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EGYPT'S HEALTH SECTOR REFORM AND FINANCING REVIEW

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CURRENCY EQUIVALENTS

Currency Unit = Egyptian Pound (EGP)

	Exchange Rate
1999	US$ 1.00 = EGP 3.40
2000	US$ 1.00 = EGP 3.41
2001	US$ 1.00 = EGP 3.86

List of Acronyms

BBP	Basic Benefits Package
CDTSP	Ministry's Central Department for Technical Support and Projects
CIS	Clinic Information System
DDM	Data for Decision-Making Project (USAID/Harvard School of Public Health)
EC	European Commission
FH	Family Health
FHC	Family Health Center
FHF	Family Health Fund
FHP	Family Health Plan
FHU	Family Health Unit
GDP	Gross Domestic Product
GIS	Geographic Information System
GOE	Government of Egypt
GPCC	Governorate Program Coordination Committee
HHUES	Household Health Utilization and Expenditure Survey
HIO	Health Insurance Organization
HPF	Health Policy Forum
HSR	Health Sector Reform
HSRP	Health Sector Reform Program
MIS	Management Information System
MOF	Ministry of Finance
MOHE	Ministry of Higher Education
MOHP	Ministry of Health and Population
NICHP	National Information Center for Health and Population
NHA	National Health Accounts
NHIF	National Health Insurance Fund
NGO	Non-governmental Organization
PHC	Primary Health Care
PHR	Partnerships for Health Reform Project
PNO	Provider Network Organization
PPMC	Program Planning and Monitoring Committee
QA	Quality Assurance
QI	Quality Improvement
TSO	Technical Support Office
TST	Technical Support Team
USAID	United States Agency for International Development
WB	World Bank

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- Depending on what is assumed about economic growth, Egypt spent about 6.1 percent (LE 25,000 million) of its GDP on health in FY 2003. By comparison, national health spending accounted for only 3.6 percent of GDP (LE 7,400 million) in FY 1995. Thus health sector spending has more than doubled its draw on resources over the past eight years, growing at a rate of 15 percent and outpacing growth in the economy. Almost half of the health spending (about LE 11,000 million or 2.8 percent of the GDP in FY 2003) came from public sources. This further raises concerns about the long-term ability of the Government of Egypt to sustain such high spending levels without addressing the issue of health care financing reform.
- The pilot phase of the Health Sector Reform Program focused on implementing a **Health Sector Reform (HSR) Pilot Project** in three governorates (Alexandria, Menofia and Sohag) and included more than 66 primary Health care facilities by the end of year 2003. The HSR Pilot Project has had its successes and its limitations.
- The *service delivery component* of the HSR Pilot Project has succeeded in increasing provider satisfaction and productivity through the use of performance-based incentive systems. It also succeeded in increasing patient satisfaction and demand for PHC services by utilizing a holistic f*amily health* approach to patient care.
- On the other hand, the *financing component* of the HSR Pilot Project has had limited success. The Family Health Funds (FHFs) were originally envisioned as autonomous insurance agencies that would integrate funding from public and private sources and separate financing from provision. However, legislative constraints led to a different reality. Financing of the services under the HSR Pilot Project continues to be fragmented and the bulk of the costs of the FH providers are still covered by their mother organizations, with the role of the FHFs limited to disbursement of provider incentives. Moreover, the financing component of the HSR Pilot Project failed to create new sustainable funding sources. Family Health services are financed through the traditional sources of public financing. The additional costs of operating the FHFs and of disbursing provider incentives are fully financed through donor funds. Thus, even within their limited scope of operations, the financial outlook for the FHFs is unfavorable.
- Replication of the pilot FH model without addressing the issue of financing reform would thus guarantee significant financial burden on the government that would grow rapidly over time. In view of the escalation of national health spending in recent years, this strategy might not be feasible.
- Attempts to modify the institutional and financial situation of the current FHFs to make them financially sustainable would require tremendous shake-up in flow of financing and giving full responsibility for paying all FH costs to agencies without proven capability.
- An approach that would not require major legislative reform and would work administratively is needed. One strategy could merge the FHFs into the purchasing division of the Health Insurance Organization (HIO) and further implement the HSR Pilot Project through the HIO. The feasibility of any chosen strategy would however need to be validated through appropriate economic and political analyses.
- Regardless of the strategy adopted, the HSP Pilot Project can only be financially sustainable, if it taps on the significant out-of-pocket expenditures that Egyptians currently spend on ambulatory care in the private sector (LE 121 per capita per year in 2002). This might require expansion of the FH services currently being provided to make them more marketable.
- The Health Insurance Organization continues to be the main health insurer in Egypt covering more than half of the population. While it has been marginalized in the first phase of the reform, its ability to achieve universal health insurance coverage for Egyptians has to be carefully studied during future phases.

Executive Summary

Background on the Health Sector Reform Program

In the early 1990s, Egypt's national health strategy focused on extending insurance coverage to new population groups with the goal of achieving universality. The Health Insurance Organization (HIO), the largest health insurer in Egypt, currently covering over 30 million people through compulsory social insurance was perceived to be the appropriate vehicle for such expansion. It was pressured to hastily expand coverage to new groups including infants and school children, without a dedicated source of revenues or appropriate development of its contracting capability. This only exacerbated its fiscal and operational problems. At the same time, the health sector had many other structural and functional issues that resulted in inadequate health outcomes; inequity in access, use and cost; inefficiency; low quality and clinical effectiveness; and lack of long-run financial sustainability.

The Health Sector Reform Program (HSRP) was developed to address these problems with a comprehensive package of interventions to reform the way health care was financed, organized and delivered. The program was based on a social insurance model that would integrate the fragmented financing structure of the Egyptian health sector into a single National Health Insurance Fund (NHIF). The NHIF would evolve from and ultimately take over the financing/purchasing function of the HIO. The reform model, however, did not clearly outline how the organizational transformation process would take place. Beyond financing reform, the HSRP proposed a complete health system overhaul, including the introduction of new concepts such as the Family Health (FH) approach to the provision of care and the District Management approach to the administration of service delivery.

Given the unacceptably high infant, child and maternal mortality rates and the system's bias toward specialty care, it was determined that the pilot phase of the HSRP would focus on primary health care (PHC). Primary health care was also perceived to be the choice that would yield maximum health gains per pound spent. The design of the pilot phase thus tried to model the basic reform principles in a *Health Sector Reform (HSR) Pilot Project* that would be implemented initially in three governorates (Alexandria, Menoufia and Sohag). The service delivery component would rationalize and upgrade PHC infrastructure, implement new management systems, train personnel and ensure quality of care through performance-based provider payment mechanisms and facility accreditation systems. It would create integrated provider networks that would correct the existing fragmented service delivery pattern and adopt a holistic approach to patient care based on the FH model. The financing component would separate financing from provision through the Family Health Funds (FHFs), governorate-level divisions of the NHIF, which would contract with government, public and private/NGO providers to deliver a package of essential services (referred to as the Basic Benefit Package or BBP) to its registered beneficiaries. The FHFs were originally envisioned as full-fledged insurance agencies. As such, they would have collected and held all health insurance funds directly from their beneficiaries, from the HIO on behalf of insured individuals who want to use the FH services and from the MOHP for needy and non-insured individuals. By integrating funding from public and private sources, the FHFs would have modeled the single payer approach and corrected the fragmentation of financing that precludes equitable pooling of risks.

However, it needs to be noted that while the design and conceptual framework of the HSRP and the HSR Pilot Project were technically sound and based on solid analytical work, implementation constraints led to a different reality. The actual model that was piloted in the

three governorates did not match the original design, notably with regard to issues of health financing and governance.

Status of Implementation

It has been more than six years since the Government of Egypt (GOE) initiated the pilot phase of the HSRP: *the HSR Pilot Project*. The service delivery component of the Project has been implemented with success, where a large number of PHC facilities were upgraded, new management systems were implemented and family health staff was trained. By November 2003, 66 FH facilities in the three pilot governorates (16 in Alexandria, 25 in Menoufia and 25 in Sohag) were accredited and entered into contractual agreements with the respective FHF serving a total population over one million. It is envisaged that in the course of year 2004, 175 additional FH facilities will be contracted (36 in Alexandria, 87 in Sohag and 52 in Menoufia). However, while the original project design emphasized involvement of health care providers from all sectors (government, public, non-governmental and private) to ensure consumer choice and provider competition, most FH centers and units are MOHP (59), with only 5 HIO, 1 private and 1 NGO facilities.

Three major innovations in service delivery were introduced:

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

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

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

The development of the FHFs, the financial component of the HSR Pilot Project, has been constrained by the legislative environment governing the health sector in Egypt, which prohibits any agency outside the HIO from collecting premiums or capitated payments from individuals or families. The FHFs were thus established in the three pilot governorates with the legal status of bank accounts under the respective HIO branches (Ministerial Decree 294 of the year 1999). From an institutional perspective, the three FHFs are managed by the

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

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

Sustainability Analysis

From the perspective of institutional sustainability, the FHFs have not developed into the autonomous purchasing agencies they were envisioned to become. Presently, the FHFs lack the enabling legal umbrella and the organizational capacity to perform insurance functions. As such, they cannot provide a proper basis for expanding social insurance throughout Egypt.

From the perspective of financial sustainability, the financial outlook for the FHFs is unfavorable even within their limited scope of operations. Aside from the substantial EC contributions (the EC has earmarked Euro 37 million to the FHFs, of which Euro 15 million have been already disbursed), local funding for the FHFs has been limited and erratic. Without infusions of donor funding, the administrative expenses of the FHFs and continued disbursement of incentives to providers cannot be sustained. Continuing the HSR Pilot Project after cessation of donor funding requires substantial new commitments of public funds, which will have to progressively increase as the model expands. Even if the GOE is willing to allocate some money for this purpose, it seems unlikely under the escalating national health spending and the growing budgetary constraints that such an expansion would be possible without some private contributions. Given that enrollment is voluntary and that the BBP is so far limited to primary care and does not provide insurance (financial risk) protection from the high costs of secondary and tertiary care, the ability of the HSR Pilot Project to generate funding from private sources is currently limited.

Experience to date with the implementation of the HSR Pilot Project has thus had both shortcomings and benefits. The **shortcomings** include the failure:

- *To consolidate financing* from MOHP, HIO and private sources through the FHFs (using the single payer approach).
- *To separate financing from provision*, since the MOHP and the HIO still own, manage and pay the costs of providing the BBP directly to their facilities.
- *To create new sources of revenue* and to channel the significant private out-of-pocket expenditures, which individuals pay for ambulatory care into the public system. The

1995 Egypt Household Health Service Utilization and Expenditure Survey (EHHUES) reported that Egyptians spent LE 98 per year on health, 64 percent of which went to outpatient care.[1] The 2002 EHHUES reported that this number more than doubled over the past few years reaching LE 206, 59 percent of which went to outpatient services.[2] The survey also reported significantly lower health care spending for the reform households, especially on outpatient care (55 percent of the spending by non-reform households).[3] The interpretation of these findings is that, on one hand, the HSRP succeeded in providing satisfactory PHC services to its patients who then decreased their use of other private providers. On the other hand, instead of shifting the decrease in private spending to the public system as envisioned in the reform model, the HSR Pilot Project has actually decreased the household contribution to health care spending and subsequently increased the government contribution.

Implementation of the HSR Pilot Project has yet resulted in a number of **benefits**:

- The HSR Pilot Project succeeded in *raising awareness within the GOE of PHC* as the most cost-effective means of improving health outcomes. This consequently resulted in gradual shifting of MOHP resources toward PHC, thus improving allocative efficiency. MOHP data indicated an 81 percent increase in public expenditures on PHC and Preventive Medicine (PM) over the last five years (1995/96 to 2000/01), with the PHC/PM budget currently representing 44 percent of the total MOHP budget.[4]
- The *introduction of the family health practice*, a specialty that is new to Egypt, can in the long run rectify the surplus of specialist physicians and support a more holistic and integrated approach to patient care.
- The introduction of *health master planning* to rationalize health infrastructure investment, also a new innovative approach in Egypt, has demonstrated the inefficiency and inequity of the current type and level of health facilities, which resulted into a more efficient investment plans that target the gaps in population coverage.
- While the HSR Pilot Project has been very limited in the scope of its implementation (66 facilities in only 3 out of Egypt's 26 governorates), scaling up implementation can ultimately:
  - Improve *technical efficiency* by increasing provider productivity.
  - Improve *allocative efficiency* by shifting GOE spending from specialized to PHC.
  - Improve *equity and health outcomes* by focusing on vulnerable and underserved population groups, namely infants, children, mothers and rural populations.
- The HSR Pilot Project experience has increased the capacity of the MOHP and its development partners to manage a complex change process. The single pivotal benefit will be the use of structured and informal feedback from the pilot experiment to shape future reform strategies.

[1] Egypt Health Care Utilization and Expenditure Survey, Berman et al., PHR Technical Report No. 25, 1998.
[2] Egypt Household Health Service and Utilization Survey, El Zanaty and Associates, 2002.
[3] Reform households: families that are registered with the FHFs to receive FH services.
[4] Source: Revised Health Sector Reform Strategy Paper, MOHP/EC, 2003.

Future Reform Strategies

Short-term and Medium-term Strategies: Expanding and Sustaining the HSR Pilot Project

In spite of impressive accomplishments in improving the delivery of PHC services, the financing component of the HSR Pilot Project has not created sustainable funding sources. While no one would agree that the pilot experiment has to be terminated, the GOE cannot continue simply to replicate the pilot model without addressing the issue of financing reform. Such a strategy guarantees significant additional costs to be paid by the traditional sources of financing with a heavy government subsidy that would grow rapidly over time. In addition to this strategy, this study has outlined two different strategies that the GOE could adopt to make the HSR Pilot Project financially sustainable and expandable:

- One strategy is to *implement financial reform through the FHFs* to make them financially sustainable. This would involve granting the FHFs more autonomy, allowing them to contract with providers for full cost, developing their organizational capacity to perform the functions of a purchasing/insurance agency and expanding the BBP to include secondary care. An appropriate organizational framework that would integrate the FH facilities into a Provider Network Organization (PNO) will also need to be created in the pilot governorates provided that these PNOs include public, parastatal, NGO and private facilities to ensure competition and not only MOHP facilities. The reformed model could then be implemented in new governorates. However, changing the institutional status and governance of the FHFs is difficult under the current legislation (Ministerial decrees 294 of year 1999, 160 of year 2001, 109 of year 2003 and 147 of year 2003). Unless there was strong political will to steer the required legislative change, this option would fail. It is thus recommended that an analysis of the political economy of this strategy would be conducted before further expansion of the HSR Pilot Project. In addition, this approach would also require a tremendous shake-up in the flow of financing, giving full responsibility for paying all FH facility expenses to fledgling financial units that do not have a proven capability to handle the complex administration that would be required.
- Another strategy is *merging the FHFs into the purchasing division of HIO.* This approach would not require major legislative change and could work administratively. It would allow the FHFs to use the HIO legislative umbrella to collect contributions from beneficiaries. Also, the HIO has internal strengths and natural advantages (e.g., ability to conduct basic insurance functions and broad administrative and regulatory flexibility) that can be transmitted to the FHFs. This approach would allow the HIO, the largest health insurer in Egypt, to get more involved in the reform, after its role in the HSR Pilot Project has been marginalized. However, we need to caution that this strategy should not be adopted before undertaking adequate analysis and assessment of its financial and other implications.

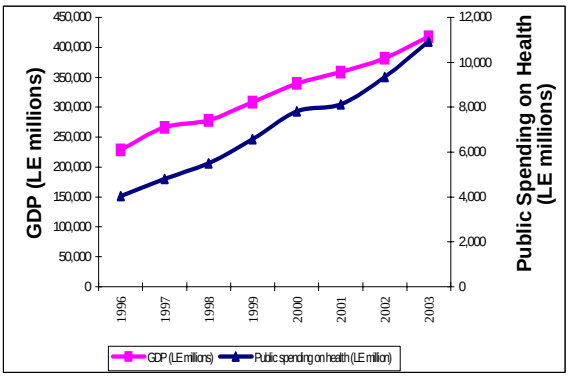
It is important to re-emphasize the need to conduct fiscal analyses of the implications of the different strategy options as well as economic modeling of possible impact before any further expansion of the HSR Pilot Project. These analyses will be invaluable for the GOE in guiding its decision about future phases of the reform.

Long-term Strategies: Addressing Overall Health Sector Financing Reform

Beyond the issue of restructuring the HSR Pilot Project, the GOE needs to start considering measures that can bring financial stability to the overall health sector. The scope of the HSR Pilot Project is so narrow and the pace of its implementation is so slow that it would take many more years to have an impact on overall health sector financing. On the other hand, the financing problems identified at the outset of the HSRP have been worsening. Health spending has grown extremely rapidly since 1995; outpacing growth in the economy and raising new concerns about government resources necessary to sustain such spending levels. Moreover, the increased spending in a system that has low technical and allocative efficiency resulted in poor value for the money.

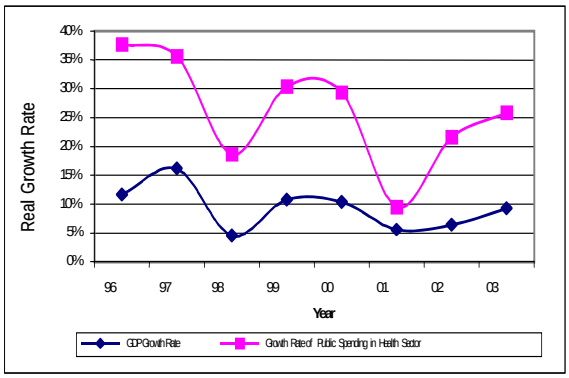
Based on actual spending data from the Ministry of Finance, public spending on health has increased from 1.6 percent of GDP (LE 3,300 million) in FY 1995 to 2.3 percent of GDP (LE 8,100 million) in FY 2001. Extrapolation of these spending patterns into the year 2003 suggests that public spending on health was about LE 11,000 million (estimated at 2.8 percent of GDP). In other terms, public spending on health has been growing at a rate of 15, outpacing growth in the economy, where nominal GDP growth rates averaged 9.4 percent between 1995 and 2003 (figures I and II).

Figure I.
Public Spending on Health vs. GDP



Source: Authors' calculations.

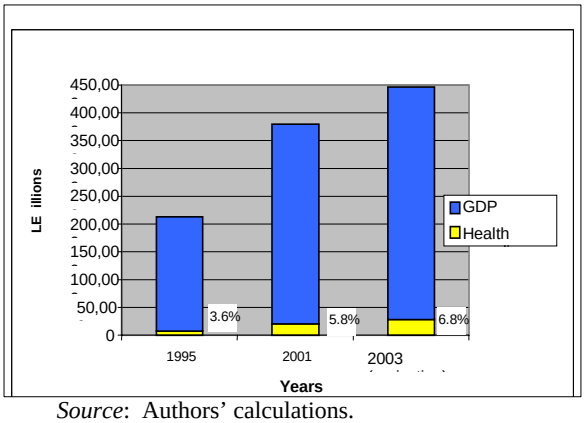
Figure II.
Growth in Public Spending vs. GDP Growth (1995-2003)



Source: Authors' calculations.

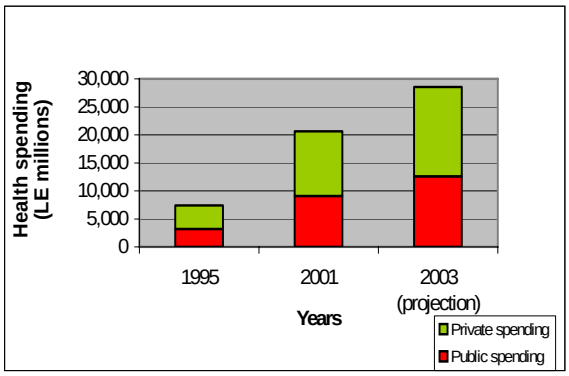
Moreover, that is only part of the financing picture since more than half of health sector spending in Egypt is paid privately and, most of that is from direct out-of-pocket payments by individuals, especially for ambulatory services and drugs. Extrapolations using the 1995 national health accounts suggest that total health spending (public and private) in FY 2003 may be at least LE 25,000 million or 6.1 percent of Egypt's GDP (figures III and IV). Thus, health sector spending has more than doubled its draw on real resources over the past eight years.

Figure III.
Total Health Spending
As a Percent of GDP



Source: Authors' calculations.

Figure IV.
Increase in Public and Private
Health Spending over Time



Source: Authors' calculations.

If the national goal is expanding social health insurance coverage while achieving financial balance in the short run and financial sustainability in the long run, then a new strategy is needed to redirect private health spending into the social health insurance program. The strategy should be informed by what can be observed readily from the current behavior of Egypt's citizens as they interact with the public and private health sectors. Reforms will also need to be implemented within the HIO system to increase sources of revenue, discourage the overuse of services and provide greater incentives for efficient delivery of care.

Beyond these challenges, thought should be given to the broader question of how the GOE in the future will commit public moneys to various health sector organizations. As social insurance grows in importance, the role of the MOHP in maintaining facilities and providing care should be re-evaluated. The likely fall in demand for MOHP services under a well-functioning social insurance system should result in some savings that can be directed to better uses. The drive toward a social insurance system will falter if the GOE does not assess the effectiveness of all its health spending—including funds spent by the MOHP, HIO, university hospitals, teaching hospitals and other organizations—and where necessary reduce budgets. Thus, the importance of more frequent updating of the National Health Accounts (NHA) can not be overemphasized.

1. General Overview

1.1 Introduction

In 1997, the Ministry of Health and Population (MOHP) of the Government of Egypt (GOE) launched a comprehensive Health Sector Reform Program (HSRP) aiming to develop a national health system, based on social insurance that would address existing problems in equity, access, efficiency, quality and financial sustainability. The HSRP has been supported by several development partners, including the European Commission (EC), the United States Agency for International Development (USAID), and the World Bank (WB).

