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The Health Insurance Organization of Egypt: An Analytical Review and Strategy for Reform

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> *Better informed and more participatory policy processes in health sector reform;*

> *More equitable and sustainable health financing systems;*

> *Improved incentives within health systems to encourage agents to use and deliver efficient and quality health services; and*

> *Enhanced organization and management of health care systems and institutions to support specific health sector reforms.*

PHR advances knowledge and methodologies to develop, implement, and monitor health reforms and their impact, and promotes the exchange of information on critical health reform issues.

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Abstract

Partnerships for Health Reform and the Working Group on Financing and Provider Payment analyzed the Health Insurance Organization (HIO) of Egypt, as it is one of the key players in the country's health sector and would be an integral part of the reform process. The HIO manages several separate social health insurance programs for formal sector workers, pensioners, widows, and school children. Financing of the HIO is fragile due to generous benefit packages, low productivity of HIO providers, and stagnant premium and co-payment levels even as expenses have increased. A reform strategy proposed for the HIO is to achieve universal coverage, equity, efficiency, quality, and sustainability. A single basic package of benefits should be developed; financing should be restructured to improve equity and sustainability; and coverage and service delivery should be reorganized to achieve efficiency and quality. The HIO will need to be strengthened as an organization for these changes to succeed.

Table of Contents

Acronyms vii

Acknowledgments ix

Executive Summary xi

1. Introduction 1

2. Overview of the HIO 3

   2.1 Organizational History and Structure 3
   2.2 HIO Beneficiaries 4
   2.3 Benefits Package 5
   2.4 HIO Health Facilities and Personnel 6

3. Utilization of Services and Providers 9

   3.1 Utilization of Inpatient Services 9
   3.2 Utilization of Outpatient Services 12

4. Financial Analysis 15

   4.1 Sources of Funding 15
   4.2 Expenditures 17
   4.3 Financial Viability and Equity 17
   4.4 Financial Projections 19
      4.4.1 Financial Projections for Programs Covering Employees, Widows, and Pensioners 19
      4.4.2 Financial Projections for SHIP 20
   4.5 Conclusions 21

5. A Reform Strategy for the HIO 23

   5.1 Principles Underlying the Reform Strategy 23
   5.2 Elements of a Reform Strategy 23
   5.3 Basic Benefits Package 24
   5.4 Sustainable and Equitable Financing 25
   5.5 Reorganize Coverage and Service Provision 26
   5.6 Strengthen the HIO Organizationally 27

List of Tables

Table 1. HIO Branches and the Governorates They Cover 4

Table 2: Distribution of HIO Beneficiaries by Law (FY 96) 4

Table 3. Distribution of Beneficiaries by HIO Branch (FY 95) 5

Table 4. Benefit Package to which HIO Beneficiaries are entitled 6

Table 5. HIO Permanent Personnel per 1000 Beneficiaries under Laws 32 and 79 7

Table 6. Number of Physicians per 1000 Students 7

Table 7. Inpatient Efficiency Indicators for Employees, Widows and Pensioners (FY 96) 9

Table 8. Inpatient Efficiency Indicators for Students 10

Table 9. Cost per Admission, per Day and per Occupied Bed for Employees, Pensioners and Widows (LE) 10

Table 10. Number of Admissions by Contracted and HIO Physicians of Beneficiaries under Laws 32 and 79 (FY 96) 11

Table 11. Number of admissions by Contracted and HIO Physicians of Beneficiaries under SHIP 11

Table 12. Number of Physician Visits Under SHIP (FY 96) 12

Table 13. Utilization Rates for General Practitioners 13

Table 14. Utilization Rates for Specialist (FY 96) 13

Table 15. Beneficiary Premiums and Co-payments 16

Table 16. HIO Revenue Sources by Program for FY 95 (millions of LE) 16

Table 17. HIO Expenditures for FY 95 (in millions of LE) 17

Table 18. Revenues and Cost per Beneficiary for FY 95 (in LE) 18

Table 19. Annual Surplus of Deficit by Beneficiary Category for FY 95 (millions of LE) 18

