is to play a key role in the reform process.

The government should take the lead in creating and sustaining an appropriate private sector. A detailed plan should be prepared for this purpose. The plan should focus on the structure and functions of accredited private providers, and on the nature of the contractual arrangements required. It should examine providing assistance to private providers to upgrade practices to meet the minimum standards required for accreditation. The plan should also focus on training and upgrading skills of physicians in the private sector and creating an environment in which private providers, including NGOs, can develop and participate effectively in delivering services.

▲ Expand review of reform strategy

External technical assistance can only help highlight issues and offer options for reform. Egypt will have to decide what course of reform is best suited to meet its needs. Wider consultation to review strategy and proposals with various stakeholders—including elected representatives; professional organizations; MOHP national, governorate, and district officials; other ministries; the HIO; CCOs; NGOs; community groups; universities; and donors—should be started to build consensus as well as set the direction for the reform process.

The fast-track activities listed above are, once again, merely illustrative and are by no means intended to be prescriptive. These recommendations are feasible in the Egyptian context, can be implemented over the next two to three years, and will contribute significantly to the reform process irrespective of its final structure and direction.