The comprehensive and complex nature of the reform dictated a phased approach whereby a Health Sector Reform Pilot Project of the HSRP was implemented between 1998 and 2004.

The purpose of the Health Sector Reform and Financing Review[5] is to provide the GOE and its development partners with a critical assessment of experience to date with the reform. At a critical juncture of the program's life, such an assessment is imperative to inform future phases of the reform and to revalidate, modify, or if necessary revisit the model envisioned at the outset.

1.2 Study Outline

The study is comprised of five sections:

- **Section 1** sets the background for the study by reassessing the health sector problems that triggered the reform efforts. To provide reference points for subsequent analysis, the long-term vision for the overall HSRP as well as the model adopted for the HSR Pilot Project are described.
- In **section 2**, the status of implementation of the HSR Pilot Project will be reviewed in relation to the model envisioned at the outset.
- **Section 3** tries to interpret why implementation of the HSR Pilot Project met, exceeded, or fell short of expectations in the various areas identified in the previous section and accordingly draws conclusions regarding the sustainability of the HSR Pilot Project.
- In **section 4,** we propose short-term and medium-term reform strategies aimed at expanding and sustaining the HSR Pilot Project. We also broadly outline some long-term strategies to start addressing other major financing issues within the overall health sector.
- **Section 5** concludes the study with a summary of main findings and presents a road map for the future of health sector reform in Egypt.

[5] This study was based on the findings of two WB missions in October 2002 and May 2003. A draft report, prepared in September 2003, was provided to the MOHP and comments received in November 2003. An internal decision/review meeting was held in December 2003. This final version largely incorporates the comments received from the MOHP, the peer reviewers, and the recommendations of the decision meeting.

1.3 Limitations of the Study

1.3.1 This study does not represent a comprehensive review of the health sector nor does it attempt to provide an update of the original Health Sector Reform Strategy Paper, which presented a complete profile of the Egyptian health sector in 1997. The scope of this analysis is limited to an assessment of the health sector reform program (not the health sector) and particularly its HSR Pilot Project. Readers are referred to the 1997 MOHP Health Sector Reform Strategy Paper (known as the D4 document)[6] and to its 2003 Revised Version for an overview of the health sector.

1.3.2 Since assessment of the reform experience to date revealed that financing continues to be the most pressing yet the least developed reform area, the discussion of future reform strategies focused on the financing area only. The study by no means presents a comprehensive package of reforms for all health sector challenges. Readers are again referred to the 1997 MOHP Health Sector Reform Strategy Paper and to its 2003 revision for details on reform strategies for areas other than financing that are beyond the scope of this study.

1.3.3 An overview of the financial situation of the Health Insurance Organization (HIO) is provided in section 5.2.2 and detailed in annex VI. However, this was done in the context of the role that the HIO can play as a financing vehicle for expanding the pilot. A complete assessment of HIO's financial, governance, and service provision situation is beyond the scope of the study. Such an analysis would however be needed to inform the next phases of the reform and is recommended to support the development of a universal social health insurance system in Egypt.

1.3.4 The financial analyses presented in section 4.2 of this report do not represent a complete update of Egypt's National Health Accounts (NHA). Such an update would require time and resources far beyond the scope of this study. Accordingly, it needs to be understood that the projections assumed that, even though spending levels have been progressively rising, the "structure" of health care financing in Egypt has not changed markedly since 1995. More precisely, it has been assumed that the ratio of public to private spending on health has not changed markedly. This was considered a reasonable assumption since all reform efforts to date have not addressed the structure of financing in Egypt.

1.3.5 Data used to estimate recent trends in health care spending in Egypt presented in section 4.2 (and detailed in annex V) were obtained from the following sources:

- Actual health expenditure data (not budget data) provided by the Egyptian Ministry of Finance.
- Projections from Egypt National Health Accounts 1995,[7] considered the only reliable basis for estimating private spending on health in Egypt at the time our study was being conducted.
- Gross Domestic Product (GDP) data derived from the World Bank's World Development Indicators (WDI) for the years studied.

1.3.6 The health spending figures presented in this study might seem higher than figures reported by other sources. This can be explained by a number of methodological

[6] The document was prepared with the technical and financial support of four donors, namely, Danida, the EC, USAID, and the World Bank.

[7] PHR Special Initiatives Report No. 3, Rannan-Eliya et al.

differences, some of which are:

- Public spending data presented in this report included, in addition to recurrent spending (Chapters 1 and 2), investment spending (Chapter 3), too. Other sources commonly consider recurrent spending only and thus understate public expenditures.
- All financial projections in this report relied on actual expenditure data rather than the budget data frequently used in similar analyses. Traditionally, actual spending in Egypt was found to be 20 percent higher than budget data.

2. Study Background

2.1 The Need for Health Sector Reform

As a result of the basic economic constraints and the limitations in administrative and technical capacities that face most developing countries, Egypt's health system was confronted with significant challenges that initiated the need for reform. The health transition, increasing demand for health services and rising consumer expectations further increased the pressure on the health system. This resulted, as will be discussed below, in diminished health outcomes, geographic, income and gender inequities in access, use, cost and outcomes, poor value for money, poor quality and clinical effectiveness, and lack of long-term financial sustainability.[8]

While no comprehensive assessment of the Egyptian health sector has been conducted since 1997,[9] it is evident that most of the major health sector issues that triggered the reform remain valid six years into the reform. This is not unexpected or disappointing given the range and extent of the problems and the complexity and scope of the Health Sector Reform Program (HSRP).

2.1.1 Health outcomes

At the HSRP outset, infant, child and maternal mortality rates were unacceptably high (infant mortality rate was 62 per 1000 live births, the under-five mortality rate was 80 per 1000 live births10 and the maternal mortality rate was 174 per 100,00 live births in 199511). Geographic disparities were 3 to 1 in infant and child mortality and 5 to 1 in maternal mortality. The burden of communicable diseases was significant.

Despite achievements in reducing infant, child and maternal mortality (infant mortality rate dropped to 43.5 per 1000 live birth, under-five mortality rate dropped to 54 per 1000 live births12 and maternal mortality rate dropped to 84 per 100,00 live births in 200013), current rates are still high compared to countries at similar income level. Moreover, they still exhibit large geographic and gender differentials.

2.1.2 Equity and access

Only 40 percent of the population had formal health insurance coverage under the Health Insurance Organization (HIO) in 1997, with coverage not including the worse-off. Fragmentation of health sector financing also precluded any equitable pooling of health risks. Revenues to finance the health system were not raised on the basis of ability to pay (poorer individuals spent more of their incomes out-of-pocket and paid relatively more in taxes). Moreover, per capita public spending was 67 percent higher in urban than in rural governorates. Bed and physician distribution exhibited the same geographic pattern. Finally, the targeted pharmaceutical subsidies unfittingly benefited

[8] For further details on the problems that triggered the reform in 1997, please refer to annex I.
[9] For more details regarding recent trends in the Egyptian health sector, please refer to the Revised Health Sector Reform Strategy Paper, MOHP and the EC, 2003.
[10] Source: Egypt Demographic and Health Survey, 1997.
[11] Source: Egypt National Maternal Mortality Survey, 1993.
[12] Source: Egypt Demographic and Health Survey, 2000.
[13] Source: Egypt Maternal Mortality Survey, 2000.

the population at large, not the poor.

Even though HIO coverage has now increased to 45 percent of the population after covering infants and school children, the inequitable financing structure and other inequities in resource distribution, access, use and cost persist.

2.1.3 Efficiency

At a total health spending of 3.8 percent of GDP and an MOHP budget of 2.2 percent of the overall government budget, Egypt's spending levels were low by international standards in 1997. The HIO and the MOHP combined financing and provision functions, thus precluding efficiency. The rigid civil service laws impeded appropriate behavioral incentives. Egypt had a surplus of physicians, particularly specialists (125,000 licensed physicians in 1997) and hospital beds (2.1 per thousand population in 1997). On the other hand, there was a shortage of nurses, low hospital occupancy rates and underutilized government PHC facilities. Drug spending and consumption were high due to over-prescribing and little use of generic forms.

While total health spending increased to almost 6 percent of GDP in 2001 (as will be discussed in section 4.2 and annex V) and the MOHP share of total GOE budget increased to 3.3 percent (2001),14 the increased spending has not resulted in proportionate health gains. Poor value for money persisted due to allocative and technical inefficiencies. Despite the surplus, physician numbers continued to rise (144,000 licensed physicians in 2001).15 Also, the total number of hospital beds in Egypt increased by 33 percent from 1997 to 2001 (2.3 beds per thousand people in 2001).16

On the other hand, some problems witnessed modest improvement over the past few years. For example, the shortage of nurses has been successfully addressed (the total number of nurses more than doubled between 1997 and 2001). Also, MOHP hospital-based services have shown some improvement in their efficiency indicators (hospital occupancy rates rose from 32 percent in 1996 to 38 percent in 2001).

2.1.4 Quality and clinical effectiveness

At the outset of the HSRP, the majority of government facilities, especially in rural areas, were poorly equipped and maintained and lacked supplies and drugs. Physician and nurse training needed strengthening in many areas, including the use of laboratory investigations, prescribing patterns and emergency care.

With the exception of a limited number of PHC facilities where reforms were implemented under the HSR Pilot Project and other special initiatives and projects, this remains the status of most government facilities and government-employed personnel in Egypt.

[14] Source: Revised Health Sector Reform Strategy Paper, MOHP/EC, 2003.
[15] Source: Revised Health Sector Reform Strategy Paper, MOHP/EC, 2003.
[16] Source: Revised Health Sector Reform Strategy Paper, MOHP/EC, 2003.

2.1.5 Long-run financial sustainability

At the outset of the reform, the rapid population growth and modest economic growth rates posed a serious threat to the financial sustainability of Egypt's health system. Moreover, the health transition resulted in a shift in the disease burden to more expensive non-communicable diseases and injuries. In addition to allocative and technical inefficiencies in the sector as a whole, the HIO was not actuarially sound, and rapid expansion of coverage to new groups was being undertaken without a dedicated source of revenues, which exacerbated its fiscal inadequacy.

Five years into the reform, the financial sustainability of the health sector has worsened further. Population growth rates remain very high *(annual growth only dropped from 1.9 percent in 1997 to 1.8 percent in 2001).*[17] The decline in the total fertility rate has been very modest *(from 3.6 in 1995 to 3.5 in 2000).*[18] On the other hand, economic growth slowed markedly after 2001, reaching its lowest figure in years *(nominal GDP annual growth rate dropped from 16.2 percent in 1996/97 to 5.6 percent in 2001/02*[19]*)*, and has been recovering at modest rates. As will be discussed in section 4.2, health care spending skyrocketed and despite some encouraging internal reforms, the HIO still suffers from lack of financial viability.

2.2 The Overall Health Sector Reform Model

For over two decades, the GOE launched smaller scale reform efforts in an attempt to address some of the health system problems identified above. These projects often tackled specific components of the system (e.g., hospital care, maternal and child health services) or specific health problems (e.g., Schistosomiasis control, diarrheal disease control, family planning and child survival programs). While these projects often achieved some success on institutional development or service improvement grounds, they did not address the fragmentation of the sector or create sustainable sector-wide impacts. The Health Sector Reform Program (HSRP) was thus designed to provide an integrated and comprehensive approach to reform.

In the HSRP Strategy Paper (1997), the GOE articulated its long-term reform vision as the achievement of universal coverage with basic health services for all its citizens. In recognition of the limited resources of the country and the existing constraints in the system, an incremental approach to coverage expansion had to be adopted. The introduction of the School Health Insurance Program (1992) and the Infant Health Insurance Program (1995) signaled the government's intent to move the system in that direction. This move, however, called for some urgent action to correct the inherent inefficiencies and inequities and to achieve financial balance in the short run and financial sustainability in the long run. Toward these goals, the HSRP proposed an integrated package of strategies addressing the ways in which health care is financed, delivered, organized and managed:[20]

[17] Source: WDI data, 2001.
[18] Source: Egypt Demographic and Health Survey, 2000.
[19] Source: WDI data, 2001.
[20] To inform the early design phase of the HSRP, analysis of the economic, legal, political, institutional and social vulnerability impacts of the reform were conducted (Partnership for Health Reform (PHR) Project, Technical Report No. 5, Volumes 2, 4, 5, 6 and 3 respectively). Also, a National Health Accounts (NHA) Study, a Health Provider Survey (PHR Technical Report No. 26) and a Household Health Utilization and Expenditures Survey (PHR Technical Report No. 25) provided information on the sources and uses of health care funds and on how services are provided and consumed.

2.2.1 In the area of health care financing

The 'family' would become the basic unit for expanding insurance coverage. An affordable package of basic health services based on cost-effectiveness would be provided (referred to as the Basic Benefits Package). Government, public and private sources channeled through a single NHIF would ensure sustainable financing. The NHIF would evolve from transformation of the current HIO into a sole financier and would be divested of its service delivery system. The significant out-of-pocket (private) expenditures that Egyptian citizens are incurring would be channeled into the social insurance system and reorganized to promote equity and risk sharing.

2.2.2 In the area of service delivery

Public and private providers would become consolidated into PNOs of accredited family practice providers. Provision of the Basic Benefits Package (BBP) would be based upon competition and choice among the different providers, under the single NHIF, using incentive-based provider payment mechanisms. The service delivery infrastructure would also be rationalized or remodeled into three different levels (Family Health Unit, Family Health Center, and a District Hospital) based on population needs.

2.2.3 In the area of organization and management

The MOHP's role would be strengthened in strategic planning, regulation and coordination of the health sector. Management of service delivery would be decentralized to the district level (the District Management Approach), in the transition period until the MOHP service delivery function is gradually phased out. Physicians and nurses would be retrained to meet new system goals. The HIO would be reorganized and eventually transformed into the NHIF.

For further details on the long-term vision of the HSRP, please refer to Annex II.

2.3 The HSR Pilot Project

The complex nature of the HSRP and the fact that it involves a complete overhaul of all aspects of the health system indicated that its full implementation would require 15-20 years. Cost implications, implementation realities, and political constraints led the GOE to have the early phases of the reform focus on interventions likely to engender rather than reduce support to the system, but which are essential to further reform stages. It was determined that phase one of the HSRP would focus on the implementation of an integrated model for the *delivery and financing of primary health care (PHC)* in three pilot governorates. This was an appropriate strategic choice for a number of reasons. First, by focusing on PHC, the most significant impacts would benefit underserved and vulnerable populations, women and children. Second, focusing on PHC would be the most cost-effective means of reducing the burden of illness. Third, allocation of more resources to PHC would significantly reduce some of the most egregious urban-rural differentials in health outcomes, access, and spending. Fourth, it would lay the base for universal coverage with a comprehensive benefit package in the future. Fifth, it would begin to rationalize the service delivery system, starting with ambulatory care up through district hospitals. Introducing family physicians, a specialty new to Egypt and retraining other primary care personnel would be sensible first steps in improving quality and efficiency and initial health workforce reform. Sixth, the PHC initiative would be undertaken while the MOHP and the HIO continued to insure secondary care and begin the long process of changing their functions and divesting their delivery systems.

In what follows, the model adopted for the HSR Pilot Project will be presented. The description of the two components of the pilot: service delivery and financing as envisioned at the outset of the reform will serve as a basis for the assessment of implementation that follows in section 3.

2.3.1 The Service Delivery Component

2.3.1.1 Three *governorates* would be selected for implementation of the HSR Pilot Project that represent the three major regions in Egypt, namely, urban, Lower and Upper Egypt as each has different characteristics and constitutes a different market. The selection within each region was based on criteria such as level and depth of poverty; health status; concentration of women, children and other vulnerable groups; commitment to reform; administrative capacity; existing delivery capacity; presence of the HIO; and, representativeness and replicability.

2.3.1.2 The *physical infrastructure* of PHC delivery in the three pilot governorates would be upgraded, in accordance with a *needs-based planning* process, where needs are assessed at the district level, then district health plans are consolidated into governorate master plans.[21] Based on the master plans, new facilities would be established or existing facilities would be rehabilitated and re-equipped. The facility infrastructure at the district level (including MOHP, HIO and participating private sector providers) would be consolidated into three types of facilities, namely, family health units (FHU), family health centers (FHC) and district hospitals. If appropriate, under-utilized facilities would be closed.

2.3.1.3 *Staffing levels and patterns* in the pilot facilities would be revised against the master plans. New health manpower needs would be met through the MOHP or the HIO and redundant staff would be retrained or relocated. Physicians would be trained in Family Medicine so that the family physician, assisted by a community nurse and a social worker, would provide services in the BBP to a specific family roster and act as the gatekeeper of the system.

2.3.1.4 An organized *referral system* that starts at the FHU level would be developed, where family doctors would refer patients for investigations or to specialists at the FHC, and to the district hospital for more specialized care.

2.3.1.5 New *facility management systems* (medical record system, provider payment systems and information systems) that support efficient operations would be implemented. Information support to the HSR Pilot Project would include the creation of a Clinic Information System at the Family Health (FH) facility level, a Payor Management Information System at the Family Health Fund (FHF) level, along with the information links between them.

2.3.1.6 *Quality of care* and appropriateness of clinical practices would be ensured through a facility accreditation process.

[21] This approach is believed to lead in the long run to a shift in the GOE investment policy away from its current urban and tertiary emphasis to underserved areas.

2.3.2 The Financing Component

2.3.2.1 A Basic Benefits Package (BBP) would be developed with cost-effectiveness as the chief criterion to ensure maximum gain in health status per pound spent. Pilot facilities would be committed to providing BBP services to all enrollees.

2.3.2.2 The BBP would be financed through *an integrated combination of public and private expenditures* as follows:[22]

- Capitated payments (premiums or roster fees) would be paid out-of-pocket by each enrolled household. In addition, households would have to pay visit fees and copayments to providers for drugs and investigations. Given the current legislation governing social insurance in Egypt, the household contribution might not cover the full cost of providing the BBP.

- The remaining cost would be financed by the MOHP for the uninsured and by the HIO for the HIO-insured. Subsidies for the poor would have to be provided from the GOE budget through the MOHP.

2.3.2.3 Governorate-level Family Health Funds (FHF) would be developed to:

- *Separate financing from provision* by acting as purchasing agencies that contract with MOHP, HIO and private sector providers to provide BBP services. As *quality-contracting agencies* the FHFs would institute effective provider payment mechanisms and distribute payments to providers based on predetermined performance criteria.

- As PHC *insurance agencies*, the FHFs would administer coverage (i.e., registration procedures for enrolled families) and collect capitated payments (roster fees or premiums) from registered beneficiaries.

- The FHFs would also integrate the currently fragmented financing structure using the *"single payer approach."* As such, they would collect and hold *all* funds from:
  - Registered beneficiaries.
  - HIO on behalf of its insured individuals.
  - MOHP for non-insured individuals.

It needs to be understood that according to the original model de-fragmentation of financing and its full separation from provision would only be achieved if the FHFs paid *all costs* directly to providers, who would no longer receive separate budgets from their parent organizations (the MOHP and the HIO).

[22] To identify funding sources for the BBP, data was collected on health expenditure in Alexandria (PHR Technical Report No. 35, "Health Expenditure Review in Alexandria, Egypt." May 1999). Also, enrollee profile, utilization and costs from the first pilot facility "Suef" were studied (PHR Technical Report No. 36, "Options for Financing Health Services in the Pilot Facilities in Alexandria," August 1999).

3. Status of Implementation of the HSR Pilot Project

The implementation of the HSR Pilot Project faced a slow start due to difficulties in establishing the capacity and procedures to manage this complex, multi-donor effort. While the initial design was completed in 1998, actual implementation did not begin until 1999.

3.1 Status of Implementation of the Service Delivery Component

3.1.1 Based on the criteria mentioned under 2.3.1.1, the GOE chose three governorates for implementation of the HSR Pilot Project: Alexandria (population 3.4 million), Menoufia (population 2.9 million) and Sohag (population 3.6 million). They represent one governorate from each of Egypt's major subdivisions (i.e., Urban, Lower Egypt and Upper Egypt respectively), excluding the sparsely populated Frontier Governorates.

3.1.2 The development of the governorate master plans took longer than anticipated, which led to delays in the initiation of civil works contracts associated with the upgrading of the PHC infrastructure facilities. Master plans were ultimately completed and utilized a socioeconomic vulnerability index[23] to target the most vulnerable (poorest and lower middle quartiles) populations in each of the three governorates.

3.1.3 The master plans identified a total of approximately 330 PHC units for upgrading in the three pilot governorates. In May 1999, the first MOHP pilot site at Seuf in Alexandria started receiving patients. By June 2002, almost five years after the launching of the project, there were only 31 operating Family Health (FH) facilities: 14 in Alexandria, 10 in Menoufia and 7 in Sohag. Replication was based on the MOHP prototype created in Seuf, Alexandria and the HIO prototype created in Abu Keir, Alexandria. By November 2003, the HSR Pilot Project had a total of 66 operating FH facilities, 16 in Alexandria, 25 in Menoufia and 25 in Sohag.[24] Most of these are MOHP facilities (59), with only 5 HIO facilities, 1 NGO and 1 private provider. The MOHP is planning to add an additional 175 FH facilities to the project over the course of 2004 (36 in Alexandria, 52 in Menoufia and 87 in Sohag).

3.1.4 The MOHP and the HIO filled manpower rosters at the pilot clinics. Physicians were trained in the family health approach. In addition, facility directors received some basic training in accounting, human resource management, continuous quality improvement and medical records.