Table 20. Comparison of HIO Expenditures Per Beneficiary by Branch, FY 95 19

Table 21. Enrollment, Revenues, and Expenditures for HIO Programs for Workers, Widows, and Pensioners: Actual 1995, Projected 1996–2000 20

Table 22. Enrollment, Revenues and Expenditures under SHIP: Actual 1995, Projected 1996-2000 21

Acronyms

ALOS	Average Length of Stay
FY	Fiscal Year
HIO	Health Insurance Organization
LE	Egyptian Pound (US $1 = LE 3.4)
MOHP	Ministry of Health and Population
PHR	Partnerships for Health Reform Project (USAID)
SHIP	School Health Insurance Program
SIO	Social Insurance Organization

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Executive Summary

The Health Insurance Organization (HIO) of Egypt is prominent among the many institutions involved in health financing and provision, and a key player in the country's health sector reform program. In 1997, the Partnerships for Health Reform (PHR) Project, funded by the United States Agency for International Development (USAID), reviewed the organizational and financial structure of the HIO as part of initiating PHR's program of technical assistance in health sector reform.

The HIO was established in 1964 as the institution in Egypt responsible for social health insurance, providing compulsory health insurance to workers in the formal sector. The HIO is an autonomous government organization under the supervision of the Minister of Health and Population (MOHP). It finances health care services through a combination of payroll and cigarette taxes, and delivers health care services through its own network of hospitals, clinics, and pharmacies as well as through contracting private sector providers. The HIO is organized into eight regional branches, which are supervised by the central headquarters in Cairo.

The HIO now manages several separate social health insurance programs under different legislation: certain government employees under Law 32, enacted in 1975; other government employees and public and private sector employees, pensioners, and widows under Law 79, enacted in 1975; and the Student Health Insurance Program (SHIP) for school children under Law 99, enacted in 1992. In fiscal year (FY) 96, there were 21,110,844 HIO beneficiaries: 5,452,982 government and public and private sector employees, 598,485 pensioners, 169,212 widows, and 14,890,165 school children.

HIO benefit packages are broad and generous. Employees covered under Laws 32 and 79 are entitled to receive all services including transplants, plastic surgery, and treatment abroad. The benefit package has no limits on the quantity or cost of services. In FY 95, the HIO network contained 27 hospitals with 4,829 beds. In addition, the HIO contracts with other facilities as well as with a large number of doctors to provide services to its insured population. In 1996, the HIO employed a total of 52,481 persons. Of these, 78 percent were permanent employees and 22 percent were contracted employees.

Utilization and productivity of HIO hospitals and physicians are relatively low. In FY 96, the average occupancy rate for inpatient services was 66 percent; a policy to increase the bed occupancy rate through a greater number of admissions per bed rather than longer stays would allow more patients to be served and boost hospital productivity. The average number visits per day per general practitioner physician was only eight under the SHIP program. The average annual per capita visits to a general practitioner is 1.29, with significant variation across programs and regions. The average annual per capita visits to a specialist across all HIO programs and branches is 0.73.

The HIO is primarily funded through a system of premiums and co-payments for services rendered. Mandated premiums from covered employees and employers are collected by the Social Insurance Organization, while the Pensions and Insurance Organization collects premiums from pensioners. SHIP is financed by a system of individual premiums paid by enrolled students (LE 4 per child, per year), a government contribution of LE 12 per child, and a cigarette tax of 10 piastres per packet. In addition, the HIO has received additional transfers from the Ministry of Finance to cover operational losses. In FY 95, total revenues of HIO were LE 1,035.7 million. Of this, 68 percent came

from premiums, 22 percent from the tax on cigarettes, 5.7 percent from other operational revenues, less than 3 percent from co-payments, and one percent from the sale of services to non-HIO beneficiaries.

HIO expenditures for FY 95 totaled LE 969.7 million, or LE 45.93 per beneficiary. This is nearly twice what the MOHP spent per capita on providing health care to the entire population of Egypt. Expenditure on drugs, 45 percent of total HIO expenditures, is a major area of concern. Nearly 24 percent was spent on salaries.

All HIO programs other than SHIP are either breaking even or losing money. PHR performed financial projections, which indicated growing deficits over the next five years. Under the programs for workers, pensioners and widows, the number of beneficiaries is projected to increase from 6 million to over 7 million. The annual deficit is projected to increase from LE 246 million in FY 95 to LE 750 million by the year 2000. HIO losses per beneficiary will increase from LE 41 in FY 95 to LE 97 in FY 2000. Under SHIP, the number of students is projected to increase from 13.2 million to 16.85 million. Its current surplus of LE 129 million per year is projected to transform into an annual loss of LE 351 million by the year 2000.

Many factors contribute to the lack of financial viability and equity in HIO programs, including: low contribution rates and co-payments, ability of employers to opt out of HIO coverage, beneficiaries in low-income regions bearing a larger cost burden than high-income regions, coverage that fragments households and services (e.g., coverage of employees does not include their families), and inefficient management of HIO programs.

A reform strategy for the HIO was formulated based on the following principles that underlie a future vision for the HIO:

> *Universality*: All Egyptians should be assured coverage for a basic set of primary care services.

> *Equity*: The financial burden of providing the covered services should be shared fairly. No one should be denied covered services for want of ability to pay.

> *Efficiency*: Services should be provided in a cost-effective way in keeping with the principles of universality and quality.

> *Quality*: Covered services should be provided according to accepted standards of scientific and clinical practice and at a level that will be perceived as adequate by the beneficiaries.

> *Sustainability*: There should be enough resources to adequately finance the basic set of services in the short and long term.

The reform strategy has four elements:

1. *Develop a single basic benefits package*: Development of a basic benefits package must consider the prevalence of disease in the community, the common causes of mortality among different population subgroups; and the common causes of morbidity (non-fatal health problems). The package should cover preventive care, primary health care, curative care, diagnostic procedures, and drugs.

2. *Restructure financing to achieve sustainability and equity*: Separate financing and purchasing, create a fund-holding entity, develop a financing strategy for long-run sustainability, develop a financing strategy to improve equity, and develop incentive payments for providers.

3. *Reorganize coverage and service delivery to obtain greater efficiency and quality*: Make families the focus of service provision, permit consumers to choose their providers, restructure the public provider market, and promote quality in the private provider market.

4. *Strengthen the HIO organizationally*: Unify the social insurance laws; invest in HIO information systems, creating capacity in policy development and analysis, planning, and budgeting; develop a detailed investment plan; and develop an appropriate public–private partnership.

Given the magnitude of reform, it is recommended that the new approach be designed and piloted in a few geographic areas.

1. Introduction

In 1997, the Partnerships for Health Reform (PHR) Project reviewed the organizational and financial structure of the Health Insurance Organization (HIO) in Egypt as part of initiating its program of technical assistance in health sector reform. The HIO is an important organization among the many institutions involved in health financing and provision in Egypt, and a key player in the country's health sector reform program. Therefore, it is important to analyze how the HIO is organized and financed, what segments of the population are covered by the HIO, and how services are delivered.

PHR took the analysis further and performed financial projections, which indicated growing deficits over the next five years. Given this scenario, PHR met extensively with the Working Group on Financing and Provider Payment to formulate a reform strategy for the HIO. This reform strategy lays the conceptual foundation for a bold and ambitious program of health sector reform, which is currently in the process of being developed by Egypt, United States Agency for International Development (USAID), the World Bank, the European Union, and the African Development Bank.