3.1.5 The Family Health Model of patient care was implemented for the first time in Egypt. Integrated services were provided under the same roof for the entire family requiring less time and transportation and providing better quality. Both physicians and patients valued the concept of continuity of care (being seen by the same FH physician and having a single medical record).

3.1.6 Family-based medical record and patient tracking systems were implemented. FH facilities started collecting some performance indicators (e.g., number of visits per physician, waiting time, etc.) from medical records and encounter forms on a regular basis (every three months). An appointment system was established to reduce unnecessary waiting time for patients.

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[23] The social vulnerability index used 8 socioeconomic indicators: illiteracy ratio, unemployment ratio, income dependency ratio, inaccessibility to electricity, inaccessibility to potable water, average family size, household crowding factor and the population size of the village.

[24] Source: HSRP Technical Support Office, Ministry of Health and Population.

3.1.7 The development of information systems to support the HSR Pilot Project was delayed since earlier attempts produced different prototypes for MOHP and HIO facilities. A consulting group affiliated with the Ministry of Health of the Canadian province of British Columbia (BC) has been working on the development of an integrated system.[25]

3.1.8 A structured system for referrals within the HSR Pilot Project was not institutionalized. A study of referral rates and costs showed that the volume of referrals made from the two most mature pilot facilities (Abu Keir and Seuf) to the participating district hospitals (Abu Keir HIO Hospital and MOHP Sharq El Medinah Hospital) was very low.[26] While it is expected and desirable that most PHC services be provided in the FH facility, the reported referral rates (almost 2 percent of all encounters) were much lower than those encountered in countries with developed referral structures (around 8 percent). This might reflect under-development of referral procedures rather than effective gatekeeping.

3.1.9 In terms of the quality of care provided by FH facilities, there was no adequate data to allow a formal assessment. Nevertheless, there was a general impression that based on increased patient demand, the quality of services provided by the FH facilities might be higher than that of an average PHC unit. All pilot facilities have gone through a one-time accreditation process established by the MOHP Quality Improvement (QI) Directorate. However, the standards used for accreditation were focused on structure with no attempt to incorporate process- or outcome-oriented measures. The QI Directorate also published and disseminated a set of clinical practice guidelines for all components of the BBP, which were used for training of providers at the pilot sites.

3.1.10 Performance-based incentives were developed and tested for the first time in Egypt.[27] Incentive schemes were tied to institutional factors (e.g., attainment of accreditation status, enrollment levels and patient satisfaction). Incentives were then distributed to employees based on job type, years of experience, academic qualifications and on-the-job performance, up to 250 percent of base salary.[28] This introduced a more responsive payer-provider relationship and induced new behaviors and attitudes among providers.

3.1.11 The interplay of the above interventions has introduced three major innovations to the service delivery model in Egypt: the family health model, the performance-based incentive system, and the rationalization of the health infrastructure investment, which resulted in:

- Increased *provider satisfaction and productivity* as physician encounters increased from 3 to 16 per day.
- Increased *patient satisfaction and demand* for FH services as demonstrated by the long waiting lists at almost all FH facilities.

3.2 Status of Implementation of the Financing Component

3.2.1 The content of the basic benefits package (BBP) was determined early on in the reform

[25] Egypt HMIS WB Consultancy Report, Dennis J. Streveler, October 2002.
[26] PHR Technical Report No. 56, "Study of Referrals in the Pilot Program in Alexandria, Egypt," October 2000.
[27] This contrasts to the current provider compensation system under HIO where the reimbursement system pays providers per visit based on a seniority sliding scale.
[28] It is estimated that between 50 percent and 58 percent of total staff remuneration was financed by FHF incentive payments. MOHP Research and Administration Group, October 7, 2002 (draft), paragraph 77, p. 19.

process based on cost-effectiveness analyses and discussions between the GOE and its development partners. The package was limited to essential preventive and primary health care services.[29] It soon became apparent that the concept of a restricted BBP was not practical. Patients could not be turned away by the family physician because their condition was not in the package list. In a survey of the top ten diagnoses in four FH facilities over a six-month period, the most frequent diagnosis, arthritis, was not part of the BBP.[30]

3.2.2 A model for assessing the cost of the BBP was developed to help policymakers in projecting resource needs for the Pilot.[31] The methodology was applied to the Alexandria governorate and concluded that the BBP would cost between LE 31[32] and LE 48[33] per capita depending on the kind of health facility if implemented for the target population of 3.4 million people in Alexandria.[34] However, preliminary results from a more recent cost study undertaken by the MOHP and that relied on analyzing costs incurred at actual FH facilities indicate that the cost of BBP has reached LE 60. It was conceived that the BBP would be financed through a combination of public and private expenditures (roster fees, visit fees and copayments) as shown in table 1.

Table 1. Proposed Distribution of Per Capita Revenue by Category of Beneficiary

Contribution to BBP (LE/Beneficiary)	Uninsured		Insured (by HIO)			Average
	Non-Poor	Poor	School Children	Pensioners	Employees	
MOHP:						
- Current expenditure	15	15	0	0	0	
- Subsidy	0	10	0	0	0	
HIO: Capitated Payments	0	0	15	110	20	
Households:						
- Roster fee	10	0	10*	10*	10*	
- Visit fees	6	6	0	0	0	
- Copayments	2	1	4	0	0	
Total Revenues	**33**	**33**	**29**	**120**	**30**	**49**

Note: Roster fees for insured patients would be paid by the HIO. If roster fees cannot be collected from HIO-insured patients, capitated payments would have to be higher.

Source: Nanda Kumar et al, PHR Technical Report No. 36, Options for Financing Health Services in the Pilot Facilities in Alexandria. 1999, p. 23.

3.2.3 As mentioned earlier, the original concept was that the FHFs would develop as insurance agencies that collect and hold capitated payment from enrolled beneficiaries. However, the complexity of issuing new legislation led to a different reality.[35]

[29] In-hospital services in the BBP are limited to deliveries and related neonatal care, minor procedures and inpatient stabilization of acute episodes of chronic conditions as hypertension and diabetes.

[30] PHR Technical Report No. 60, "Evaluation of the Demonstration Project for the Financing of Primary Health Care in Egypt," January 2001, p. 57.

[31] PHR Technical Report No. 32, "Costing of the Basic Benefits Package in Egypt," August 1998.

[32] PHR Technical Report No. 36, "Options for Financing Health Services in the Pilot Facilities in Alexandria," 1999.

[33] WB Project Appraisal Document, 1998.

[34] Thirty-one percent of this cost is for personnel, 27 percent is for drugs and diagnostic tests, and 42 percent is for overhead costs and referrals for ancillary services and inpatient care.

[35] A discussion of the specific issues and options considered prior to the establishment of the FHF as a sub-account within HIO can be found in PHR Technical Report No. 42, "Establishing a Family Health Fund in

Ministerial Decree No. 294 of 1999 (see annex III) established the first FHF in Alexandria as a "bank account" affiliated with HIO's Northwest Delta Branch. Two additional FHFs were established in Menoufia and Sohag. As such, the FHFs were only authorized to receive funds from other sources for the disbursement of provider incentives. Thus, the original concept of the FHFs providing full cost PHC insurance through a capitation payment system for members of families registered for continuous care at the pilot facilities never materialized. The FHFs are currently financial intermediaries with the actual flow of funds through them limited to provider incentive disbursement (see figure 1). They function as payment centers whose sole mandate is to ensure quality and efficiency through a performance-based incentive system.

3.2.4 Family Health Fund enrollment has been progressing at modest rates. In June 2002, the Alexandria FHF, which is by far the most developed, had only 200,000 enrolled beneficiaries. By the end of year 2003, the Alexandria FHF had 299,200 individuals, Menoufia had 520,000 and Sohag had 139,600, rendering the total FH program enrollees a million. Although one might expect to see improvement in enrollment figures with more time and effort, the absence of a comprehensive health benefit that includes secondary care will almost certainly restrict enrollment growth.

3.2.5 While the FHFs were envisioned as the 'single payers', which would integrate BBP financing from different sources, the current financing structure remains fragmented. Currently, the HSR Pilot Project is financed as follows:

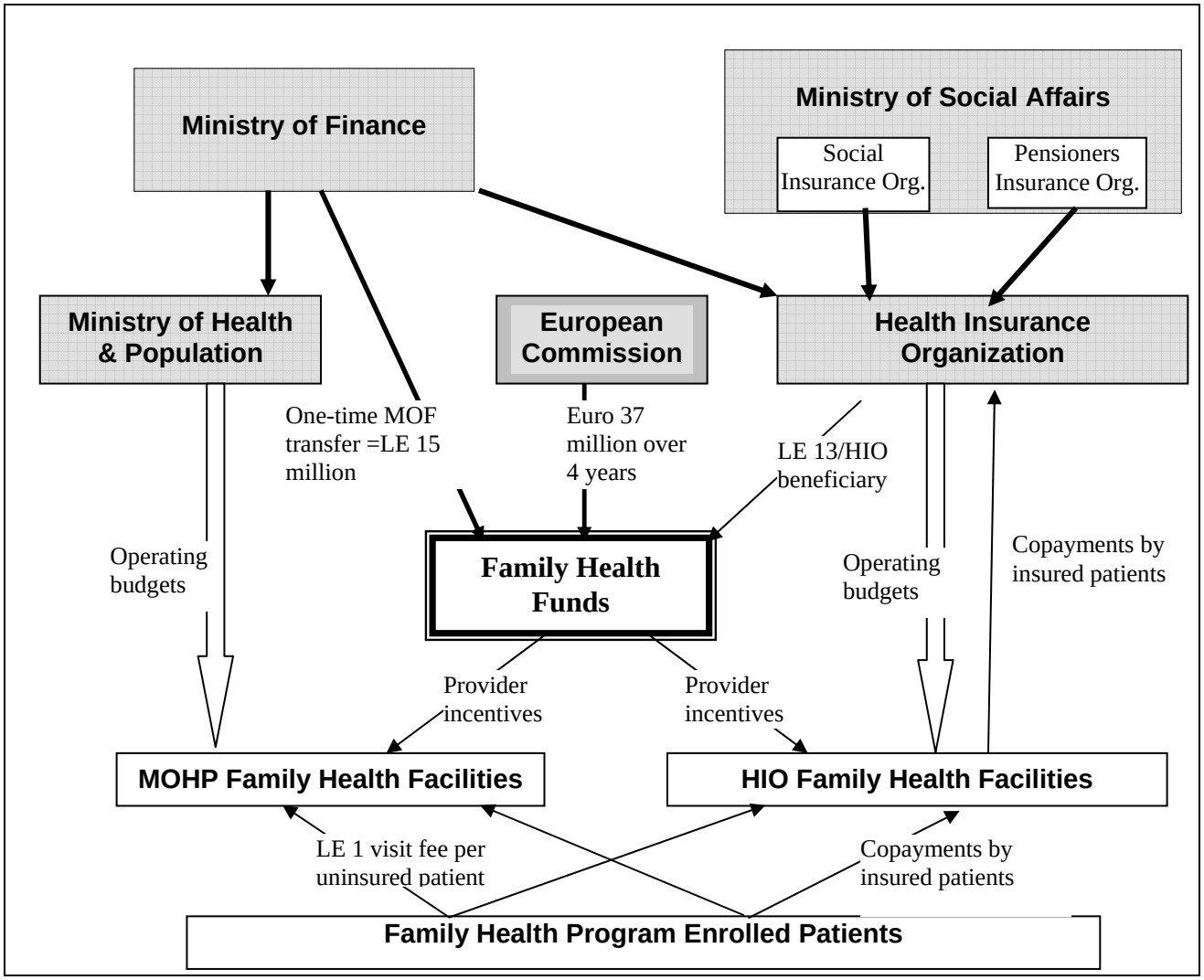
a) Funding for BBP services is through the MOHP and the HIO, which continue to pay salaries and facility recurrent costs directly to their own FH facilities, as occurred before the start of the HSR Pilot Project.

b) Funding for FHF administrative operations and disbursement of provider incentives comes from:

- The European Commission, which as part of the HSRP grant allocated Euro 37 million over 4 years to the FHFs. Of these, Euro 5 million were disbursed in year 2002 and an additional Euro 10 million were disbursed in 2003.
- A one-time MOF allocation of LE 15 million to the three FHFs as part of the GOE contribution to the HSRP. About half of that amount (LE 7.5 million) has been paid to the FHFs thus far.
- The HIO which is obligated to make an annual payment to the FHFs of LE 13 for each HIO-insured beneficiary who participates in the family health plan. That is on top of the HIO continuing to pay all operating and capital expenses for its owned FH facilities and providing services to those who opt out of FH facilities operated by the MOHP. There is however some indication that the HIO payments have not been made fully and in a timely manner.

Alexandria, Egypt - The Quality Contracting Component of the Family Health Care Pilot Project," December 1999.

Figure 1. Current Flow of Funds to and from the FHFs



3.2.6 Current revenues from FH patients are insignificant. The initial design proposed a LE 10 roster fee to be paid annually for each uninsured family member, with the MOHP contributing the roster fee on behalf of uninsured poor patients (see table 1). Due to difficulty in establishing collection mechanisms from families and MOHP reluctance to pay roster fees for the uninsured poor, this did not materialize. In terms of visit fees, uninsured patients pay a LE 1 fee for each visit to the FH facility. Patients who are insured through the HIO pay according to the rules established for their coverage (thus, people insured under Law 79 make no copayments, and those insured under Law 32 have nominal copayments for office visits). Any fees that are collected go directly to the MOHP (for the uninsured) and the HIO (for the insured). About half of these collections are re-distributed to FH facility staff as incentive payments.[36] To increase the ability of the FHFs to generate revenues, Ministerial Decree 147 of year 2003 was issued. The Decree authorized FH facilities to collect user fees and drug copayments from beneficiaries. However, the proposed fee structure covers a small part of the

[36] This is on top of the provider incentives that are distributed by the FHFs.

actual cost of providing BBP services and the drug copayments are set at one-third of the market price of the drug. Moreover, only 40 percent of collections from patients are transferred to the FHFs to assist in covering their administrative costs. While it represents some improvement, the potential of Decree 147 in making the FH program financially self-sufficient is limited.

3.2.7 The financial outlook for the FHFs is unfavorable (see table 2). While the three FHFs reported a net operating surplus at the end of FY 2002, the surplus is itself not a good indication since it was the result of various delays in contracting, training and renovation that slowed the delivery of services and held spending down artificially. The scale of the FHFs operations increased dramatically in 2003, which converted the net operating surplus reported by each of the FHFs for FY 2002 to a large deficit (LE -17.3 million or LE -18/enrollee). To place the size of the deficit (LE 18/enrollee over the three governorates on average) in perspective, note that the overall deficit for the HIO averaged LE 10 per beneficiary for FY 2002. Thus the FHFs have a deficit per enrollee 80 percent greater than HIO, but the FHFs are directly responsible for only a tiny fraction of the cost of the BBP (which is, itself, significantly less expensive than the HIO's comprehensive benefit package). These negative balances were however later reversed after the FHFs received a second EC disbursement in the amount of Euro 10 million in 2003.[37] Nevertheless, the current financial situation still shows that without donor funds (which were originally intended to cover start-up costs, rather than be a continuing resource for sustaining operations) the FHFs are not able to sustain administrative expenses and continued disbursement of incentives to providers. As we look at a fuller scale of operations in 2004 and 2005, the mismatch between revenues and spending will become even more pronounced.

[37] By November 2003, the FHFs expenditures from the disbursed funds (Euro 15 million from the EC and LE 7.5 million from the MOF) had only totaled Euro 3.8 million from the EC funds and LE 3 million from the MOF funds, leaving the FHFs with a current positive balance in both their Euro and Egyptian pound accounts. In addition, a MOF allocation of LE 7.5 million and an EC contribution of Euro 22 million have not yet been disbursed. Nevertheless, in view of the rising number of FH facilities, the Funds' intent to become true purchasers of services at primary and secondary care levels, and the decision to extend the operations to two new governorates, expenditures are likely to increase considerably over the coming years. Under the 2003/04 Business Plan, 36 additional PHC facilities in Alexandria, 52 in Menoufia, and 87 in Sohag are still to be contracted. If the FHF should contract these facilities under the present conditions (i.e. incentive payment only), an amount of approximately LE 32 million (plus 10% administrative overhead for the FHF) is needed. In the event the FHF should start to initiate full contracting, it is estimated that the cost per FH facility would increase rendering the projected needs around LE 147 million (equivalent to Euro 20,652,000) to the end of 2005. The above projections do not take into account that the FHF will extend its operations to Qena and Suez. Thus it becomes evident while it might be true the FHFs have funds to sustain their operations through 2005, unless they start generating revenues, they will not be financially sustainable in the long run.

Table 2. Financial Balance of the Family Health Funds, FY 2002/03 (LE million)

	Alexandria	Menoufia	Sohag	Total
FY 2002 (Technical Support Office)				
Revenue	3.9	2.2	2.1	8.2
Expenditures	2.3	1.0	0.7	4.0
Net Balance	1.6	1.2	1.4	4.2
Number of FH Units	*14*	*10*	*7*	*31*
FY 2003 (Technical Support Office)				
Revenue	2.9	2.2	3.4	8.5
Expenditures	8.8	8.3	5.1	22.2
Net Balance	-5.9	-6.1	-1.7	-13.7
Number of FH Units	*22*	*38*	*19*	*79*
FY 2003 (FHF Business Plans)*				
Revenue	1.3	1.5	0.8	3.5
Expenditures	8.8	8.8	3.3	20.8
Net Balance**	-7.5	-7.3	-2.5	-17.3
Number of FH Units	*22*	*38*	*24*	*84*
FHF enrollment (2003)	299,200	520,000	139,600	958,800
% Covered out of the total population	8%	17%	4%	9%
Deficit/Enrollee	-25	-14	-18	-18

Note: * Data reported for FY 2003 (FHF Business Plans) are estimated.

** The two reported projections for FY 2003 differ somewhat, but the estimated deficits are similar orders of magnitude. Estimates from the FHF Business Plans permit a calculation of the amount of the operating deficit per enrollee in the FH plan.

Source: Authors' calculations. Technical Support Office, MOHP, 2002; FHF Business Plans 2002 reported in Research and Administration Group, October 7, 2002 (draft).

4. Sustainability Analysis of the HSR Pilot Project

Before we move to the next phase of the HSRP, it is necessary to assess the sustainability of the different components of the HSR Pilot Project to ensure that past achievements are not gradually divested and that future investments are not wasted.

4.1 Institutional Sustainability Issues

4.1.1 Due to constraints in the legislative environment governing the health sector, the FHFs were not established on sound institutional grounds. The early design emphasized that the administrative culture of the FHFs should be one of financial independence from the bureaucracy. Yet, the FHFs need to maintain some organizational linkages with the HIO and the MOHP. The MOHP would oversee that the FHFs are performing their role within the overall reform objectives. The HIO would extend its insurance expertise to the FHFs, which in turn should impart new contracting techniques back into the HIO. The FHFs would have funding sources outside the traditional ones that support the MOHP but the HIO budgets and would not provide them with any surpluses.

4.1.2 However, attempts to establish the FHFs as autonomous entities failed. The creation of the FHFs as independent insurance agencies would have required a presidential decree and statutory changes (having to do with the fact that HIO is the sole party authorized to deal with social insurance in Egypt). Consequently, the FHFs ended up with an awkward institutional set-up. While their legal status is that of HIO sub-accounts, they do not enjoy HIO's full array of legal authorities to collect, retain or manage funds. On the other hand, the MOHP maintained managerial oversight over the FHFs operations. In fact, the central FHF (which according to the original model would evolve into the NHIF) is virtually part of the MOHP and is totally integrated into the Ministry's Central Department for Technical Support and Projects (CDTSP).

4.1.3 The PHC insurance model envisioned in 1997 was based on the premise that a new insurance law or a unification of existing laws would be issued to form the basis for further expansion of health insurance coverage in Egypt. Under the umbrella of such law, the HIO and subsequently the FHFs would have had authority to collect reasonable cost-related premiums from enrollees, and providers would have been able to charge copayments. Such a law was drafted by the previous MOHP leadership yet did not pass the parliamentary test. Given this failure, it is unlikely that the MOHP will submit a revised proposal for a new law in the near future. Without such legislative change, the legal foundation for the model is jeopardized.

4.1.4 As mentioned in section 3.1, the HSRP Strategy Paper envisioned that the NHIF, a national-level consolidation of the governorate-level FHFs, would in the long run take over the financing/purchaser function of the HIO. As compared to HIO, which covers over 30 million Egyptians with comprehensive benefits, the FHF handles very limited care for one million individuals. HIO has a nationwide network of hospitals, polyclinics and pharmacies, whereas the FHFs deal with only a few PHC facilities in just 3 out of Egypt's 26 governorates. Given their modest institutional start-up, scarce resources and limited authority, it is highly unlikely that the FHFs could in the long-term undertake full responsibility for financing social health insurance in Egypt. Moreover, the HSRP should avoid creating a new, large bureaucracy parallel to that existing under HIO, even on an interim basis.

4.1.5 Some of the basic principles for the reform failed to be institutionalized within the HSR Pilot Project:

- *Separation of financing and provision* has not technically occurred. Basic benefit package services provided by the FH facilities are still primarily funded through the parent organizations (the MOHP or the HIO) that own the facilities and not through the FHFs.
- *Integration of service delivery* was also not achieved since MOHP and HIO facilities still coexist as parallel public service delivery systems and since the private sector role was marginal in the Pilot Project. The only innovation in that respect lies in the fact that FH facilities, whether HIO- or MOHP-affiliated, were required to serve families in one catchment area regardless of their insurance status.
- *Provider competition* was not instituted since FH facilities are predominantly MOHP facilities, with a few HIO facilities, one private or one non-governmental facility.[38] The exclusion of the private sector also has major financial implications, since the private sector is currently receiving a substantial portion of individual out-of-pocket payments that the HSRP was trying to channel into the public financing system.
- The *"district approach"* to management of service delivery, as defined in the original design of the HSR Pilot Project and in the master plans, has not been adopted.
- The service delivery and financing components of the HSR Pilot Project have been evolving independently of each other and were not *integrated* into one model.

We conclude that it is clear that the FHFs have not developed into the institutional entities they were envisioned to become. They lack the enabling legal umbrella and the institutional capacity required to perform insurance functions, especially collecting contributions from enrollees. As such, they cannot provide a proper basis for expanding social insurance throughout Egypt. Their role as purchasing agents that can move from incentive payment to full purchasing of services can be re-evaluated.

4.2 Financial Sustainability Issues

4.2.1 Short- and medium-term costs of sustaining the HSR Pilot Project

While the initial investment costs of the HSR Pilot Project (renovation of 330 facilities in three governorates and start-up costs for the three FHFs) are substantial (estimated at $323 million),[39] a significant portion of them was met through donor funding ($290 million).[40]

The real challenge lies in covering the recurrent costs of the HSR Pilot Project (administrative costs of the FHFs, distribution of provider incentive payments and operational costs for the FH facilities), which will ultimately have to be met through Egyptian funds. The cumulative five-year recurrent costs of phasing in BBP coverage to the six million uninsured citizens in the three pilot governorates (at a cost of LE 48

[38] Some of the reasons stated by the MOHP officials interviewed during the October 2002 WB Mission included difficulty in recruiting non-governmental/private facilities that would meet accreditation standards and eligible private providers not being motivated to participate.

[39] WB Project Appraisal Document 1998. PHC pilot project initial investment costs include $300 million for restructuring the PHC delivery system (renovation of FH facilities) and $23 million for initial set-up of three PHC Insurance entities (FHFs).

[40] A total of $290 million is available from donor funding. This includes $120 million from the EU, $90 million from the WB and $80 million from USAID.

per capita per year) were estimated at the HSRP outset at approximately $300 million (US$ 60 million per year on average).[41] The governorate master plans estimated in 2002 the total annual recurrent costs of FH facilities (salaries, maintenance and drug costs) at LE 146–267 million.[42]

After termination of donor funding, covering these recurrent costs will require substantial new commitments of public funds, which will have to progressively increase as the model expands. Even if the GOE is willing to allocate some money for that purpose, it seems likely under the growing budgetary constraints that such an expansion would be impossible without some private contributions. Two factors currently constrain the ability of the HSR Pilot Project to generate funding from private sources:

- The BBP is limited. Because the BBP covers only primary care services and not the high costs of hospital and secondary care, it does not offer insurance protection. The attractiveness of the BBP to potential enrollees depends on many factors, including the perceived value of the specific services, availability of other sources of services that are close substitutes, quality of care, ease and convenience of accessing the services, and cost to the patient. The perception of high quality of services provided at FH facilities, the trivial patient fees, and the access to lower-priced prescription drugs have made the HSR Pilot Project modestly successful in the short time that it has been in operation. However, the absence of a comprehensive health benefit including secondary care would almost certainly restrict the willingness of beneficiaries to make substantial financial contributions in the future.
- Enrollment is voluntary. Since enrollment is voluntary and patients have not been charged significant premiums or copayments, it is likely that any attempt to increase collections from patients could substantially reduce enrollment and subsequently reduce revenues. Focus-group discussions conducted in Alexandria showed that patients might be reluctant to pay higher fees for better quality services at FH facilities if they used to pay lower fees. Despite willingness to pay private providers outside the HSR Pilot Project, many patients were also negative about paying a roster fee to the FHF or copayments to FH providers. [43]

4.2.2 *Long-term costs of expanding the HSR Pilot Project*

The costs of expanding coverage with the BBP are likely to be very high. Under the existing financing structure, the recurrent portion of the costs will have to be met through public funds. It was estimated that universal coverage of all Egyptians with the BBP would increase the public share of health spending from 43 percent to 62.5 percent while the private share would

[41] Source: WB Project Appraisal Document, 1998.

[42] Based on the governorate master plans, FH facility recurrent costs were estimated at LE 45-77 million per year for Alexandria, LE 48-87 million per year for Menoufia and LE 53-103 million per year for Sohag. The total is thus LE 147-267 million or $32-58 million (exchange rate: US $1 = LE 4.58 in September 2002).

[43] Patients who were not part of the pilot project experience and had low incomes, no HIO coverage and lived in urban/rural areas where the MOHP system was not as accessible were more willing to pay for FH services. This is because these patients already had high out-of-pocket expenses for drugs and visits to private doctors (PHR Technical Report No. 55).

drop from 57 percent to 37.5 percent.[44] As will be discussed in section 5.2, Egypt's public spending on health is already increasing at much higher rates than its economic growth. Thus, the expansion of the current financing approach will further strain the public budget. To make the expansion affordable, the large private out-of-pocket payments that Egyptians currently make[45] must be channeled into the system through innovative financing mechanisms such as risk-adjusted capitation payments.

Moreover, while the net costs of the reforms can be easily quantified, it is unclear how the *net benefits* of the reforms can be measured. It was hypothesized at the outset of the HSRP that enhanced micro-efficiency stemming from improved contracting procedures and phased movement to a single source financing system for the BBP could offset the costs of expanding coverage with the BBP. The incomplete implementation of the financing component of the HSR Pilot Project precludes objective quantification of savings or gains due to the implemented reforms.

We conclude that the strategy adopted by the HSR Pilot Project for expanding insurance on a voluntary basis through a limited package is not financially viable. The HSR Pilot Project has not created any new sources of revenue and thus represents an additional burden on the government budget. The project has been implemented for only few years in a few governorates, yet it is largely dependent on donor funding. The amount of new public money that would be needed to expand this model to other population groups or governorates appears to be prohibitive.

4.3 Design and Implementation Issues

Experience to date has revealed a number of issues and limitations in the design and the implementation approach (discussed in detail in annex IV) utilized for the HSR Pilot Project that need to be taken into consideration when designing future reform phases. The key highlights include:

- The design of the HSR Pilot Project lacked an *analysis of the political economy* of the proposed reforms, which led to lack of political support. Future reforms need to be designed based on an analysis of the political economy especially the changes necessary to render the pilot model institutionally and financially sustainable.

- The HSRP did not clearly delineate relationships and linkages between parent organizations and new entities to be created under the reform. There is strong need for an *organizational transformation plan* to clearly delineate how the role and structure of major health sector organizations would evolve over time under the reform.

- The HSR Pilot Project was silent about "*risk management"*, which is a major issue in insurance reform. If risks and deficits were to be borne by the FHFs, then these institutions in addition to being independent entities need to meet some prudential requirements (minimum capital requirements, solvency margins and others) which should be tested in the next phases of the reform.
- As previously mentioned, the limited *content of the BBP* represents an obstacle in generating revenues since the current package does not provide protection from financial risk. Also, the BBP did not draw clear boundaries between the level at which

[44] WB Project Appraisal Document 1998.

[45] Egyptians spent LE 98 per year on health in 1995, 64 percent of which went to outpatient care. The number rose to LE 205 per year in 2002, 59 percent of which was spent on outpatient care (Egypt Household Health Service and Utilization Survey, 2002).

service should be provided and the one at which it should be referred. Future phases of the reform need to consider expanding the BBP to include some secondary care.

- *The development of the Master Plans* was undertaken by technical assistance contractors. Every measure needs to be undertaken to institutionalize the important function of needs-based planning into the MOHP during future reform phases.

- Resistance to the *integration of vertical public health programs* into the HSR Pilot Project was encountered. To avoid fragmentation of service delivery, measures need to be taken to ensure that these programs are integrated into the model at least at the service delivery level.

- Given that implementation of the reform model has so far covered only a segment of the population in the pilot governorates, it may be therefore useful to conduct *a benefit-incidence analysis* to study the profile of those who benefited from the reform interventions.

- At present, only a limited number of service performance indicators are being collected and reviewed at the pilot facility sites. As the reform moves from the pilot phase to the deployment phase, an e*ffective monitoring and evaluation system* will be needed so as to manage a larger volume of data as well as include a selected number of key outcome indicators.

- The *regional and governorate variation in health care markets* needs to be factored into the design of future reform phases. For example, the population of Alexandria has better than average access to care and greater ability to pay for it. Per capita expenditures on health for Alexandria were more than twice the national average. The proportion of individuals in Alexandria already covered under HIO insurance was also higher than the national average. When planning expansion of the reform to other governorates, particularly in Upper Egypt where HIO insurance coverage is lower, health needs are greater, and ability to pay is lower, these variations need to be taken into consideration.

- Experience with development programs in Egypt has repeatedly demonstrated that the more simplified the *program implementation structures*, the more effective they are. This might need to be considered while designing future reform phases. It is also important that every measure should be taken to retain staff, to ensure continuity and capacity building.

- One of the complexities of the HSRP lies in the fact that it is a multi-donor effort. *Donor collaboration* and the compatibility and integration of the different donor plans are crucial.

5. Future Strategies for Health Sector Reform

Since assessment of the reform experience to date revealed that financing continues to be the most pressing yet the least developed reform area, the following discussion of future reform strategies will focus mainly on the financing area.

We start by proposing some short- and medium-term financial reform strategies that the GOE can immediately adopt to make the HSR Pilot Project financially sustainable and expandable. Beyond the HSR Pilot Project, Egypt needs to start addressing financing issues in the overall health sector. We present some long-term strategies to that end.

5.1 Short- and Medium-term Strategies: Sustaining and Expanding the HSR Pilot Project

5.1.1 Replicating the service delivery component of the HSR Pilot Project without financing reform.

The previous sections have clarified that the service delivery component of the HSR Pilot Project has been successful. Scaling up the implementation of the service delivery component within the existing governorates and in new ones is an option.

Based on the current experience, the model will next be replicated in the MOHP facilities. The FHFs will then be phased out and the incentives paid to providers will be acquired by the MOHP. While there will be no competition between different public and private service providers, "internal markets" however may be created among MOHP service providers. This model may be considered a "service improvement" rather than a "health reform" model. This approach would support the GOE's goals of expanding coverage with essential health services and should ultimately contribute to improved health outcomes and equity. It also broadens the base of the Pilot's successful experiment of improving provider performance and customer satisfaction, thus contributing to the goals of improving quality and technical efficiency.

This option, however, is not financially viable. While the success of the pilot facilities in reforming their operational system is impressive when compared to other MOHP units, such service delivery accomplishments could not simply be replicated in the rest of the pilot governorates—without attention to financing reform. Unless new sources of revenues are created, its expansion will represent a significant financial burden on the GOE health budget, which may not be affordable.

5.1.2 Reforming the financing component of the HSR Pilot Project and replicating the reformed model

Exploring strategies to address the shortcomings in the financing component of the HSR Pilot Project can make this successful pilot experiment replicable without being dependent on donor funding or straining the government budget.

One strategy could try to *implement major financial reform through the current FHFs* to improve their ability to generate more funds. The financing and service delivery components of the HSR Pilot Project could then be integrated and the reformed version could be replicated in additional governorates. This approach might not be feasible given the limitations of the decrees currently governing the FHFs (including Decree 147) and the complexity of modifying health care legislation in Egypt so as to give the FHFs authority to collect contributions from beneficiaries. A major challenge would be re-channeling the current flow of funds for salaries and operating budgets from the

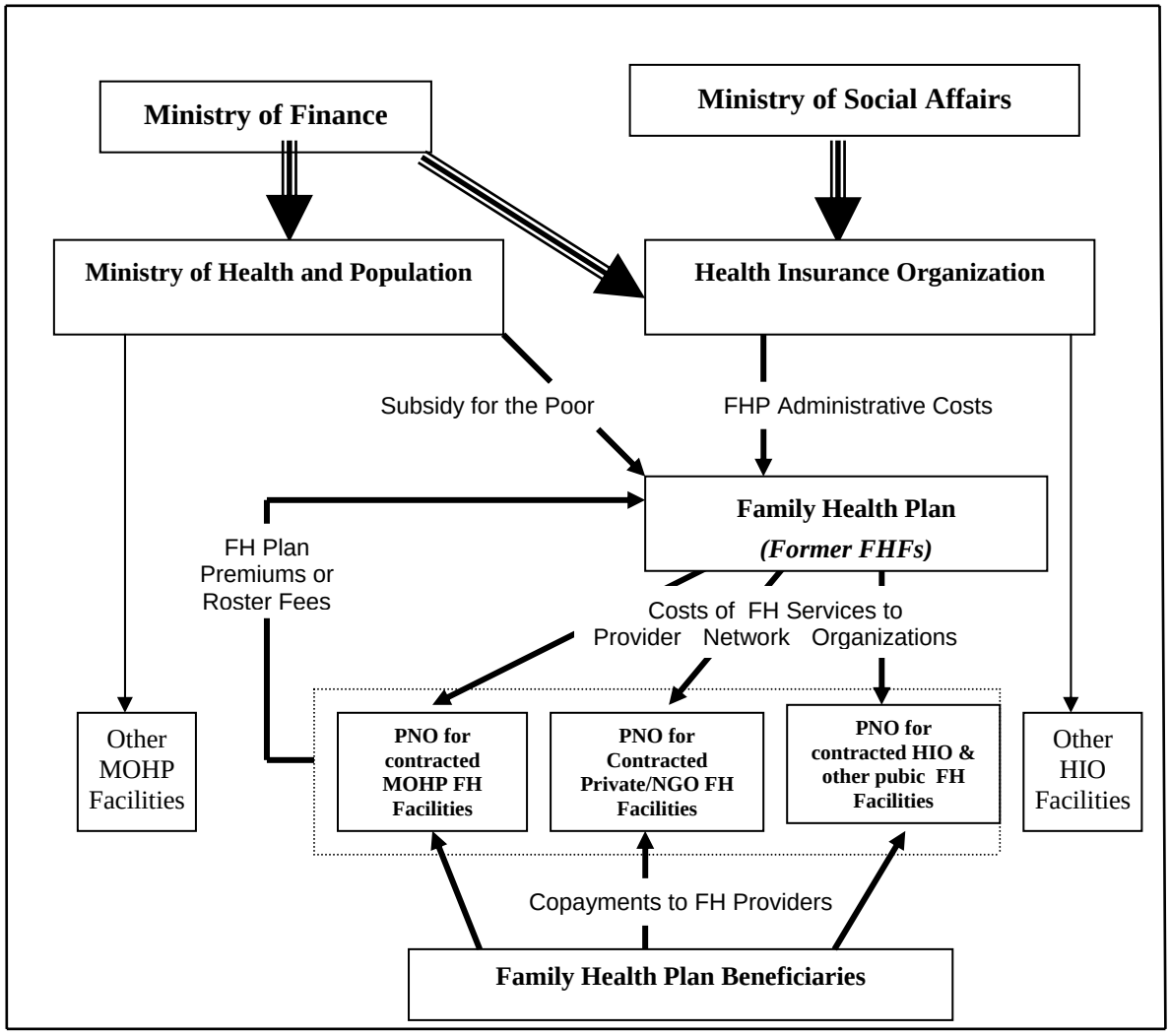
MOF/MOHP to the FH facilities so as to allow the FHFs to provide the full cost of services. Another prerequisite is the establishment of financial departments in the FHFs capable of managing funds and granting FHF management some discretion in making financially sound business decisions. This would require a tremendous shake-up in the flow of financing, giving full responsibility for paying all FH facility expenses to fledgling financial units that do not have the requisite proven capability of handling complex administration.

5.1.3 Merging the Family Health Fund into the purchasing division of the Health Insurance Organization.

Another strategy therefore is needed, one that does not require major legislative change and can work administratively. *Merging the FHFs into the purchasing division of HIO* to create the Family Health Plan (FHP) could be an appropriate strategy. While the original concept was to grow the FHFs into a national network that would absorb HIO's financing functions, the implementation pace has made it clear that this vision is unrealistic. As compared to HIO, which is responsible for 20 percent of total public spending in the health sector, the FHFs are responsible for only a small fraction of the total spending in the HSR Pilot Project. A prerequisite of this approach is to reorganize HIO into two distinct divisions, one for managing and the other for "purchasing" service delivery. It would thus be more efficient to incorporate the functions of the FHFs into the purchasing division within the HIO and build on the strengths of the larger organization. Additional advantages of this approach would include:

- Placing the FHFs under the HIO, as another insurance plan would allow them to use the HIO legislative umbrella to collect contributions from beneficiaries.
- This reorganization would support the transition from the current fragmented financing structure to a more unified and managed structure using the "single payer approach" (see figure 2).
- This reorganization would also support the consolidation of the service delivery system creation of competing PNOs of FH facilities.

Figure 2. Flow of Funds to and from the Proposed FHP (Former FHFs)



- The HIO has internal strengths and natural advantages that it can transmit to the FHFs (see table 3). These include its long experience as a public health insurer, legal authority to conduct basic insurance functions, legal authority to expand health insurance coverage to the population not currently covered by the health insurance laws, and a broad administrative and regulatory flexibility.

- Moreover, HIO has been "contracting" and "purchasing" medical services from other public and private providers since it cannot provide all the services through its owned facilities. For example, it is estimated that more than 35 percent of HIO expenditures are for "contracted services" that are "purchased" from other public and private providers.

Table 3. Comparison between the Family Health Fund (FHF) and the Family Health Plan (FHP)

		Family Health Fund (FHF)	Family Health Plan (FHP)
1	**Institutional Set-up**	Established as an HIO sub-account.	Become an insurance plan (similar to Student Health Insurance Plan) under HIO purchasing division.
2	**Legislative Requirements**	The current FHFs required a ministerial decree to be established. Rendering them fully functional insurance funds would require a presidential decree or law.	No legislative changes are required. As an HIO plan, the FHP would have the necessary legislative umbrella to conduct insurance functions.
3	**Governance**	MOHP.	HIO.
4	**Staffing**	Staffed by contracted employees including former HIO and MOHP employees.	Staffed by HIO employees.
5	**Funding**	FHF administrative operations and provider incentives funded by donors, the MOF and the HIO.	FHF administrative operations would be funded by the HIO.
6	**Functions**	Disburses performance-based incentives to contracted providers.	Assumes full array of insurance functions: - Determines scope/scale of benefits, based on cost data. - Sets premium structure and revises it periodically as deemed necessary. - Registers and collects premiums (or roster fees) from beneficiaries. - Contracts with MOHP, HIO (and other public), and private sector PNOs to provide FH services. - Reimburses PNOs for cost of FH services based on preset performance criteria and using appropriate provider payment mechanisms.
7	**Organizational Strengths**	Successfully demonstrated that provider productivity can be influenced through performance-based payment mechanisms.	As part of the HIO, the FHP would have these advantages: - Experience in conducting insurance operations. - Administrative flexibility (e.g., HIO has the authority to transfer employees out of facilities that have surplus labor or reducing the number of contracted employees, which can be a powerful tool for reducing cost). - HIO can undertake separation of financing from service provision without legislative change by internal reorganization.

The HIO, through the FHP, would become the vehicle for further coverage expansion. The initial expansion could focus on families of HIO enrollees. Family coverage, rather than HIO's current system of individual coverage, would provide a consistent level of financial protection for all family members and should remedy to a limited extent some of the existing inequities. Later expansions of insurance coverage could target other uninsured groups starting with the most vulnerable.

Integrated Provider Network Organizations (PNO) would provide services through contracts with the FHP to allow patient choice among different PNOs (MOHP, HIO, other public, private, and NGOs) competing in the same geographic area, e.g., district.

The beneficiaries of the new insurance plan (FHP) would have to make substantial contributions for the services offered through premiums and copayments. Also, rather than using the existing unrealistic HIO premium structure, a new structure reflecting actual costs will need to be created using costing data from the HSR Pilot Project. Thus, a study of population willingness and ability to pay for FH insurance, along with projections of potential revenue generation based on macroeconomic, demographic, and labor data, might be needed during the next phase of the HSRP.

Although the services currently offered under the BBP have some value, they are unlikely to attract sufficient demand to assure a significant infusion of voluntary payments by beneficiaries. Combining primary with limited secondary care into a single benefit package would create a real insurance product, allow the pooling of financial risks and begin to rationalize clinical and financial decisions throughout the health system. Beneficiaries are more likely to perceive a fuller benefit package as valuable and would be more willing to pay significant premiums and copayments to gain access to this new insurance coverage. The benefit package could be defined as including primary and secondary care up to the district hospital level. The precise coverage of benefits should be considered carefully during the next phase of the HSRP, based as much as possible on clinical evidence regarding the efficacy of specific treatments.

If the GOE accepts this restructuring approach, a number of specific financing options could then be tested and developed to find the proper balance between fiscal stringency and improvement of health care.

5.2 Long-Term Strategies: Addressing Overall Health Sector Financing Reform

5.2.1 Recent trends in health care financing reaffirm the need for reform

Beyond restructuring the HSR Pilot Project to make it financially sustainable, the GOE needs to start considering measures that can bring financial stability to the overall health sector in the long run. The scope of the HSR Pilot Project is so narrow and the pace of its implementation is so slow that it would take many more years to have an impact on overall health sector financing.

On the other hand, the financing problems identified at the outset of the HSRP have been worsening. Moreover, health spending has grown extremely rapidly since 1997; outpacing growth in the economy and raising new concerns about government resources necessary to sustain such spending levels.

Based on actual spending data from the Ministry of Finance (MOF), public spending for health has increased from 1.6 percent of GDP in FY 1995 (approximately LE 3,200 million) to 2.3 percent of GDP in FY 2001 (approximately LE 8,100 million). That is an increase of nearly LE 5,000 million (see table 4). It also represents an average growth rate of 16.8 percent a year (see table 5). In contrast, Egypt's economy grew an average of 9.8 percent a year—quite rapid, but lagging far behind the public sector's draw on resources for health.