2. Overview of the HIO

2.1 Organizational History and Structure

The Health Insurance Organization was established in 1964 as the institution in Egypt responsible for social health insurance, providing compulsory health insurance to workers in the formal sector. The HIO is an independent government organization under the supervision of the Minister of Health and Population. It finances health care services through a combination of payroll and other taxes. It delivers health care services through its own network of hospitals, clinics, and pharmacies, as well as through contracting private sector providers. The headquarters in Cairo works under the direction of the chairman of the board.

The HIO first started operating in the governorate of Alexandria. From the beginning, the intention was to expand social health insurance to the entire population, but for various reasons, this did not happen. Instead, coverage has been extended to three major groups of beneficiaries under different legislation:

> Government employees (Law 32, enacted in 1975)

> Government[1], public and private sector employees, pensioners and widows (Law 79, enacted in 1975)

> School children (Law 99, enacted in 1992).

Each of the laws above stipulates the beneficiary population, the package of benefits, the beneficiary premiums and co-payments, and administrative aspects. In effect, the HIO manages several separate social health insurance programs, not a single, unified program. For example, in July 1992, when the People's Assembly of Egypt enacted Law 99 expanding health insurance to cover all school children, the HIO set up the School Health Insurance Program (SHIP) as a separate program covering school children only.

SHIP started operating in February 1993, and has since become an important source of health care financing in Egypt. Only registered students are eligible to enroll. Children, who are not going to school, often those from the poorest families with high burden of ill health, are not eligible. SHIP was implemented in three stages. The first was in February 1993 with the objective of covering 5.017 million students in large cities and some districts. The second was in October 1993 with the objective of covering 5.089 million children in rural areas. The third stage started in October 1994, with the objective of achieving universal coverage. One hundred percent coverage (14.89 million school children) was achieved by June 1995

[1] Government employees can be covered either under Law 32 or Law 79. The distinction determines relative contributions paid by employee and employer.

The HIO is organized into eight regional branches, which are supervised by the central headquarters in Cairo. Each of the eight regional branches covers a number of governorates. Table 1 lists the governorates covered by each branch.

Table 1. HIO Branches and the Governorates They Cover

Branch	Governorates
Cairo	Cairo
North West Delta	Alexandria, Behaira, Matrooh
Middle Delta	Minofiah, Gharbia, Kafr El Sheikh
East Delta	Sharkia, Kalubiah, Dhakalia, Damietta
North Upper Egypt	Giza, Fayooum, Beni Suef, Miniya
Middle Upper Egypt	Assuit, Suhag, El Wadi Gedid
South Upper Egypt	Qena, Aswan, Red Sea
Canal	Port said, Ismailia, Suez, North and South Sinai

Source: HIO, 1997

2.2 HIO Beneficiaries

Table 2 provides the distribution of beneficiaries by law. The HIO began operating in Alexandria with 140,000 beneficiaries. At the end of fiscal year (FY) 96, there were 21,110,844 HIO beneficiaries including 5,452,982 government, public, and private sector employees, 598,485 pensioners, 169,212 widows, and 14,890,165 school children. With the exception of Alexandria, benefits are restricted to the beneficiary and are not extended to other members of the family.

Table 2: Distribution of HIO Beneficiaries by Law (FY 96)

Beneficiaries	Number of Beneficiaries
Government employees (Law 32)	2,960,903
Government, public, and private employees (Law 79)	2,492,079
Pensioners	598,485
Widows	169,212
School children (Law 99)	14,890,165
Total	21,110,844

Source: HIO, 1997

Table 3 provides the distribution of HIO beneficiaries by regional branches. The extent of coverage within the regions varies considerably, from 42.36 percent in the Canal Branch to 26.72 percent in North Upper Egypt. This reflects the differences in the size and composition of the formal sector employment and school enrollment across the country.