Table 4. Public Spending in the Health Sector, FY 1995 - 2001 (LE millions)

	1995	1996	1997	1998	1999	2000	2001
MOHP	1,528	2,146	2,576	3,104	3,394	4,297	4,229
HIO	972	1,067	1,191	1,407	1,571	1,748	1,813
MOE	459	529	635	508	1,114	1,160	1,406
Teaching Hospitals	117	155	241	262	276	327	331
Other Organizations	121	132	171	210	213	285	346
Total	**3,196**	**4,029**	**4,813**	**5,491**	**6,568**	**7,818**	**8,123**

Note: Excludes funds spent by National Investment Bank (NIB) in the health sector.
Source: Authors' calculations based on unpublished tables, MOF.

Table 5. Real Growth in Public Spending in the Health Sector, FY 1995 to FY 2001

	1995	2001	Increase	Growth Rate
Total Public Spending (LE millions)	3,196	8,123	4,926	16.8%
Per Capita Spending (LE)	56	124	69	14.4%
Spending/GDP (percent)	1.6%	2.3%	0.7%	6.4%
Memorandum:				
Population (millions)	57.5	65.3	7.8	2.1%
GDP (LE millions)	205,000	359,000	154,000	9.8%

Note: Excludes funds spent by NIB in the health sector.
Sources: Authors' calculations based on unpublished tables, MOF, Table A1.1, Rannan-Eliya ET al., 1997. GPD data based on World Development Indicators data, World Bank, 2002.

Extrapolation of these trends suggests that public spending will continue to grow rapidly. While actual spending data in the health sector is not yet available for FY 2003, projections using MOF budget data suggest that spending levels rose by 24 percent to 35 percent between FY 2001 and FY 2003 (see table 6). Given the traditional tendency of actual spending to exceed budgets (by an average of 20 percent over the last seven years), this figure is probably an understatement.

While these projections of actual public spending are somewhat speculative, they illustrate the financial situation facing the GOE as it considers further reforms in the health sector. The policy debate should be framed with an understanding that the Egyptian government spent an amount in the neighborhood of LE 11,000 million in FY 2003 for health services, and that the spending level is likely to increase rapidly in the future.

Table 6. Public Spending in the Health Sector Projected to FY 2003 (LE millions)

	Actual 2001	Projected 2002	Projected 2003	Increase 2001-03	% Increase 2001-03
Budget	*7,107*	*7,699*	*9,083*	*1,976*	*27.8%*
Projected Actual Spending					
Increase by Average Difference	8,123	8,703	10,087	1,964	24.2%
Increase by Percentage Difference	8,123	9,288	10,958	2,836	34.9%
Increase by FY 2000 Difference	8,123	9,476	10,860	2,737	33.7%
Increase by FY 2000 Percentage Difference	8,123	9,964	11,756	3,633	44.7%
Average from all 4 methods above	8,123	9,358	10,915	2,792	34.38%

Source: Authors' calculations based on unpublished tables, MOF.

While this pace of public spending growth in the health sector is certainly a cause for concern, it is only part of the financing picture. The full burden of an inefficient health system on the economy is the sum of public and private spending. According to the 1995 study of Egypt's National Health Accounts (NHA), more than half of health sector spending is paid privately, and nearly all of that is from direct out-of-pocket payments by individuals for services and drugs. Using several different sets of assumptions (see box 1), we find that total (public plus private) health spending in FY 2001 was in the range of LE 19,000 million to LE 22,000 million, or about 5.3 percent to 6 percent of Egypt's GDP.[46] Extrapolating to FY 2003, we estimate that total health spending was between LE 25,000 million and LE 31,000 million, implying health spending that was in the range of 6.1 percent to 7.4 percent of GDP (see tables 7, 8 and 9). By comparison, health accounted for 3.6 percent of GDP in FY 1995.[47] Thus health sector spending has more than doubled its draw on real resources over the past eight years. While the projections of total health spending reported here are again speculative and constrained by the lack of data on private spending since the 1995 NHA, they are certainly suggestive of the main trends Egypt has experienced in recent years.

Please refer to annex V for a detailed discussion of recent trends in health financing in Egypt and of public and private spending projections and their underlying assumptions.

[46] EHHEUS 2002 revealed that private spending in 2001 was estimated at LE 205.

[47] Note that no actual data on private spending has been collected since 1995. The analysis thus assumes that the relative shares of spending between the private and public sectors have remained fairly constant since 1995. A proper analysis would be based on a new, exhaustive survey of health spending similar to the efforts undertaken to produce the NHA for FY 1995.

Box 1. Scenarios for Projecting National Health Spending to 2003

THREE SCENARIOS ARE PROVIDED TO ASCERTAIN THE POTENTIAL VARIABILITY OF THE SPENDING PROJECTIONS PRESENTED BELOW. THOSE SCENARIOS MAKE THE FOLLOWING ASSUMPTIONS:

- Scenario One uses the public spending totals as reported in the MOF data through FY 2001, without adjustment. This scenario assumes that public spending is a constant 76.3 percent of private spending in all years.
- Scenario Two recomputes the public spending totals to account for the implausible decline in spending growth reported for FY 2001. In this scenario, the average annual growth rate in public spending between FY 1995 and FY 2000 is used to re-estimate public spending levels each year. Thus, instead of the observed average growth rate of 16.8 percent a year, we impose the higher growth rate of 19.6 percent a year. This scenario also assumes that public spending is a constant 76.3 percent of private spending in all years.
- Scenario Three applies alternative growth rates to public and private spending based on an analysis of NHA data for FY 1991 and FY 1995. We estimate that public spending grew by 20.6 percent a year and private spending grew by 18.8 percent a year, over that period. These growth rates are somewhat higher than those used in the first two scenarios.

Table 7. Health Spending Projections to FY 2003 Scenario One

	1995	2001	2003 (a) Using Average % Difference	2003 (b) Using % Difference from 2000	Annual Growth Rate	
					1995-03 (a)	1995-03 (b)
Spending (LE millions)						
Public	3,196	8,123	10,958	11,756	15.4%	17.7%
Private	4,187	10,640	14,354	15,399	15.4%	17.7%
Donors	61	108	131	131	10.0%	10.0%
Total	7,444	18,871	25,443	27,285	15.4%	17.6%
Spending as a Percent of GDP						
Public	1.6%	2.3%	2.6%	2.8%		
Private	2.0%	3.0%	3.4%	3.7%		
Donors	0.0%	0.0%	0.0%	0.0%		
Total	3.6%	5.3%	6.1%	6.5%		
Memorandum	**1995**	**2001**	**2002**	**Growth rate: 95-02**	**Projected 2003**	
GDP at market Price (LE millions)	205,000	359,000	382,000	9.3%	417,500	

Source: Authors' calculations.

Table 8. Scenario Two
Health Spending Projections to FY 2003

	1995	2001	2003	Growth Rate 1995-03
Spending (LE millions)				
Public	3,196	9,349	13,370	19.6%
Private	4,187	12,246	17,513	19.6%
Donors	61	108	131	10.0%
Total	7,444	21,703	31,014	19.5%
Spending as Percent of GDP				
Public	1.6%	2.6%	3.2%	
Private	2.0%	3.4%	4.2%	
Donors	0.0%	0.0%	0.0%	
Total	3.6%	6.0%	7.4%	

Source: Authors' calculations.

Table 9. Scenario Three
Health Spending Projections to FY 2003

	1995	2001	2003	Growth Rate 1995-03
Spending (LE millions)				
Public	3,196	9,822	14,280	20.6%
Private	4,187	11,788	16,744	18.8%
Donors	61	108	131	10.0%
Total	7,444	21,718	31,055	19.5%
Spending as Percent of GDP				
Public	1.6%	2.7%	3.4%	
Private	2.0%	3.3%	4.0%	
Donors	0.0%	0.0%	0.0%	
Total	3.6%	6.0%	7.4%	

Source: Authors' calculations.

5.2.2 Financing Reform through Stabilizing and Expanding the Social Insurance Program

The GOE repeatedly reaffirmed that expanding coverage with social insurance is its strategic health sector goal. Moreover, a social health insurance system that provides real value to people (in terms of the range of available services, the quality of care and convenience in access) could redirect a substantial portion of the money now paid out-of-pocket by patients to private providers into the public budget. A well-structured social insurance system would not only increase government revenues but also provide appropriate financial incentives for the prudent use of health resources by all members of Egyptian society—patients, health care providers, insurers and government agencies.

The HIO is constitutionally the sole financier of social insurance in Egypt. It finances health care for over 46 percent of Egyptians through compulsory social insurance. The HIO is responsible for almost 20 percent of public spending on health. But the HIO has a fragile financial structure (see table 10). Costs have grown rapidly for many reasons, including:

- Guaranteed benefits are generous, covering all forms of health care.
- Coverage has been progressively expanding. Millions of new beneficiaries (mainly schoolchildren and infants) were added over the past decade.
- The HIO's contract management and provider performance measurement capabilities are limited and were further strained by the sudden expansion of coverage that forced the HIO to contract with large numbers of private providers to deliver services to the new beneficiaries.
- HIO enrollees have little reason to use HIO services sparingly, since they pay little or nothing in copayments for those services.
- HIO providers are not very productive, since the provider payment mechanism does not offer incentives for efficiency.

On the other hand, revenues have not kept pace with the growth in costs, largely because premiums and copayments were fixed in law at modest levels and not permitted to

increase over time. Consequently, the HIO is not financially sustainable in the long term. For further details on the HIO's financial situation refer to annex VI.

Table 10. HIO Revenues and Expenditures, FY 1997 - 2001 (LE millions)

Beneficiary Group	1997	1998	1999	2000	2001	Change 1997 - 01
Law 32						
Revenue	89.3	103.3	111.8	117.7	126.7	37.4
Expenditure	236.3	260.0	267.7	271.9	296.1	59.8
Net Balance	-147.0	-156.7	-155.9	-154.1	-169.4	-22.4
Law 79						
Revenue	274.3	294.4	319.1	356.7	385.9	111.6
Expenditure	275.8	316.9	329.5	359.2	390.6	114.8
Net Balance	-1.5	-22.4	-10.4	-2.5	-4.7	-3.2
Pensioners and Widows						
Revenue	26.0	31.7	38.0	45.3	70.2	44.2
Expenditure	166.0	207.0	236.9	280.0	315.2	149.2
Net Balance	-140.0	-175.3	-198.8	-234.7	-245.0	-105.0
Law 99						
Revenue	516.0	537.6	551.5	562.4	603.3	87.3
Expenditure	392.7	434.4	487.3	541.6	581.3	188.6
Net Balance	123.3	103.2	64.2	20.8	22.0	-101.3
Total						
Revenue	905.7	967.0	1,020.4	1,082.1	1,186.1	280.5
Expenditure	1,070.8	1,218.3	1,321.3	1,452.6	1,583.2	512.4
Net Balance	**-165.2**	**-251.3**	**-300.9**	**-370.5**	**-397.1**	**-231.9**

Note: Data source did not report revenue and expenditure data for beneficiaries under Ministerial Decree 380 (newborn infants).
Source: Authors' calculations based on HIO Sustainability draft paper, 2002.

In recognition of its serious spending problems, HIO leadership has taken measures to limit costs. The initiatives included:

- Limiting the use of non-HIO pharmacies to take advantage of bulk purchase discounts and to have better control over fraud.
- Limiting the number of specialist referrals to reduce the use of higher-cost physician services and to reduce the unnecessary prescribing of higher-cost drugs.
- Developing clinical protocols to treat expensive conditions, such as viral hepatitis or joint replacement.
- Allowing staff sizes to reduce by attrition.
- Cutting facility maintenance costs by freezing new facility construction.
- Increasing the contracting of services that could be provided more efficiently by other providers, such as renal dialysis.
- Improving contracting mechanisms with private providers (including better pricing). Some contracts with private pharmacies that did not comply with HIO requirements have not been renewed.

According to the Chairman of HIO, these steps helped improve HIO's financial situation and led to a gradual shrinking of its operating deficit (see table 11). It appears that the overall deficit for the HIO may have dropped from about LE 400 million in FY 2001 to LE 300 million in FY 2002, reversing the upward trend of the previous five years.

Table 11. Components of HIO's Net Financial Balance, FY 2001 – 2002

	2001	2002
Net Balance (Per Beneficiary, LE)		
Law 32	-49	-42
Law 79	-2	20
Pensioners and Widows	-179	-158
Law 99 and Decree 380	2	2
Estimated Total	**-14**	**-10**
Net Balance (Total, LE millions)		
Law 32	-174.0	-152.5
Law 79	-6.0	62.4
Pensioners and Widows	-261.7	-255.6
Law 99 and Decree 380	41.6	44.5
Estimated Total	**-400.1**	**-301.2**

Note: Total net balances are calculated from imprecise data and only indicate rough orders of magnitude.

SOURCE: AUTHORS' CALCULATIONS BASED ON HIO CHAIRMAN'S ORAL STATEMENT, OCTOBER 12, 2002.

While this is a truly remarkable development, it is believed that for the HIO to continue to be the prime vehicle for expanding social insurance in Egypt and implementing many of the reform elements, it needs to become financially sustainable. The financial stability of the HIO could be improved through a variety of interventions that can be initiated under the HSRP. It needs to be noted though that some of the strategies discussed below might require legislative approval to become effective:

- ***Standardize premium payments or payroll tax contributions***. Provisions of Laws 32 and 79 impose widely varying requirements on individuals and their employers for premiums or payroll taxes. The required payments are low by international standards and unrelated to the cost of providing services. They also may impose inequitable burdens on some people. Four alternative approaches are suggested to resolve these issues:
  - Impose a total contribution of 4 percent of salary or pension on all individuals covered under Laws 32 and 79. The enrollee share would be 1 percent of salary; the government or the SIO would contribute the remaining 3 percent. That would raise the premiums for workers under Law 32, require a new contribution for pensioners and widows from the SIO and lower the widow's share of premiums.
  - Adopt a new uniform premium structure indexed to the actual costs of providing care under the HIO. Premium rates could be set at some reasonable fraction of annual operating costs, and premiums could continue to be deducted from salaries or pensions as is currently done. Under this approach, premiums would grow at the rate of health cost growth, which is typically faster than growth in salaries.[48]
  - Provide a government premium payment for infants under Ministerial Decree 380, similar to the payment made for students under Law 99. Unlike the first two approaches, this would not impose additional premium costs on beneficiaries (and would not generate new funds from the private sector).
  - Raise the premium for firms that opt out of HIO coverage. Such firms now pay 1 percent of payroll. That could be raised and indexed to health costs. Note, however, that increasing this premium would discourage firms from providing their own health insurance coverage, which could result in greater use of HIO services and a net addition to HIO spending.
- ***Rationalize cost-sharing requirements***. Many beneficiaries of HIO make little or no copayments for their use of services, which can encourage overuse and waste of resources. A balance must be reached in setting copayment levels to assure that beneficiaries continue to access medically necessary care. Some options include:
  - Impose a copayment of one-third the price of prescription drugs for all HIO enrollees. This would lower costs for beneficiaries under Law 32 and raise costs for those under Law 79.
  - Increase copayments for office visits and diagnostic services, and require larger copayments for more expensive services (such as specialist consultations). A related approach is to impose coinsurance, which is computed as a percentage of the cost of a service.
  - Impose an annual deductible to be paid by beneficiaries for routine office visits and other routine services. Deductibles are more effective than copayments in

[48] Under such an approach, provision would have to be made to assure that rising premiums do not become unaffordable to those on fixed incomes. One method is to cap the absolute increase in premiums from year to year.

discouraging beneficiaries from using unnecessary services, and they may impose less of a financial burden than a meaningful copayment structure on chronically ill patients.

- ***Expand mandatory participation in the HIO to additional groups***. This approach to expanding insurance coverage can increase revenues net of costs to the HIO, but only if premiums and cost-sharing requirements are rationalized. An obvious first step would be to require full family coverage for all persons now covered under the HIO on an individual basis. The package of services should be, however, less than the current unlimited HIO package and more than that of the HSR Pilot Project. Separate premiums should be established for families and single individuals to reflect the typical patterns in their use of services.
- ***Separate financing from provision of services***. One of the main methods of improving health system performance is to introduce greater separation between the functions of purchasing (financing and contracting) and actual provision of health services. The HIO is already increasingly purchasing services from contracted providers. The complete internal separation of the financing function from the provision function will permit the HIO greater use of financial incentives to stimulate restructuring of health facilities and efficiency and quality improvements. In particular, if the functions are separate it is more feasible to terminate contracts with providers if they fail to meet performance expectations.
- ***Implement new provider payment mechanisms***. Currently, payments to providers are budgeted based on historical spending patterns, which do not reflect efficient use of resources. Salaries are set according to job classification and length of service, rather than on measures of performance. Alternative payment approaches can improve the delivery of services and reduce waste. The performance bonuses paid by the FHFs demonstrate the usefulness of such approaches, showing that service levels can improve dramatically if a financial incentive is offered to health care workers. Specific examples of these new payment mechanisms include:
  - Use performance-based payments instead of fee-for-service reimbursement in HIO contracts with providers.
  - Introduce capitated payments for outpatient services and payments based on diagnosis related groups for inpatient services. In each of those cases, the payments are for a bundle of related services, which gives the provider an incentive to eliminate unnecessary treatments. Careful calibration and oversight is necessary in managing such payment systems to assure that providers do not eliminate necessary care.
- ***Give HIO managers greater flexibility to manage their resources***. The restrictive labor laws, employment guarantees, and rigid salary structures frustrate any attempt to use resources more efficiently. Workers might be willing to give up such protections for the opportunity to increase their incomes through better performance. In the near term, such policies would increase system costs. In the longer term, a well-managed system will realize efficiencies and better health outcomes.
- ***Invest in HIO information systems*** to improve management of resources. Such systems should support insurance functions including cost analysis, beneficiary registration, drug inventory and control systems, and accounting systems.
- ***Aggressively reduce fraud*** in the health system and aggressively capture the benefits of group purchasing and scale economies whenever possible.

It needs to be noted that strategies for stabilizing the current system of social insurance under HIO will still not solve all financing problems. For example, the problems of inequity in rural areas can only be dealt with through a combination of social insurance and direct government provision of health services.

6. Conclusions

The future of the Health Sector Reform Program and its HSR Pilot Project must be based on a firm determination that the model succeeded in attaining the reform goals it was designed to achieve. In addition, there must be a determination that the model could be technically and financially sustained with exclusively Egyptian resources, after termination of donor support.

The three most important conclusions to be drawn from this review are:

1. The service delivery component of the HSR Pilot Project has been implemented with success, which made the GOE and some development partners eager to scale up implementation. Yet, in spite of impressive accomplishments in improving the delivery of primary care services, the financing component of the HSR Pilot Project could not create new sources of funding for the FH services. A possible expansion strategy is to replicate the current model of service delivery improvement in new governorates. Such a strategy guarantees however significant additional costs to be paid by the traditional sources of financing with a heavy government subsidy that would grow rapidly over time, which may not be affordable. The GOE thus may not continue simply to replicate the HSR Pilot Project without addressing the issue of financing reform at some point in time.

2. The study has outlined some approaches that the GOE could adopt to make the HSR Pilot Project financially sustainable. One approach is to make the FHFs legally and financially viable. The GOE must address the need to create the appropriate organizational framework that would integrate the FH facilities into competing PNOs and the need to address the institutional set-up and governance of the FHFs. Another approach is to merge the FHFs into HIO, which needs to be internally reorganized to create a division for purchasing and another for service provision management. The FHFs would then be integrated as a FHP into the purchasing division that would in turn contract with the competing PNOs.

3. Egypt is spending much more on health care than is commonly realized. Public spending in the health sector has grown very rapidly over the last few years, outpacing growth in the economy and raising new concerns about the need to reform health financing in Egypt. If the national goal is expanding social health insurance coverage while achieving financial balance in the short run and financial sustainability in the long run, then a new strategy is needed to redirect private health spending into the social health insurance program. That strategy should be informed by what we can readily observe from the current behavior of Egypt's citizens as they interact with the public and private health sectors. Reforms will also need to be implemented within the HIO system to increase sources of revenue, discourage the overuse of services and provide greater incentives for efficient delivery of care. As social insurance grows in importance, the role of the MOHP in maintaining facilities and providing care should be reevaluated. The likely fall in demand for MOHP services under a well-functioning social insurance system should result in some savings that can be directed to better uses.

Beyond these challenges, thought should be given to the broader question of how the GOE in the future will commit public moneys to various health sector organizations. The drive toward a social insurance system will falter if the GOE does not assess the effectiveness of all its health spending—including funds spent by the MOHP, HIO, university hospitals, teaching hospitals and other organizations—and where necessary reduce budgets. An inefficient public health program open to everyone regardless of need conflicts directly with the goal of universal social insurance. Over time, the appropriate roles and relationships between social insurance and the direct provision of services by public agencies will have to be addressed.

In view of the above, we are proposing that the next phase of the HSRP adopt a two-tier approach:

- The first tier would address the FHF: analyzing the current political economy of the heath reform, creating the appropriate institutional and legal status for the FHFs (whether as autonomous institutions or merged into HIO), addressing staffing issues, expanding the benefits package to include secondary care, creating a sound financing basis, balancing the financial risk management, expanding coverage to more beneficiaries and then scaling up the experience to other governorates.
- The second tier would support a long-term phased approach to remedy the HIO's financial and institutional aspects so as to render it an effective vehicle for expanding social health insurance in Egypt.

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ANNEX I

The Problems that Triggered the Egyptian Health Sector Reform Initiative in 1997

As a result of the basic inherent complexities of the sector as well as basic economic constraints, the health sectors of every country face serious challenges in meeting the generally unlimited expectations and demands of their citizens. These problems are compounded in developing countries where the resource constraints are more severe, and there is limited administrative and technical capacity to effectively manage the sector.