Table 3. Distribution of Beneficiaries by HIO Branch (FY 95)

Branch	Govt. Employees (Law 32)	Public/ private employees (Law 79)	Pensioners /Widows	School Children	Total	Population	Coverage Rate (%)
Cairo	276,346	560,196	176,479	1,779,463	2,792,484	6,925,000	40.32
Northwest Delta	192,078	913,071	203,100	1,859,170	3,167,419	7,570,000	41.84
Middle Delta	608,676	213,513	95,585	2,226,066	3,143,840	8,368,000	37.56
East Delta	592,721	261,684	99,087	3,096,683	4,050,175	11,477,000	35.28
North Upper Egypt	487,461	326,354	95,585	2,226,066	3,143,840	11,764,000	26.72
Middle Upper Egypt	334,607	65,496	34,912	1,382,732	1,817,447	6,072,000	29.93
South Upper Egypt	225,000	64,781	21,358	1,030,189	1,341,328	4,094,000	32.76
Canal	244,014	86,984	37,185	779,384	1,147,567	2,709,000	42.36
Total	2,960,903	2,492,079	767,697	14,890,165	21,110,844	58,978,000	35.79
Percentage	14.04	11.80	3.63	70.53	100		

Source: HIO, MOHP, and Central Agency for Population Mobilization and Statistics

The government is currently considering expanding HIO health coverage to children below the age of one, as they are considered especially vulnerable. It is expected that the People's Assembly will pass legislation enabling this and the scheme might go into effect shortly. There is a possibility that children born since September 1, 1996, will be covered retroactively. This will add roughly 1.3 million beneficiaries each year. The HIO is in the process of estimating the cost of providing services to this category of beneficiaries.

2.3 Benefits Package

Table 4 shows the package of benefits guaranteed under each of the HIO laws. The packages are broad and generous. Employees covered under Laws 32 and 79 are entitled to receive all services including transplants, plastic surgery, and treatment abroad. The benefit packages have no limits on the quantity or cost of services. Preventive care is provided mainly under SHIP. Choice of provider is restricted for those covered under SHIP.

Table 4. Benefit Package to which HIO Beneficiaries are entitled

Services	Employees (Law 32 and 79)	Students (Law 99)	Pensioners and Widows (Law 79)
Curative Care			
General Practitioner Service	Yes	Yes	Yes
Specialist Services	Yes	Yes	Yes
Dental	Yes	Yes	Yes
Home Visits	Yes	Yes	Yes
Inpatient Care	Yes	Yes	Yes
Surgical and Medical	Yes	Yes	Yes
Radiology, Lab, other Invest.	Yes	Yes	Yes
Medicines (Drug benefit)	Yes	Yes	Yes
Ante, Natal, Post-natal care	Yes	Yes	No
Prosthesis and physiotherapy	Yes	Yes	Yes
Overseas Treatment	Yes	Yes	No
Preventive Care			
Annual medical exams (at the start of the school year)	No	Yes	No
Immunization	No	Yes	No
Periodic medical exam	No	Yes	No
School hygiene	No	Yes	No
Health education	No	Yes	No
Nutrition supervision	No	Yes	No

2.4 HIO Health Facilities and Personnel

The regional branches run a network of hospitals, clinics, and pharmacies, that provide services to beneficiaries. In FY 95, the HIO network contained 27 hospitals with 4,829 beds. This is a 1.5 percent decline from the 4,900 beds that were available in FY 94.

In addition, the HIO contracts with a large number of doctors and other facilities to provide services to its insured population. Contracted providers include the MOHP, the Curative Care Organization, university hospitals, teaching hospitals, and non-governmental organizations (NGOs) and private facilities. The role of contracting has increased under SHIP.

Beneficiaries must all enroll with an HIO-designated general practitioner, who can provide treatment or refer patients to HIO specialists. Consultation with specialist without referral from a general practitioner is not permitted.

In 1996, the HIO employed a total of 52,481 persons. Of these, 78 percent (nearly 41,000) were permanent employees and 22 percent (11,500) were contracted employees. Physicians, nurses, and engineers represented nearly 40 percent of permanent employees, technicians 48 percent, with the remaining 12 percent distributed among other categories. The HIO did not have comparable breakdowns for contracted employees, but they were mostly physicians.

Table 5 presents the number of permanent HIO personnel per 1000 beneficiaries under Laws 32 and 79. On average there were 0.50 physicians, 0.05 dentists, 0.1 pharmacists, 0.93 nurses, and 0.3 technicians per 1000 beneficiaries. The distribution of permanent personnel is not uniform. South Upper Egypt has the lowest availability of all category of medical providers. As expected, Cairo and the Canal branches have more physicians and other medical personnel available per beneficiary.

Table 5. HIO Permanent Personnel per 1000 Beneficiaries under Laws 32 and 79

Branch	Physicians	Dentists	Pharmacists	Nurses
Cairo	0.95	0.10	0.11	1.13
North West Delta	0.58	0.05	0.25	0.72
Middle Delta	0.50	0.02	0.15	1.53
East Delta	0.72	0.04	0.08	1.72
North Upper Egypt	0.69	0.10	0.10	1.08
Middle Upper Egypt	0.59	0.03	0.15	1.13
South Upper Egypt	0.18	0.02	0.02	0.07
Canal	0.31	0.10	0.04	1.05
Average	0.50	0.05	0.10	0.93

Source: HIO

Table 6 presents the number of total physicians (employed and contracted) per 1000 school children. A surprising finding is that nearly 65 percent of the physicians working under SHIP are contracted. This probably reflects the fact that HIO's permanent employees have traditionally worked in urban areas and larger cities. The SHIP thrust upon the HIO the responsibility of managing health services for millions of school children living in rural areas, and the HIO responded by relying on contracted employees to provide these services. Once again, South Upper Egypt has the lowest availability of physicians per 1000 school children. In the case of South Upper Egypt, 96 percent of physicians providing health services to school children were contracted.

Table 6. Number of Physicians per 1000 Students

Branch	Permanent	Percent permanent	Contracted	Percent Contracted	Total
Cairo	0.42	91%	0.04	9%	0.44
North West Delta	0.17	39%	0.27	61%	0.44
Middle Delta	0.07	18%	0.32	82%	0.44
East Delta	0.09	20%	0.35	80%	0.44
North Upper Egypt	0.10	24%	0.04	76%	0.46
Middle Upper Egypt	0.20	44%	0.31	56%	0.41
South Upper Egypt	0.01	4%	0.25	96%	0.45
Canal	0.10	23%	0.34	77%	0.39
Average	0.15	36%	0.27	64%	0.25

Source: HIO

3. Utilization of Services and Providers

3.1 Utilization of Inpatient Services

Table 7 presents several measures of inpatient (i.e., hospital) efficiency by HIO regional branch for FY 96. The average occupancy rate was 66 percent. This rate ranges from 62 percent in the East Delta and Canal branches to 72 percent in Middle Delta. The Middle Upper Egypt branch has the highest bed turnover rate at 62 patients per year. This rate decreases to 43 patients in the Canal branch and 35 patients in the East Delta. The average turnover rate for the HIO hospitals on the national level is 45 patients per year.

Table 7. Inpatient Efficiency Indicators for Employees, Widows and Pensioners (FY 96)

Branch	Occupancy Rate	Number of Admissions	Average Length of Stay	Number of Beds	Bed Turnover Rate	Days of Stay
Cairo	67	41,942	4.9	939	45	206,915
North West Delta	69	67,804	4.8	1,351	50	324,094
Middle Delta	72	24,420	3.8	543	47	97,759
East Delta	62	29,047	5.9	835	35	170,356
North Upper Egypt	66	17,566	5.6	453	39	97,941
Middle Upper Egypt	65	23,793	4.5	383	62	106,780
Canal	62	8,635	5.2	200	43	44,522
Total		214,207		4,704		1,048,367
Average	66		4.9		45	

The implications of high occupancy for average costs and hospital efficiency are ambiguous without information on other service indicators. For example, a high occupancy rate might reflect relatively efficient situations, as when many patients with modest lengths of stay are served (that is, the department has a high bed turnover rate). However, a high bed occupancy rate does not always indicate a better hospital performance. Indeed, bed occupancy rates can be too high, meaning that the volume of services is above the designed level of the hospital, and, therefore, quality may be diminished.