At the outset of the reform initiative in 1997, Egypt's health system faced serious problems. These included diminished health outcomes, geographic, income and gender inequities in access, use, cost and outcomes, poor value for money, poor quality and clinical effectiveness, lack of consumer satisfaction and lack of long-run financial sustainability:[49]

A. Health Outcomes

- Maternal mortality was unacceptably high (170 deaths per 100,000 live births).
- Infant and child mortality rates were higher than the levels found in other comparable income countries.
- One in 12 children died before reaching age five, one in seven in Rural Upper Egypt.
- Public health programs were poorly targeted for non-communicable diseases and needed improvement to deal more effectively with the still significant communicable disease burden.
- Health promotion and prevention programs needed to focus on lifestyle and society-induced illnesses caused by overnutrition, smoking and accidents.
- Mothers received regular antenatal visits for only 28 percent of births.
- There was a significant amount of undernutrition among young children, as 30 percent of all children under age five were stunted, and five percent were wasted.

B. Equity and Access

- Less than 40 percent of the population had formal health insurance coverage (under the HIO), these largely being urban males in relatively well-paying government or formal-sector employment and pensioners, as well as infants and school children.
- The fragmented system of financing the HIO, MOHP, other government agencies and private services did not lead to an equitable and efficient system for pooling health risks, which is the basis for health insurance.
- Revenues to finance the health system were not raised on the basis of ability to pay; poorer individuals spent relatively more of their incomes on health care out-of-pocket and were increasingly paying relatively more in taxes than wealthier individuals (as the non-progressive tax structure becomes increasingly regressive).
- Per capita public spending was 67 percent higher in urban than in rural governorates and total health spending per capita was 79 percent higher.

[49] Source: Egypt Health Sector Reform Program Strategy Paper, MOHP/the D4 Group, December 1997.

- Only 16 percent of all public spending for health went to the lowest income quintile group, while 24 percent went to the highest income quintile group.
- Low government salaries and strong job protection provided powerful incentives for public-sector physicians to refer their patients to their private practices, resulting in increased costs and an erosion of the MOHP's social safety net function.
- Poorly targeted pharmaceutical subsidies benefited the population at large and not the poor**.**
- There were 3 to 1 disparities in infant and child mortality among governorates.
- There were 5 to 1 geographic disparities in maternal mortality with ratios in excess of 500 in some rural areas.
- Beds were maldistributed as evidenced by a 5 to 1 differential in beds between wealthier urban and poor rural governorates.
- Physicians were maldistributed as shown by a 6 to 1 differential in physicians between wealthy urban and poor rural governorates.
- There were 2 to 1 differences in the outpatient visit and hospital admission rates between urban and rural areas.

C. Efficiency

- Total health spending in 1997 was around 3.7 percent of GDP and public spending was 3-4 percent of the overall government budget. These figures were low by international standards.
- There were some 29 different uncoordinated government and public entities involved in financing, spending, personnel and capital allocations, provision of care, etc., each with their own objectives, which precludes a consistent policy focus and consistent incentives from impacting on public and private sector institutions and entities.
- The HIO and MOHP as well as several other government ministries combined financing and provision functions. They employed methods to 'pay' for care that did not encourage efficient behavior on the part of medical care providers and were contrary to the modern incentive-based methods used in the OECD and an increasing number of developing countries.
- The multiple sources of paying for care–MOHP, HIO, other government agencies and private payments–each with their own sets of rules precluded a uniform system from impacting on the health system. They encouraged 'cost-shifting' and gaming by medical care providers as they attempted to maximize their incomes and precluded efficient use of combined public and private resources.
- Studies of unit costs in MOHP and the HIO hospitals indicated enormous differences in efficiency across hospitals as was evidenced by 3 and 4 to 1 differences in costs per hospital day and admissions**.**
- The public sector was the main employer of health manpower, and rigid civil service laws precluded appropriate behavioral incentives and flexibility for allocating manpower efficiently.
- At 2.1 beds per thousand population, Egypt overall had a surplus of hospital beds compared to other comparable income countries**.**
- Substantial over-capacity existed as the hospital occupancy rate overall was less than 50 percent and was as low as 4 percent in some MOHP rural facilities**.**
- There was a wide variation in length of stay for certain medical procedures. For some of these procedures (e.g., c-section–5.5 days, appendectomy–4.1 days, cataracts–23 days), the stays were quite long or inappropriate by international standards (e.g., over 90 percent of all cataract procedures for the U.S. Medicare program are performed on an outpatient basis).

- Egypt had many more (four times) physicians per capita than other comparable income countries. With almost 1 physician per hospital bed, Egypt had a surplus of physicians**.** There were 1.3 physicians per occupied hospital bed, one of the highest ratios in the world**.** Egypt had too many specialists (over 60 percent of all physicians) relative to primary care physicians.
- Egypt's medical schools were turning out far more (two to three times) physicians than it needed, exacerbating the existing surplus.
- The extensive network of MOHP primary care facilities was underutilized as over 60 percent of all primary care visits took place in private sector facilities**.**
- Services in many public primary care facilities were of poor quality as evinced by the majority of individuals and visits, even for those with insurance coverage, being rendered in the private sector.
- There was little use of lower cost generic drugs. Drug spending and consumption were high, perhaps on the order of 50 percent above the levels found in other comparable income level countries**.**
- Current procedures regarding manufacturing, importation, procurement, pricing and distribution of drugs resulted in inefficiencies and conflicting incentives.

D. Quality, Clinical Effectiveness, and Consumer Satisfaction

- The quality of many facilities was poor since insufficient funds were spent on maintenance.
- Physician training needed to be improved through more extensive clinical exposure.
- There was a shortage of skilled nurses. Medical and nursing education needed to be upgraded at both the university and in-service training levels.
- MOHP primary care clinics, the most convenient access point for poor rural populations, were often poorly equipped, and lacked supplies and drugs. They were staffed by unmotivated, often poorly trained practitioners, who had financial incentives to 'refer' their public patients to their private practices, resulting in over 60 percent of all primary care visits taking place in the private sector.
- Nosocomial infection rates in hospitals were high, perhaps on the order of 5 to 10 times the rates in OECD countries.
- Poor quality of physician services was shown by studies indicating that as many as 50 percent of deaths in emergency cases were due to improper case management by physicians.
- Poor physician quality in public hospitals regarding laboratory tests was indicated in a study showing that 31 percent of tests requested were clinically inappropriate, 20 percent of appropriate tests were not used in treatment decisions, and 16 percent of appropriate tests were never performed.
- A study of physician prescribing patterns in public hospitals found physicians inappropriately prescribing antibiotics for as many as 41 percent of ophthalmology patients and 37 percent of internal medicine patients.
- Quality of pharmaceuticals was poor and required improvement through post-marketing surveillance and quality assurance efforts.
- Rational use of drugs required enforcement through education, treatment protocols, and generic substitution.
- The national drug policy needed strengthening in areas including essential drug lists, removal of conflicting incentives (e.g., low prices versus requirements for public firms to be profitable, lower

markups on generics versus incentives for pharmacists to sell brand name drugs) and rationalizing tradeoffs among affordability, availability, quality and local manufacture.

E. Long-Run Financial Sustainability

- Allocative and technical inefficiencies, expansion in insurance coverage, population growth and the health transition made the system unsustainable in the long run.
- The HIO was not actuarially sound and undertook expansions of coverage at that time without a dedicated source of revenues, which exacerbated its fiscal unsoundness. Expansions of coverage in the inefficient system resulted in poor value for money.
- The health transition resulted in a shift in the disease burden to much more expensive-to-treat non-communicable diseases and injuries. While there were no country-specific data for Egypt, WHO estimated that by 2020, 80 percent of the disease burden in the Middle East Crescent will be due to non-communicable diseases and accidents compared to just over 50 percent now.

ANNEX II

The Long-Term Vision of the Health Sector Reform Program

The GOE articulated, as its long-term goal, the achievement of universal coverage with basic health services for all its citizens. It also stated as its priority objective the importance of targeting the most vulnerable groups in the population, emphasizing in particular the need to identify approaches that have the most impact on reducing infant, child and maternal mortality rates. These measures were viewed as critical not only for securing the health and welfare of the population but also for protecting the social cohesion and stability of the country.

In recognition of resource limitations and the constraints in the system, the GOE adopted an incremental approach to covering the population with a common package of services. The introduction of the School Health Insurance Program (1992) and the Infant Health Insurance Program (1995) under the HIO signaled the commitment of the government to initiate the process toward the achievement of universal coverage.

The adoption of these policies called for urgent action to correct some of the inherent inefficiencies and inequities in the system as detailed in annex I. Toward these goals, the HSRP provided an integrated package of strategies addressing the ways in which health care was financed, delivered, organized and managed:

A. Financing, Coverage and Benefits

- Expanding social health insurance coverage to achieve universal coverage based on the 'family' as the basic unit and by geographical regions or population groups.
- Providing an affordable and cost-effective package of basic health services including promotive, primary, preventive, curative and rehabilitative services.
- Organizing the significant out-of-pocket expenditures in a manner that promotes risk sharing and collects contributions according to ability to pay.
- Ensuring sustainable financing of the basic package by government, public and private sources through a single National Health Insurance Fund (NHIF).
- Transforming the current HIO into a National Health Insurance Fund (NHIF) to act as the sole financier of the basic benefit package and complete divestiture of the HIO's service delivery system.
- Redistributing public expenditures to adjust for geographic inequities and increase emphasis on primary care.

B. Health Services Delivery

- Organizing public and private service delivery into a system centered on a holistic Family Health approach.
- Decentralizing the MOHP service management to the district level (the District Management Approach), in the transition period until the MOHP phases out its delivery function.
- Ensuring competition and choice among the different public and private service providers, under the single NHIF.
- Using incentive-based provider payment mechanisms to ensure accountable provider performance.

C. Organization and Management

- Creating organizational structures, effective management systems, enabling capabilities, regulatory framework and institutional relationships that effect the reform of the health sector.
- Strengthening the role of the MOHP in strategic planning, regulation and coordination of the health sector.
- Ensuring that the health workforce would be of the right size, in the right place, with the right mix and level of skills, and would be employed and managed effectively.
- Rationalizing resource planning and allocation based on prioritized population needs.

D. Pharmaceuticals

- Making affordable quality drugs available to the entire population while ensuring their rational prescription, dispensing and consumption.
- Developing the domestic pharmaceutical industry, and reducing government involvement in the production of pharmaceuticals and strengthening its role as a financier of the pharmaceutical sector.

ANNEX III

Translation of the Ministerial Decree for Establishing the Family Health Funds

Arab Republic of Egypt
Ministry of Health and Population
Ministerial Decree No. 294 of the year 1999

The Minister of Health and Population - Having taken note of the Constitution and the following laws and decrees:

- Law No. (79) of the year 1975 amended by Law No. (25) of the year 1977 on Social Insurance
- Presidential Decree No. (1209) of the year 1964 promulgating the establishment of the Health Insurance Organization and its different divisions
- Presidential Decree No. (2323) of the year 1967 authorizing the Health Insurance Organization to provide medical and pharmaceutical services for the uninsured on a fee for service basis
- Presidential Decree No. (254) of the year 1997 on the agreement between the GOE and USAID that represents the USA for the donation of technical support for the Health Sector Reform Program
- Presidential Decree No. (65) of the year 1999 on the financing agreement between the GOE and the EC concerning the Health Sector Reform Program
- Prime Ministerial Decree No. (10) of the year 1981 on providing medical services and treatment for the families of the insured and pensioners in Alexandria by the Health Insurance Organization
- Ministerial Decree No. (282) of the year 1975 on user fees required for receiving medical services by the Health Insurance Organization
- Ministerial Decree No. (804) of the year 1981 on the regulations of providing medical services and treatment for pensioners and families of the insured.

Based on the recommendation of the High Committee for the Family Health Fund, the Minister decided:

Article “One”
Open an account in a bank called the “Family Health Fund” for the Health Sector Reform Program.

Article “Two”
He the Minister or whomever he delegates hires a Family Health Fund Director and staff for the operations of the Family Health Fund.

Article “Three”
By a decision of the Minister or whomever he delegates, a Board of Trustees is appointed to oversee the Family Health Fund’s work. The formation of the Board is as follows:
- Representative from the health sector in the Pilot Project governorate
- Representative from the HIO in the Pilot Project governorate
- Representative from the TSO
- Representative from the community and the NGO and private sector
- Representative from the governorate office of the Pilot Project

- Other representatives that the Minister of Health and Population wishes to add to the Board of Trustees.

Article “Four”
The name of the financial account for the Fund will be:
The Family Health Fund for the Health Sector Reform Program.

Article “Five”
The Fund will be financed through:
Money collected for receiving the services
Any other sources that the Minister determines can be added to the Fund.

Article “Six”
The Family Health Fund has the right to contract with all government and non-government organizations to offer basic health services and other kinds of health services.

Article “Seven”
The Family Health Fund is responsible for the following:
Paying incentives for staff working in the Pilot Sites based on rates of performance and quality of services
Paying for its own administrative costs
Paying for any other responsibilities that the Minister of Health and Population determines.

Article “Eight”
The Family Health Fund has the right to invest its reserves.

Article “Nine”
All the agencies involved should execute this decree starting from the date it is issued.

Dated December 29, 1999
Signature
(Professor Doctor Ismail Salam)

Minister of Health and Population.

ANNEX IV

Health Sector Reform Program Design and Implementation Considerations

Design Considerations:

- ***Analysis of the political economy***. There was lack of analysis of the political economy of the specific reforms proposed in 1997. Stakeholder analysis would have been critical to assess the political risk including the position of the labor unions, the medical syndicate, the People's Assembly, the media and the public. The MOF was not fully brought on board of the economic analysis and the implications of the reform on both the macro-economy and public financing structure.
- ***Institutional analysis and organization transformation plan.*** The HSRP Strategy Paper did not clearly delineate relationships and linkages between parent organizations and new entities to be created under the reform. Also, the modified relationship between the central MOHP, the Governorate Health Directorates and the Health District Offices under the District Management Model needed further clarification. In addition, more elaboration on transitional institutional states that might exist during the reform process and how they would evolve over time into their final post-reform state was needed. These issues need to be given more consideration when designing future phases of the reform.
- ***Risk management***. The envisaged model lacked an assessment of risk management, which is a major issue in insurance reform. Risk management is transferred according to the type of contracting and the source of deficit financing. If FHF were to receive capitated contracts and were to bear deficits, then in addition to being independent, these entities would have to meet some prudential requirements such as minimum capital and solvency margins. On the other hand, if capitated contracts were transferred to the provider networks then these have to meet the appropriate prudential requirements to be able to manage the risk.
- ***The content of the Basic Benefit Package.*** The BBP was designed to include only essential preventive and primary health care services, based on the country's resource constraints. It soon became apparent that the concept of a restricted BBP was not practical. Patients could not be turned away by the family physician because their condition was not on the package list. In a survey of the top ten diagnoses in four FH facilities over a six-month period, the most frequent diagnosis, arthritis, was not part of the BBP. Also, the BBP did not draw clear boundaries between the level at which service should be provided and the one at which it should be referred. Finally, lack of secondary care in the package meant that it was not really an insurance product and limited the ability to generate revenues from consumers.

Implementation Considerations:

- ***Institutionalization of the Master Plan.*** The utilization of needs-based planning and the decentralization of the planning function from the central to the district level are two integral components of the model. However, the development of Master Plans for the three pilot governorates was commissioned as a one-time activity to TA contractors. Although the firms had the technical expertise to adequately develop the plans, the important element of the reform failed to be institutionalized within the MOHP. Transferring the knowledge and experience in preparing Master Plans to the governorate TSOs will be very important for future reform phases.

- ***Integration of the vertical public health programs at the service delivery level.*** In the original design of the model, services provided under the vertical broad-based public health programs (e.g., family planning, child immunization) were included in the BBP to ensure an integrated model of care. However, since their funding and management are separate, resistance to integrating these vertical programs into the FH program was encountered during implementation.
- ***Benefit-incidence analysis.*** The implementation of the reform model is far from being universal and only a segment of the population in the pilot governorates has been covered so far. It may be, therefore, important to conduct a benefit-incidence analysis to ascertain the profile of those who benefited from the reform interventions.
- ***Effective monitoring and evaluation system.*** At present, only a limited number of service performance indicators are being collected and reviewed at the pilot facility sites. However, as the project moves from the pilot phase to the deployment phase, the system's capacity will need to expand so as to manage a larger volume of data as well as include a selected number of key outcome indicators. It is very important to establish a system to monitor and evaluate the effectiveness of the reform as the model is deployed incrementally throughout the pilot governorates.
- ***Factoring the regional and governorate variation in the health care markets***. The three pilot governorates were selected as each represents a different market. For example, the population of Alexandria, the first governorate selected for HSRP implementation has better than average access to care and greater ability to pay for it. Per capita expenditures on health for Alexandria were more than twice the national average, 59 percent of which come from household out-of-pocket expenditures (33 percent being spent on drugs).[50] The proportion of individuals in Alexandria already covered under HIO insurance in 1997 (58 percent) was also higher than the national average (40 percent). These variables were not factored in when the model was implemented in the other two governorates. It is important to factor in these variables when using Alexandria experience to evaluate the model and need to be taken into consideration when planning expansion of the reform to other governorates, particularly in Upper Egypt where HIO insurance coverage is lower, health needs are greater, and ability to pay is lower.
- ***Reform implementation structure.*** Experience with development programs in Egypt has repeatedly demonstrated that the more simplified the program implementation structures, the more effective they are. The HSRP has the following implementation bodies: the Health Policy Forum (HPF), the Program Planning and Monitoring Committee (PPMC), the Technical Support Office (TSO), the Technical Support Teams (TSTs), which mirror the TSO at the governorate level, and the Governorate Program Coordination Committees (GPCCs). Experience with the pilot has shown that the TSO at the central level and the TST at the governorate level have been the main bodies actively involved in implementing the reform. It might be feasible to integrate the TSO and the PPMC into a management-level body and the TSTs and the GPCCs into an operational-level body. The HPF can still act as an ad hoc strategic-level body. It is also important that every measure should be taken to retain TSO and TST staff, to ensure continuity and capacity building.[51]
- ***Donor coordination.*** One of the complexities of the HSRP lies in the fact that it is a multi-donor effort. Donor collaboration becomes a challenge, especially when different donors do not agree on specific reform strategies and implementation approaches. Nevertheless, the lack of donor coordination can be overwhelming and frustrating to the host country government. Every effort needs to be made to ensure the compatibility of the different donor plans and to facilitate their collaboration.

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[50] PHR Technical Report No. 25, 1995. Berman et al., January 1998.
[51] WB Mid-Term Evaluation, January 2002.

ANNEX V

Recent Trends in Health Financing in Egypt

A. Background

Egypt has a pluralistic health care system, with many different public and private providers and financing agents. Financing occurs primarily through government budgets, social insurance, or private payments by individuals who pay directly out-of-pocket for services. In addition, some financing is provided by firms (as an employee benefit) and through private insurance, although the magnitudes are small.

Egyptians are, in principle, guaranteed comprehensive subsidized benefits through the government delivery system. In practice, access to those services is limited, and shortages of drugs, supplies and qualified staff are frequent problems.

The government system has a poor reputation for quality of care and customer service. Salaries are low, requiring most physicians and other health workers to supplement their income by taking jobs outside the government sector. That detracts from their ability and desire to devote their greatest energies to patients in the public system. Providers have little incentive for efficiency since funds that remained unspent in one year could result in a lower budget allocation the next year. Moreover, health care workers are not financially rewarded for either superior service or greater efficiency.

Patients also have few incentives to use health services prudently in this system, since they are liable for little or none of the cost of treatment. Spending growth is difficult to limit under these circumstances, even though the resulting output from the government health sector may be inadequate.

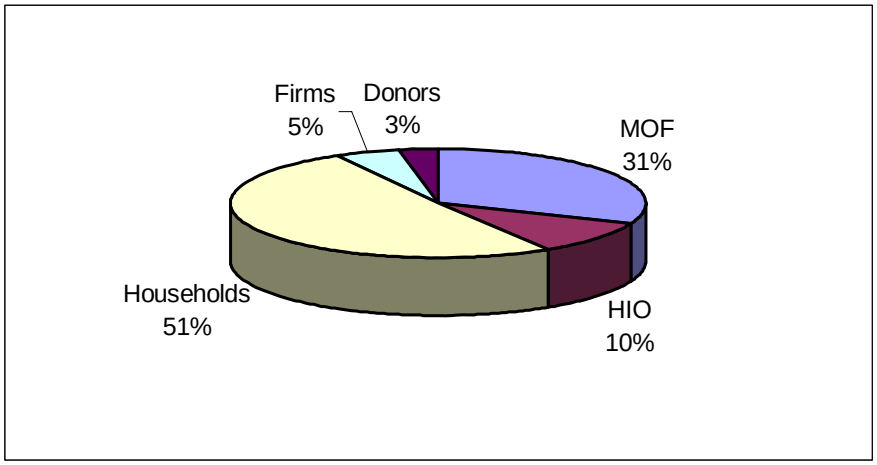
Demands on the government health system will increase as the population ages and a growing number of elderly people need treatment for chronic diseases. In addition, the need to provide a more equitable distribution of health care to low-income people and people living in rural and frontier areas, and the demand for higher quality and better service, will place additional stress on the system. The GOE has decided to expand the social insurance system as a way of creating proper financial incentives to providers and patients and as a way of mobilizing additional resources to fund improvements in the delivery of health care.

National health accounts (NHA) provide a comprehensive description of resource flows in the health care system, showing where resources come from and how they are used. The latest NHA data for Egypt are estimated for FY 1995.[52] Although the magnitude of health spending has clearly increased since FY 1995, the GOE has undertaken only limited initiatives that would affect the relative importance of financial flows from the public and private sectors.

According to the NHA, spending for health care services in Egypt totaled LE 7,516 million in FY 1995. That was equivalent to 3.7 percent of GDP, or LE 127 per capita. The private sector accounted for 56 percent of that spending, with the remainder financed by the public sector (see figure 1). The majority of financing for health care flows through three entities:

[52] Rannan-Eliya et al., 1997.

Figure V-1. Sources of Revenue for the Health Sector, FY 1995



Source: Authors' calculations based on Rannan-Eliya et al., 1997.

- *Ministry of Finance.* The MOF allocates general revenues to other government ministries that operate health facilities or provide health services. Most of those funds are provided to the MOHP, which offers comprehensive care. Lesser amounts go to the Teaching Hospital Organization and the Ministry of Education, which provide tertiary care through teaching hospitals and university hospitals. In FY 1995, about a third of all health spending flowed through the MOF.
- *The Health Insurance Organization.* The HIO operates a social insurance program financed by payroll tax contributions, premiums, copayments, a tobacco tax and general revenues. The HIO offers comprehensive care through its own facilities as well as services provided on a contractual basis with private physicians and facilities. Eligibility for social insurance is limited to particular groups of workers and others. In FY 1995, about one-eighth of all health spending flowed through the HIO.
- *Private Spending*. Households directly fund about half of all health spending. Most of those payments go to private sector providers, including private physicians, hospitals and pharmacies. A small percentage of private spending comes through employers who purchase health services directly from providers on behalf of their employees or through private insurance. In FY 1995, more than half of all health spending flowed through the private sector.

Egyptian citizens pay nearly all of the cost of their health care, regardless of the specific financial pathway. About 3 percent of Egypt's national health expenditures were paid through foreign donors in FY 1995. The remaining 97 percent were paid by individuals—in the form of direct out-of-pocket payments for health services provided in the private sector, copayments for health services provided in the public sector, payroll taxes or premiums for social or private insurance, and other taxes paid to the GOE which are used for health purposes. Although foreign donors may continue to be generous, Egypt will remain dependent on its own resources to fund essential health services and will inevitably have to address the inefficiencies and inequities of the current financing system.

The NHA also provides some limited information on how national health expenditures are used (see figure 2). Private providers accounted for more than half of health spending in FY 1995, most of that through pharmacies. The MOHP finances its own facilities, which spent nearly a fifth of the total health bill, and transfers funds to other providers as well. Other public providers of care—including university and teaching hospitals, HIO facilities and

curative care organizations—accounted for more than a quarter of national health spending.

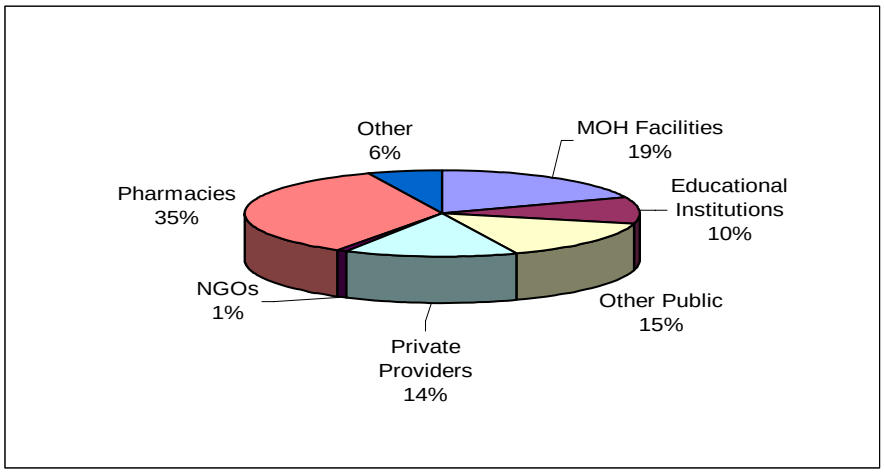


Figure V-2. Health Spending by Providers, FY 1995
Source: Authors' calculations based on Rannan-Eliya et al., 1997.

Considerably less information is available on spending for different types of health services, rather than providers. Pharmaceuticals accounted for 36 percent of national health spending in FY 1995, making that the largest single category of service in the NHA. Hospital services accounted for 27 percent of total spending. The remaining 37 percent of national health spending includes ambulatory care, public health programs and other services that cannot be identified separately.

Previous studies concluded that Egypt's health system places too much emphasis on curative services (largely hospital services) rather than primary care and preventive health services. Although that might be the case, the split in spending between curative care and primary/preventive care is largely the product of conscious government policy and consumer demand.[53] The public health system is hospital-intensive, and the system of heavily subsidized care and poor financial incentives for both providers and patients encourages the use of curative services (in both inpatient and outpatient settings). Less is known about the composition of private health spending, but the experience of other countries suggests that primary and preventive services are used less intensively when paid for out-of-pocket than many experts think is desirable. Any reform of the health system must take into account the consequences of past government policy and the realities of consumer demand for health

[53]The proper balance between curative care and primary/preventive care is far from certain. Clinical standards regarding medical screening change from time to time as the mechanism of disease becomes better understood and as preventive, diagnostic and treatment methods improve. Given the inherent uncertainties of medicine and the economic incentives associated with setting the standards, at best they represent a consensus view of ideal practices given the state of knowledge when the standards are devised. Actual practice frequently deviates from the ideal, often for good reason. In addition, the success of primary and preventive care depends crucially on the cooperation of the patient. Some may not wish or be able to make lifestyle changes that would forestall the onset of disease or reduce the cost of treatment. For example, improvement in diet is an important tool in the control of diabetes that might not be possible for patients with very low income. Moreover, the early detection and treatment of disease can improve a patient's quality of life, but that might increase rather than decrease health spending at least in the medium term.

services in devising new policies intended to meet financing and public health objectives.

B. Public Health Spending Since 1995

Data on actual health spending was recently released by the MOF, enabling us to track the growth of public spending between FY 1995 and FY 2001. Public spending in the health sector has grown very rapidly over that time period, outpacing growth in the economy and raising new concerns about the need to reform health financing in Egypt.

This new information provides tantalizing clues about changes in spending patterns, but it falls short of a comprehensive update of Egypt's NHA. Such an update would require a major new effort, including new surveys of consumer spending patterns and intensive analysis of public sector revenue and outlays in the health sector.

B.1 Comparison of Data Sources for FY 1995

Some discrepancies are found in the spending levels reported by the MOF and those reported in the NHA for FY 1995. Those discrepancies may result from many different causes, including conceptual differences between the measurements, differences in accounting conventions, incorrectly reported data, subsequent data revisions, and estimation errors. Rannan-Eliya et al., 1997, discuss the limitations of data available from the MOF and from health organizations and attempt to adjust for those limitations. Such adjustments rely on more detailed information than is currently available, making it impossible to reproduce the NHA estimates with precision. The difference observed in the aggregate estimates of public spending is quite small, however, suggesting that further refining the MOF data might not substantially improve their overall accuracy.

The MOF data on actual spending in FY 1995 are reported for the MOHP, the HIO and other health organizations according to four standard budget categories, called chapters (see table 1). Chapter One includes all salaries and wages benefits and allowances for government employees. Chapter Two includes all recurrent expenditures other than salaries. Those expenses include commodities and consumable goods (including pharmaceuticals), payments for utility services (such as electricity, heat, telephone), spare parts, maintenance expenses and the like. Chapter Three consists of capital purchases and investments. That spending covers the cost of construction, renovation, rehabilitation and repair of facilities, as well as the purchase of equipment. Chapter Four consists of capital transfers, including payments for debt service, and the deficit accruing because current activities are under-funded.

Table V-1. MOF Data on Public Spending in the Health Sector, FY 1995, By Budget Chapter (LE millions)

	Budget Chapters				
	One Salaries	**Two Supplies**	**Three Investment**	**Four Capital Transfers**	**Total**
MOHP	765	434	329	21	1,549
HIO	197	712	63	288	1,260
MOE	202	257	0	28	487
Teaching Hospitals	39	31	48	1	118
Other Organizations	13	92	15	68	189
Total	1,216	1,525	456	406	3,603

Note: Other organizations include Curative Care Organizations, the National Council for Motherhood and Childhood, the National Population Council, the Drug Control and Research Authority and the Biological Products Authority.
Source: Authors' calculations based on unpublished tables, MOF.

Salaries (Chapter One) and supplies (Chapter Two) are the major components of spending for current health care services. The treatment of investments (Chapter Three) is somewhat problematic. Expenditures for facilities and equipment are made in a specific year, but the increased capacity to provide health care services arising from such investments extends for many years into the future. One could consider attempting to estimate the service flows from investments, but that is a difficult analysis that is only loosely related to depreciation allowances typically found in budget accounts.[54] It is more direct and understandable to simply count investment spending in the year of the expenditure. Moreover, the inclusion of investments along with recurrent costs provides a more complete view of the national resources being devoted to the health sector.

It is reasonably clear that capital transfers reported under Chapter Four do not constitute the actual purchase of goods, services or real investments in the health sector. Most of that chapter represents deficit financing of current activities, and the actual spending level is accounted for by the other budget chapters. In addition, a portion of Chapter Four represents repayment on debt held by the National Investment Bank and can be thought of as an intergovernmental transfer rather than a net expenditure by the government. We exclude Chapter Four spending from the analysis reported below.

The MOF estimates of public spending by health organizations for FY 1995 are generally lower than health spending as reported by the NHA if only Chapters One and Two are considered, but are generally higher than the NHA estimate if Chapter Three is included as well (see table 2). The differences between the two sources are somewhat overstated by the MOF's omission of payments it makes to the National Investment Bank (NIB). According to the NHA, those payments amounted to LE 46

[54] Depreciation allowances might not account fully for technological obsolescence, for example.

million in FY 1995. Such payments are used by the NIB to make investments in the health sector and should be included in the public spending total.

In the aggregate, there is only a small difference between expenditures reported by the NHA and the more expansive definition from the MOF. If the NIB payments reported in the NHA were added to the MOF data on total spending for budget Chapters One, Two, and Three, the revised total would be LE 3,242 million, or less than one percent lower than the NHA estimate.

Table V-2. Comparison of NHA and MOF Data on Public Spending in the Health Sector, FY 1995 (LE millions)

	NHA	MOF Chapters One + Two	MOF Chapters One + Two + Three
MOHP	1,479	1,198	1,528
HIO	933	909	972
MOE	517	459	459
Teaching Hospitals	97	69	117
Other Organizations	242	106	121
Total	3,268	2,741	3,196

Note: For NHA data, other organizations include the Ministry of Social Affairs, other ministries and the NIB. For MOF data, see note to table 1.

Sources: Table 2.3, Rannan-Eliya et al., 1997;Authors' calculations based on unpublished MOF tables.

B.2 Public Spending, FY 1995 to FY 2001

By any measure, public spending in the health sector has grown at an unsustainable pace in Egypt between FY 1995 and FY 2001. Public spending grew from about LE 3,200 million in FY 1995 to over LE 8,100 million in FY 2001, an increase of nearly LE 5,000 million in only six years (see table 3). That represents an average growth rate of 16.8 percent a year (see table 4). In contrast, Egypt's economy grew an average of 9.8 percent a year—quite rapid, but lagging far behind the public sector's draw on resources for health.

Such rapid growth in public sector spending for health is to be expected. The factors that contribute to rapidly rising health spending include:

- An aging population, which imposes greater demands on the health sector
- Improving medical technology for the diagnosis and treatment of disease, which adds to demand
- Rising use of pharmaceuticals
- Persistent inefficiency and waste in the delivery of health services
- Inappropriate incentives for patients, who face nearly zero cost for services provided by the public sector
- A growing economy, which makes possible greater spending on health care.

Table V-3. Public Spending in the Health Sector, FY 1995 - 2001 (LE millions)

	1995	1996	1997	1998	1999	2000	2001
MOHP	1,528	2,146	2,576	3,104	3,394	4,297	4,229
HIO	972	1,067	1,191	1,407	1,571	1,748	1,813
MOE	459	529	635	508	1,114	1,160	1,406
Teaching Hospitals	117	155	241	262	276	327	331
Other Organizations	121	132	171	210	213	285	346
Total	3,196	4,029	4,813	5,491	6,568	7,818	8,123

Note: Excludes funds spent by the NIB in the health sector. Also, see note to table 1.
Source: Authors' calculations based on unpublished tables, MOF.

The available data do not permit further investigation into the causes of the rapid increase in public spending on health. However, it is sufficient to point out that annual growth rates of nearly 17 percent in a significant component of Egypt's budget could eventually crowd out other government programs (such as education, public works, or defense) unless prudent steps are taken to reform the health financing system.

The data presented here seem to be fairly reliable, but closer examination reveals several anomalies suggesting that the current public financing situation may be even worse than we have indicated. It is likely that the data reported for FY 2001 understate trends in public sector spending for health; FY 2000 appears to be a more realistic benchmark for comparison. A review of year-to-year changes in spending indicates the expected pattern of double-digit growth rates in public sector health spending in each year except FY 2001, when reported spending grew by less than four percent (see table 5). By comparison, spending grew by 19 percent in FY 2000, which seems more realistic. Several budget accounts seem particularly unlikely, including the sharp slowdown in reported spending by the MOHP. The reported reduction in spending by the MOHP between FY 2000 and FY 2001 is highly suspect.

Table V-4. Real Growth in Public Spending in the Health Sector, FY 1995 to FY 2001

	1995	2001	Increase	Growth Rate
Total Public Spending (LE millions)	3,196	8,123	4,926	16.8%
Per Capita Spending (LE)	56	124	69	14.4%
Spending/GDP (percent)	1.6%	2.3%	0.7%	6.4%
Memorandum:				
Population (millions)	57.5	65.3	7.8	2.1%
GDP (LE millions)	205,000	359,000	154,000	9.8%

Note: Excludes funds spent by NIB in the health sector.
Sources: Authors' calculations based on unpublished tables, MOF; Table A1.1, Rannan-Eliya et al., 1997; GPD data based on World Development Indicators data, the World bank, 2002.

Table V-5. Year-to-Year Changes in Public Spending in the Health Sector, FY 1995 - 2001 (LE millions)

	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01
MOHP	618	431	528	290	903	-69
HIO	95	124	216	164	178	64
MOE	71	106	-127	606	46	245
Teaching Hospitals	38	86	22	14	51	4
Other Organizations	11	39	39	4	72	61
Total	833	784	678	1,077	1,250	305
Growth Rate	26.0%	19.5%	14.1%	19.6%	19.0%	3.9%

Note: Excludes funds spent by NIB in the health sector. Also, see note to table 1.
Source: Authors' calculations based on unpublished tables, MOF.

Variations seen in the FY 2001 data must be further investigated to determine whether those data are accurate. Accounting conventions might have changed, significant expenses by the MOHP might not have been included in the current figures, cost containment policies might have been implemented and other developments might contribute to the peculiar patterns in the data. If, however, the slowdown did not actually occur, then the growth rate between FY 1995 and FY 2000 might be a better indicator of the financing problem. Over that period, public spending in the health sector grew by 19.6 percent a year, rather than 16.8 percent a year.

B.3 Public Sector Spending Outlook for FY 2003

Actual public spending in the health sector is not yet available for FY 2003. Analysis of budget data for that year suggests that actual spending continued to grow rapidly. An increase in public spending in the health sector of 25 to 50 percent between FY 2001 and FY 2003 occurred.

Budget levels for health organizations—including the MOHP, the HIO, teaching hospitals and other institutions—are approved by the People's Assembly after an extensive process of negotiation and analysis. Actual spending is typically larger than budgeted levels. That is due partly to uncontrollable factors, such as unexpected increases in the use of services associated with disease outbreaks, as well as to the lack of economic incentives in the health sector for efficiency and appropriate use of scarce resources.

Budget allocations appear to respond to rising demands on health organizations, albeit only partially and with a time lag (see table 6). Excluding FY 2001, budgeted levels fell further and further behind actual spending levels in every year for which data are available. The gap between budgeted and actual spending shrank somewhat in FY 2001, but that is the result of the unexplained decline in spending growth in that year rather than an exceptional increase in health budget.

Table V-6. Actual Spending Compared to Budgets, FY 1995 - 2001 (LE millions)

	1995	1996	1997	1998	1999	2000	2001
Actual Spending	3,196	4,029	4,813	5,491	6,568	7,818	8,123
Budget	2,953	3,351	3,998	4,415	5,149	6,040	7,107
Difference	243	678	815	1,076	1,419	1,777	1,016
Percent Difference	8.2%	20.2%	20.4%	24.4%	27.6%	29.4%	14.3%

Source: Authors' calculations based on unpublished tables, MOF.

Budget allocations for FY 2002 and FY 2003 were used to project actual spending in those years (see table 7). Two projections use the average discrepancy (measured as the absolute difference or as the percentage difference between actual and budgeted levels) over the entire period of observation. Those projections suggest that spending levels rose by 24 percent to 35 percent between FY 2001 and FY 2003. Given the apparent trend in differences between budgets and actual spending (except for FY 2001), it is probably an understatement of actual expenditure.

Table V-7. Public Spending Projected to FY 2003 (LE millions)

	Actual 2001	Projected 2002	Projected 2003	Increase 2001-03	% Increase 2001-03
Budget	7,107	7,699	9,083	1,976	27.8%
Projected Actual Spending					
Increase by Average Difference	8,123	8,703	10,087	1,964	24.2%
Increase by Percentage Difference	8,123	9,288	10,958	2,836	34.9%
Increase by FY 2000 Difference	8,123	9,476	10,860	2,737	33.7%
Increase by FY 2000 Percent Difference	8,123	9,964	11,756	3,633	44.7%
Memorandum:					
Average Difference (LE millions)	1,004				
Percentage Difference	20.6%				
FY 2000 Difference	1,777				
FY 2000 Percentage Difference	29.4%				

Source: Authors' calculations based on unpublished tables, MOF.

Two other projections use the discrepancy measured in FY 2000, which is the largest difference between budgeted and actual spending levels in the seven years of observation. Those projections suggest that spending levels rose by 34 percent to 45 percent. Such estimates are more realistic, since the average three-year increase in actual spending (observed over each consecutive three-year period) was about 35 percent.

These projections of spending are somewhat speculative, but they illustrate the financial situation facing the GOE as it considers further reforms in the health sector. The policy debate should be framed with an understanding that public spending for health is not LE 3,300 million (as indicated in the NHA for FY 1995) or LE 8,100 million (as indicated by the latest available information from MOF for FY 2001). In reality, Egypt's government is spending an amount closer to LE 12,000 million this

year for health services, and that spending level is likely to grow rapidly in the future.

C. Projections of National Health Spending to 2003

Rapidly rising public spending in the health sector, as found in the analysis above, is certainly a cause for concern regarding the ability of current government revenue sources to finance health care in the future. But that is only part of the financing picture. According to the NHA for FY 1995, more than half of health sector spending is paid privately, and nearly all of that is from direct out-of-pocket payments by individuals for services. The full burden of an inefficient health system on the economy is the sum of public and private spending.

Using several different sets of assumptions, we find that total health spending in FY 2001 was in the range of LE 19,000 million to LE 22,000 million, or about 5.3 percent to 6.0 percent of Egypt's GDP. Extrapolating to FY 2003, we estimate total health spending to be between LE 25,000 million and LE 31,000 million. Depending on what is assumed about economic growth, the FY 2003 estimates could imply health spending that was in the range of 6.1 percent to 7.4 percent of GDP. By comparison, health accounted for 3.6 percent of GDP in FY 1995. Thus health sector spending has more than doubled its draw on real resources over the past eight years.

The projections of health spending reported here are obviously speculative. A proper analysis would be based on a new, exhaustive survey of health spending similar to the efforts undertaken to produce the NHA for FY 1995. Absent adequate data, we have made several sets of assumptions regarding the structure of financing in the health sector. The resulting projections are suggestive of the trends in total health spending that Egypt has experienced in recent years.

C.1 Key Assumptions

As mentioned earlier, there is only a small difference in public sector spending between the MOF data and the NHA estimate for FY 1995. Since the MOF does not provide information on private health spending, we are forced to make an assumption about the relationship between public and private spending using NHA data. Rannan-Eliya et al., 1997, provide NHA estimates for FY 1995 and what they term speculative revisions to the NHA estimates for FY 1991 that attempt to correct the original estimates and place both data sources on the same conceptual basis.[55] Based on that information, it appears that public spending may have increased slightly as a share of total health spending between FY 1991 and FY 1995 (see table 8).[56] Any such increase is minuscule, however. Since there do not appear to have been any major financing reform initiatives since 1995, it seems reasonable to assume that the share of spending accounted for by the public sector has remained constant over time.

Projected spending levels are based on the following FY 1995 spending levels:

- Public spending of LE 3,196 million, from the MOF data

[55] See chapter 4 of Rannan-Eliya et al., 1997. Table 4.1 of the report summarizes their analysis. Obvious clerical errors were made in preparing this table; so that spending totals do not reflect the underlying components. Reasonable assumptions about what was intended were necessary to use that information.

[56] Direct spending by donors is identified separately, since those funds are not controlled by government agencies and not separately identified in the MOF data. Rannan-Eliya et al., 1997, include donor spending in the public sector.

- Private spending of LE 4,187 million, from the NHA for FY 1995
- Direct donor spending of LE 61 million, from the NHA for FY 1995.[57] This does not include donations made to other health organizations.