The length of stay ranges from 5.9 days in East Delta branch to 3.8 days in Middle Delta branch. The average length of stay during FY 95 was 5.1 days and decreased to 4.9 days in FY 96. A long average length of stay can be caused by lack of standard treatment practices, admission of patients for diagnostic tests, and patients staying in the hospital until results are received and then proceeding for medical or surgical treatments. Reducing the average length of stay by increasing the occupancy rate would enable turnover rate to increase and would extend hospital benefits to a greater number of beneficiaries.

Table 8 shows the average length of stay for students to be 3.4 days. Once again there is a significant difference across branches. For example, the average length of stay was just 2.3 days in Middle Delta as compared with 4.8 days in the Middle Upper Egypt branch. The data does not permit an analysis of the reasons for these differences.

Table 8. Inpatient Efficiency Indicators for Students

Branch	Number of Admissions	Average Length of Stay	Days of Stay
Cairo	15,218	3.7	56,779
North West Delta	22,239	3.6	79,254
Middle Delta	9,160	2.3	21,166
East Delta	17,844	2.8	50,630
North Upper Egypt	719	2.5	1,808
Middle Upper Egypt	6,658	4.8	31,899
Canal	471	3.4	1,595
Total	72,309		243,131
Average		3.4	

Table 9 presents cost data on inpatient services. The average cost per day was LE 96, ranging from LE 150 in Cairo hospitals to LE 65 in Middle Upper Egypt. Long lengths of stay tend to have lower than average costs per day because the treatment costs for the additional days are likely to be less than the average. Under the assumption that treatment cost profiles are relatively similar, high occupancy rates tend to result in lower than average cost per patient per day as overhead costs are spread over the beds that are usually filled; in such cases, the lower average cost actually masks inefficient hospital performance. A policy to increase the bed occupancy rate through a greater number of admissions per bed rather than longer stays would allow more patients to be served and boost hospital productivity.

Table 9. Cost per Admission, per Day and per Occupied Bed for Employees, Pensioners and Widows (LE)

Branch	Cost per Admission	Cost per Day	Cost per Occupied Bed per Day
Cairo	739	150	136
North West Delta	370	78	71
Middle Delta	280	82	77
East Delta	572	98	85
North Upper Egypt	453	98	88
Middle Upper Egypt	152	65	61
Canal	471	89	83
Average	453	96	87

Tables 10 presents the number of admissions by type of physician—those contracted and those employed by the HIO—for beneficiaries covered under Laws 32 and 79 (formal sector employees, pensioners and widows). Table 11 presents the same data for beneficiaries under SHIP.

Table 10. Number of Admissions by Contracted and HIO Physicians of Beneficiaries under Laws 32 and 79 (FY 96)

Branch	No. of Beneficiaries	No. of Admissions by				% of Admissions by Branch
		Contracted Physicians	HIO Physicians	Total Physicians	Per 1000 Beneficiaries	
Cairo	1,013,021	17,236	41,942	59,178	58.42	19
North West Delta	1,308,249	14,986	67,804	82,790	63.28	26
Middle Delta	917,774	16,995	25,420	42,415	46.22	14
East Delta	953,492	36,565	29,047	65,612	68.81	21
North Upper Egypt	914,106	5,951	7,566	13,517	14.79	4
Middle and South Upper Egypt	745,854	5,980	23,713	29,693	39.81	9
Canal	368,183	12,259	8,635	20,894	56.75	7
Total	6,220,679	109,972	204,127	314,099	50.49	
Percentage		35	65	100		100

Table 11. Number of admissions by Contracted and HIO Physicians of Beneficiaries under SHIP