Table V-8. Public and Private Health Spending by Fiscal Year

Spending	Revised 1991			NHA	Base Data
(LE millions)	Low Total	High Total	Average	1995	1995
Public	1,550	1,600	1,575	3,268	3,196
Private	2,000	2,200	2,100	4,187	4,187
Donors	n.a.	n.a.	n.a.	61	61
Total	3,550	3,800	3,675	7,516	7,444
Spending as a Percent of Total					
Public	43.7%	42.1%	42.9%	43.5%	42.9%
Private	56.3%	57.9%	57.1%	55.7%	56.2%
Donor	n.a.	n.a.	n.a.	0.8%	0.8%
Total	100.0%	100.0%	100.0%	100.0%	100.0%
Memorandum:					
Public/Private	77.5%	72.7%	75.0%	78.1%	76.3%

Notes: Base data for 1995 substitute the MOF public spending level for the public spending reported in the NHA data. n.a. - not available.
Sources: Authors' calculations based on Tables 1.1 and 4.1, Rannan-Eliya et al., 1997, and unpublished MOF data.

Three scenarios are provided to ascertain the potential variability of the spending projections presented below. Those scenarios make the following additional assumptions:

– Scenario One uses the public spending totals as reported in the MOF data through FY 2001, without adjustment. This scenario assumes that public spending is a constant 76.3 percent of private spending in all years.

– Scenario Two recomputes the public spending totals to account for the implausible decline in spending growth reported for FY 2001. In this scenario, the average annual growth rate in public spending between FY 1995 and FY 2000 is used to re-estimate public spending levels each year. Thus, instead of the observed average growth rate of 16.8 percent a year, we impose the higher growth rate of 19.6 percent a year. This scenario also assumes that public spending is a constant 76.3 percent of private spending in all years.

– Scenario Three applies alternative growth rates to public and private spending based on an analysis of NHA data for FY 1991 and FY 1995. Using data reported in Table 8 above, we estimate that public spending grew by 20.6 percent a year,

[57] Direct donations from foreign sources are separated from public spending because such donations are not under public control. We assume that direct donations increase at a steady 10 percent a year. Since the size of direct donations is small, any error caused by this assumption will also be small.

and private spending grew by 18.8 percent a year, over that period. These growth rates are somewhat higher than those used in the first two scenarios.

Additional assumptions are necessary to extend the spending estimations to 2003. Those assumptions relate to the way 2003 spending levels were estimated earlier. The growth rate for GDP between 2002 and 2003 is also assumed to be equal to the average annual growth rate of GDP growth between 1995 and 2002.

C.2 National Health Spending, 2001 and 2003

There is little question that health spending has increased greatly since FY 1995, when the last detailed examination of funding flows in the health sector was conducted. If the relative shares of spending between the private and public sectors have remained fairly constant over the past decade, then fairly reliable estimates of total spending can be estimated using unpublished data from the MOF through FY 2001. If, in addition, the difference between budget levels and actual government spending is predictable for a few years into the future, then useful but less reliable estimates of total spending can be projected to FY 2003.

The Scenario One estimation uses assumptions that might understate the growth in health spending. That scenario estimates that total health spending in FY 2001 was nearly LE 18,900 million, or 5.3 percent of GDP (see table 9). The corresponding estimate for FY 2003 depends on what is assumed regarding the difference between the budget level and actual spending in the public sector. Those assumptions yield estimates of total spending in FY 2003 of between LE 25,400 million to LE 27,300 million. Thus health spending was in the range of 6.1 percent to 6.5 percent of GDP in FY 2003.

Scenario Two projects health spending under the assumption that the average growth rate observed between FY 1995 and FY 2000 is a valid representation of spending trends. Both public and private sector spending levels are higher here than under scenario one. In FY 2001, we estimate total health spending of LE 21,700 million, or 6.0 percent of GDP (see table 10). In FY 2003, spending reaches LE 31,000 million, or 7.4 percent of GDP.

Scenario Three uses growth rates for major components of health spending in the NHA computed for the period FY 1991 through FY 1995 to project public and private sector spending levels from FY 1995 through FY 2003. Under that assumption, government spending grows more rapidly than private spending, resulting in total spending of LE 21,700 million in FY 2001 and more than LE 31,000 million in FY 2003 (see table 11). Although the calculations for Scenarios Two and Three derive from different data sources, they yield similar projected levels of spending.

Table V-9. Health Spending Projections to FY 2003: Scenario One

	1995	2001	2003: (a) Using Average % Difference	2003: (b) Using % Difference From 2000	Annual Growth Rate 1995-03 (a)	Annual Growth Rate 1995-03 (b)
Spending (LE millions)						
Public	3,196	8,123	10,958	11,756	15.4%	17.7%
Private	4,187	10,640	14,354	15,399	15.4%	17.7%
Donors	61	108	131	131	10.0%	10.0%
Total	7,444	18,871	25,443	27,285	15.4%	17.6%
Spending as a Percent of GDP						
Public	1.6%	2.3%	2.6%	2.8%		
Private	2.0%	3.0%	3.4%	3.7%		
Donors	0.0%	0.0%	0.0%	0.0%		
Total	3.6%	5.3%	6.1%	6.5%		

Memorandum

	1995	2001	2002	Growth rate 1995-2002	Projected 2003
GDP at market price	205,000	359,000	382,000	9.3%	417,500

Source: Authors' calculations.

Table V-10. Health Spending Projections to FY 2003: Scenario Two

	1995	2001	2003	Growth Rate 1995-03
Spending (LE millions)				
Public	3,196	9,349	13,370	19.6%
Private	4,187	12,246	17,513	19.6%
Donors	61	108	131	10.0%
Total	7,444	21,703	**31,014**	19.5%
GDP	205,000	359,000	417,500	
Spending as a Percent of GDP				
Public	1.6%	2.6%	3.2%	
Private	2.0%	3.4%	4.2%	
Donors	0.0%	0.0%	0.0%	
Total	3.6%	6.0%	**7.4%**	

Source: Authors' calculations.

Table V-11. Health Spending Projections to FY 2003: Scenario Three

	1995	2001	2003	Growth Rate 1995-03
Spending (LE millions)				
Public	3,196	9,822	14,280	20.6%
Private	4,187	11,788	16,644	18.8%
Donors	61	108	131	10.0%
Total	7,444	21,718	**31,055**	19.5%
Spending as Percent of GDP				
Public	1.6%	2.7%	3.4%	
Private	2.0%	3.3%	4.0%	
Donors	0.0%	0.0%	0.0%	
Total	3.6%	6.0%	**7.4%**	

Source: Authors' calculations.

Annex VI

The Financial Status of the Health Insurance Organization

The Health Insurance Organization (HIO) was established in 1964 with a historic mandate to cover all Egyptians with health benefits. The HIO manages several separate social health insurance programs for formal sector workers, pensioners, widows, schoolchildren and infants. It currently finances health care for over 30 million people through compulsory social insurance and serves as both a payer for health care and a provider of those services. The HIO owns and operates hospitals, clinics, and pharmacies, and employs physicians, nurses and other health care workers. The HIO also contracts with other health care providers for services.

A. Eligibility and Enrollment

The HIO finances health care for over 30 million people through compulsory social insurance. Eligibility for HIO coverage and the costs of participating in the insurance are determined by a series of laws and decrees established over the past twenty-five years (summarized in Table 1). Eligibility for HIO coverage rests with the specific circumstances of the individual. Consequently, individuals are covered but not all members of their immediate families. It is common for the male head of a family and some of his children to have insurance through the HIO while the female spouse and others of his children do not have coverage.

HIO enrollment has grown by over 9 million people between FY 1996 and FY 2002, primarily as a result of adding infants under Ministerial Decree 380 in 1997 (see table 2). More than two-thirds of beneficiaries covered by the HIO are school children and infants. By FY 2002, about 46 percent of all Egyptian citizens were enrolled in health insurance under the HIO.

People covered under different legislative acts face very different costs for health care under the HIO. The rationale for these distinctions is unclear. For example, government employees covered under Law 32 must pay some of the cost of their care, including half the cost of their prescription drugs, while government employees covered under Law 79 face no copayments for services. Payroll taxes are lower for the first group, which offsets some or all of the revenue gained through copayments. Inequities could be fostered in such a system, with people in similar economic circumstances liable for vastly different premiums and other costs. The impact of such inequities is dampened by the extremely modest levels of premiums, payroll taxes and copayments that are required of most people.

Table VI-1. HIO Eligibility and Benefits

	Workers Law 32 (1975)	**Workers Law 79 (1975)**	**Pensioners Law 79 (1975)**	**Schoolchildren Law 99 (1992)**	**Infants Decree 380 (1997)**
Beneficiaries	Govt. workers	Govt. & private workers	Pensioners & widows	Students up to high school	Infants ("newborns")
Annual Premium or Payroll Tax					
Enrollee Share	0.5% of salary	1% of salary	1% of pension; 2% for widows	LE 4	LE 5
Employer/ Government Share	1.5% of salary	3% of salary; add 1% for disability	None	LE12 plus cigarette tax	None
Copayments	LE 0.05 (visit GP) LE 0.10 (visit specialist) up to LE 1 (tests) 50% Rx	None	None	33% Rx	LE 0.50 (visit); 33% Rx

The GOE has as one of its objectives the expansion of social insurance coverage to everyone. That is likely to be a difficult goal to achieve. Thus far, enrollment in the HIO has been restricted to groups that can easily be required to participate in the program. Government and private workers included under laws 32 and 79 all work in the cash economy, and the mechanics of withholding payroll taxes from them is simple. Premiums may also be withheld without administrative difficulty from the pensions of people who are eligible for such payments under the Social Insurance Organization.

Because students may only attend school if they participate in the HIO, their insurance participation is high. On the other hand, the cost of HIO coverage exacerbates the school dropout problem among children of poor families, and the dropout problem tends to increase the number of people who do not have health coverage. Students who drop out of school are likely to remain in low-wage jobs, without health insurance, for the rest of their lives.

Many of the uninsured work in the informal sector or in agriculture, and participate in a barter economy rather than the cash economy. It is thus difficult to determine their economic status and ability to afford health insurance. Collecting insurance premiums from people who live outside the cash economy would be difficult even under the best of circumstances.

Table VI-2. HIO Enrollment, FY 1996 - 2002 (LE millions)

	1996	1997	1998	1999	2000	2001	2002	Increase 1996 - 02
Eligibility								
Law 32	3.0	3.1	3.3	3.4	3.5	3.6	3.6	0.7
Law 79	2.5	2.6	2.6	2.7	2.8	3.0	3.1	0.6
Pensioners/Widows	0.8	0.8	1.0	1.1	1.3	1.5	1.6	0.9
Law 99	14.9	15.4	15.8	16.0	16.3	16.6	16.7	1.9
Decree 380	n.a.	n.a.	1.0	1.6	2.9	4.2	5.5	n.a.
Total Enrollment	21.1	21.9	23.6	24.8	26.8	28.8	30.6	9.5
Memorandum:								
Total Population	58.8	60.1	61.3	62.7	64.0	65.3	66.6	
% Enrolled	35.9	36.4	38.5	39.6	41.9	44.2	46.0	

Note: n.a. – not applicable.
Source: Authors' calculations based on Table 2, untitled draft paper, HIO 2002; and Table 1.4, Central Agency for Public Mobilization and Statistics, 2002.

B. Revenue and Expenditures

The financial problems facing the HIO stem from two general sources. Funding for the HIO is poorly designed and inadequate, without question; but the HIO has also had difficulty controlling its expenditures while maintaining appropriate levels of services. Although much discussion focuses on the adequacy of funding, finding ways to improve efficiency and reduce unnecessary cost is absolutely essential to resolving the HIO's overall financial problems. Both tasks pose substantial challenges for the HIO and the GOE.

The HIO is financed through a complex structure of different sources, including:

- Payroll taxes—which are paid by both employees and their employers
- Premiums—which are paid by retirees and widows of deceased beneficiaries, the GOE on behalf of those people, and families of children who are beneficiaries
- Copayments—which are paid by some (but not all) HIO beneficiaries
- Cigarette taxes
- Other government subsidies necessary to cover operating deficits.

As mentioned above, the amount that an individual pays into the HIO is somewhat arbitrary and that amount is largely unrelated to the actual cost of providing services.

B.1. Funding Inadequacy

Over the past decade, spending for health services under the HIO has grown faster than revenues, resulting in a persistent and rising operating deficit (see table 3). That deficit more than doubled between FY 1997 and FY 2001. Note that the data reported here are incomplete and do not include the revenue and expenditure for enrollees under Ministerial Decree 380. Nonetheless, they give some indication of the growing financial problems facing the HIO.

Closer examination of the components of the HIO's financial flows reveals sharp disparities between several of the beneficiary groups. Workers under Law 32, for example, account for a very significant portion of the net deficit, while workers under Law 79 account for very little of the deficit. That undoubtedly reflects the substantially higher payroll taxes paid by the latter group. Contributions totaling 4 percent of the employee's salary are made for those under Law 79, or double the contributions made for those under Law 32. In addition, the Law 79 group also includes workers in private firms, who often opt out of the HIO program in exchange for a smaller contribution—only 1 percent of salary. Such firms typically offer private insurance coverage to their employees. Workers in those firms represent a net gain for the program, since they do not use HIO services.[58]

Pensioners and widows represent an even larger source of deficit for the HIO. This group accounted for 60 percent of the net deficit in FY 2001, even though they represent only about 6 percent of enrollment (counting only the groups for whom financial data are available, as listed in Table 3). This is the consequence of inadequate financing, with no explicit government contribution to match the payment of 1 percent of the pension amount made by the pensioners and widows.[59] Note the ominous upward trend of this component of the overall HIO deficit, suggesting that this group of relatively low-income people may be growing over time.

The one bright spot in these data appears at first glance to be students who are enrolled in the HIO under Law 99. They account for a modest surplus in all years reported. However, the surplus dropped in most years, only seeming to stabilize at a modest level in FY 2001. This pattern of an initially large surplus that erodes over time reflects a revenue structure that is fixed in absolute amounts rather than being proportional to income. Students are responsible for a flat LE 4 annual premium. The government's contribution is also fixed in part—LE 12 per student annually plus revenue from cigarette taxes.

[58] This assumes that HIO providers check the insurance status of patients. Since doctors are salaried, there may be little incentive to perform such a check.

[59] Although there are no government payments tied directly to pensioners and widows, the government provides general subsidies to the HIO to help with its annual operating deficit.

Table VI-3. Selected Revenues and Expenditures of the HIO, FY 1997 - 2001 (LE millions)

	1997	1998	1999	2000	2001	Change 1997 - 01
Law 32						
Revenue	89.3	103.3	111.8	117.7	126.7	37.4
Expenditure	236.3	260.0	267.7	271.9	296.1	59.8
Net Balance	-147.0	-156.7	-155.9	-154.1	-169.4	-22.4
Law 79						
Revenue	274.3	294.4	319.1	356.7	385.9	111.6
Expenditure	275.8	316.9	329.5	359.2	390.6	114.8
Net Balance	-1.5	-22.4	-10.4	-2.5	-4.7	-3.2
Pensioners and Widows						
Revenue	26.0	31.7	38.0	45.3	70.2	44.2
Expenditure	166.0	207.0	236.9	280.0	315.2	149.2
Net Balance	-140.0	-175.3	-198.8	-234.7	-245.0	-105.0
Law 99						
Revenue	516.0	537.6	551.5	562.4	603.3	87.3
Expenditure	392.7	434.4	487.3	541.6	581.3	188.6
Net Balance	123.3	103.2	64.2	20.8	22.0	-101.3
Total						
Revenue	905.7	967.0	1,020.4	1,082.1	1,186.1	280.5
Expenditure	1,070.8	1,218.3	1,321.3	1,452.6	1,583.2	512.4
Net Balance	**-165.2**	**-251.3**	**-300.9**	**-370.5**	**-397.1**	**-231.9**

Note: Data source did not report revenue and expenditure data for beneficiaries under Ministerial Decree 380 (newborn infants).
Source: Authors' calculations based on the HIO Sustainability draft paper, 2002.

These data provide an ample demonstration of the inadequacy and relative inequity of the ways in which revenue is collected from HIO beneficiaries. The contribution levels from employees are disparate, but they pose no hardship for most employees. Although more information is needed, the lower contributions from pensioners and widows also seem readily affordable for most of those beneficiaries. The fixed student fee and the significant copayment for prescription drugs, on the other hand, is probably a significant expense for many poor families with large numbers of children.

B.2. Controlling Cost

Funding for the HIO is clearly inadequate. But an even more important and difficult challenge is for the HIO to gain some measure of control over its operating cost.

Simply putting more money into an inefficient system might ease the financing problems facing the HIO for a short time but would not guarantee a sustainable program for the long term. Inappropriate incentives, tight limits on managerial discretion and inadequate accountability are the root causes of problems throughout Egypt's health system, including the HIO. For example:

- Labor laws are rigid, making it difficult to reshape the workforce even when conditions and needs change. Employment is effectively guaranteed. Reassignments to meet changing demands can be difficult. Salaries are paid according to rigid formulas that do not account for how well the employee performed the job. Quality and service are not rewarded.
- Salary levels are very low, which leads to physicians and others seeking second and third jobs. That reduces their ability and willingness to meet patient needs. Absences, inattentive care and redirecting patients to a physician's private practice are common.
- Because most services are free or impose almost no cost on patients, there is no incentive for patients to use health services sparingly. The HIO's benefits are broad, covering all services including transplants, plastic surgery and treatment abroad. The benefit package has no limit on the quantity or cost of services.
- Prescription drug spending has grown very rapidly. The only HIO program that has limited respective growth to a reasonable extent is the Student Health Insurance Program (SHIP), primarily because there is a 50 percent copayment for drugs. A variety of abuses are commonly found, including patient stockpiling drugs for future use, reselling pharmaceuticals back to the pharmacy and substituting pharmacy purchases that are of lesser value in place of the prescribed product (but submitting the claim for payment as if the prescription had been filled).
- The dual role of the HIO as both a purchaser and a provider remains problematic given the obvious conflict of interest. The balance is shifting increasingly to the purchasing role, but the HIO must further develop an ability to manage contracts with private providers more efficiently.

Many of these problems can only be addressed through new legislation or other actions outside the immediate control of the HIO, but the HIO recognizes its serious spending problems and reportedly has taken measures to limit costs. The initiatives included:

- Limiting the use of non-HIO pharmacies to take advantage of bulk purchase discounts and to have better control over fraud. In FY 1996, HIO pharmacies filled only 55 percent of prescriptions for HIO beneficiaries. That number is up to 87 percent in FY 2002. Over the same period, prescription drug costs fell from 45 percent of the HIO budget to 35 percent.
- Limiting the number of specialist referrals to reduce the use of higher-cost physician services and to reduce the unnecessary prescribing of higher-cost drugs.
- Developing clinical protocols to treat expensive conditions, such as viral hepatitis or joint replacement.
- Allowing staff sizes to reduce by attrition.
- Cutting facility maintenance costs by freezing new facility construction.

- Increasing the contracting of services that could be provided more efficiently by other providers. For example, renal dialysis has been contracted out, reducing cost from LE 126 if performed at HIO facilities to LE 96 if performed elsewhere.
- Improving contracting mechanisms with private providers (including better pricing) resulting in savings of LE 1.3 million per month in FY 2002. Some contracts with private pharmacies that did not comply with HIO requirements have not been renewed.

According to Dr. Mustafa Abdel Atti, the Chairman of Health Insurance Organization, these steps helped improve the HIO's financial situation and led to a gradual shrinking of its operating deficit (see table 4). It appears that the overall deficit for the HIO may have dropped from about LE 400 million in FY 2001 to LE 300 million in FY 2002, reversing the upward trend of the previous five years.[60] This is a truly remarkable development.

Table VI-4. Components of the HIO's Net Financial Balance, FY 2001 – 2002

	2001 From Table 3	2001 From Chairman	2002 From Chairman
Net Balance (Per Beneficiary, LE)			
Law 32	-48	-49	-42
Law 79	-2	-2	20
Pensioners and Widows	-168	-179	-158
Law 99 and Decree 380	n.a.	2	2
Estimated Total	n.a.	-14	-10
Net Balance (Total, LE millions)			
Law 32	-169.4	-174.0	-152.5
Law 79	-4.7	-6.0	62.4
Pensioners and Widows	-245.0	-261.7	-255.6
Law 99 and Decree 380	n.a.	41.6	44.5
Estimated Total	n.a.	-400.1	-301.2

*Note***:** Total net balances are calculated from imprecise data and only indicate rough orders of magnitude. n.a. – not available.
*Source***:** Authors' calculations based on Tables 2 and 3 above; the HIO Chairman's oral statement, October 12, 2002.

The pattern of cost reductions across different groups of HIO beneficiaries shows the importance of copayments in constraining spending. Employees under Law 79 and pensioners and widows under the same law had very large improvements in their net fiscal balances, measured per beneficiary—a swing of LE 22 per worker and LE 21 per pensioner or widow. In contrast, the improvement was much less for workers under Law 32—about LE 7 per beneficiary. The first two groups make no copayments for services and consequently are more affected by the new restrictions

[60]Documentation of the Chairman's oral statement was not made available. However, as Table 15 demonstrates, the net balances described by the Chairman in per-beneficiary terms are consistent with data from the untitled document received from the HIO after the meeting with the Chairman.

on services (particularly restrictions on their purchase of prescription drugs). The third group is already cost-conscious, since they pay half the cost of prescription drugs. Given they are already economizing to some extent, the new restrictions produce lower savings per beneficiary. Although it is important for the HIO to find ways to reduce unnecessary spending, there are possible risks to public health when large reductions in spending levels from one year to the next are effected. Further analysis would be required to determine the specific treatment areas most affected by the cost-saving policies adopted by the HIO and to assess how well the policies reduced unnecessary services, questionable capital improvements, abusive practices and fraud in the system.