Branch	No. of Beneficiaries	No. of Admissions by				% of Admissions by Branch
		Contracted Physicians	HIO Physicians	Total Physicians	per 1000 Beneficiaries	
Cairo	1,779,463	36,576	15,213	51,789	29.10	30
North West Delta	1,859,170	2,862	22,239	25,101	13.50	15
Middle Delta	2,226,066	16,165	9,160	25,325	11.38	15
East Delta	3,096,683	17,644	17,844	35,488	11.46	21
North Upper Egypt	2,736,478	18,709	719	19,428	7.10	11
Middle and South Upper Egypt	2,412,921	3,747	6,658	10,405	4.31	6
Canal	779,384	4,270	471	4,741	6.08	3
Total	14,890,165	99,973	72,304	172,277	11.57	
Percentage		58	42	100		100

HIO physicians admitted 65 percent of the beneficiaries covered by Laws 32 and 79; contracted physicians admitted the remaining 35 percent. The reverse relationship was found under SHIP: contracted physicians admitted 58 percent of students, while HIO physicians admitted the remaining 42 percent.

Beneficiaries under laws 32 and 79 in the North West Delta branch accounted for 26 percent of total admissions. This is the highest percentage among all branches. The number of admissions per 1000 beneficiaries was highest in the East Delta branch (69 admissions per 1,000), followed by the North West Delta branch (63 admissions per 1,000). The lowest rate was North Upper Egypt, with 15 admissions per 1000 beneficiaries.

The Cairo Branch accounted for the highest percentage (30 percent) of total SHIP admissions. The number of admissions per 1000 beneficiaries in Cairo was 29.1 admissions, followed by 13.5 admissions in the North West Delta branch. The lowest rate was Middle and South Upper Egypt with 4.3 admissions per 1,000 beneficiaries. The average number of admissions per 1,000 students was 11.57.

3.2 Utilization of Outpatient Services

Table 12 presents the volume of general practitioner visits and indicators of the efficiency of these outpatient providers under the SHIP program in FY 96. Physician productivity varied across branches, with the East Delta branch averaging only 1,377 visits per physician during the year, and the Cairo Branch averaging a high of 3,377 visits. The average number of visits per day per general practitioner physician was only eight visits per day. The highest number of visits per day per physician was 11 visits in the North West Delta and Cairo branches. The East Delta Branch had the lowest rate at five visits per physicians per day.

Table 12. Number of Physician Visits Under SHIP (FY 96)

Branch	No. of Students	No. of Physicians (General Practitioner)	No. of Students/ Physicians	Total no. of Visits	Average No. of Visits per Physician	Average No. of Visits per Day per Physician*
Cairo	1,779,463	822	2,165	2,773,727	3,374	11
North West Delta	1,859,170	814	2,284	2,744,020	3,371	11
Middle Delta	2,226,066	874	2,547	1,678,976	1,921	6
East Delta	3,096,683	1371	2,259	1,888,258	1,377	5
North Upper Egypt	2,736,478	1134	2,413	2,526,525	2,228	7
Middle Upper Egypt	1,382,732	626	2,209	1,939,937	3,099	10
South Upper Egypt	1,030,189	257	4,009	609,278	2,371	8
Canal	779,384	345	2,259	612,264	1,775	6
Total	14,890,165	6,243		14,772,985		
Average			2,385		2,366	8

*Number of working days available per year = 300

Table 13 presents FY 96 utilization rates for general practitioners across all HIO programs, calculated as the average number of visits per beneficiary per year. The average utilization rate for an HIO general practitioner was 1.29 visits per beneficiary per year, with significant variation across programs and regions. Beneficiaries under law 79 had the highest (3.07) utilization rate for general practitioners. By branch, beneficiaries in the North West Delta branch had the highest utilization rate, 2.1 visits per beneficiary per year. The South Upper Egypt branch had the lowest utilization rate at 0.69 visits per beneficiary per year.

Table 13. Utilization Rates for General Practitioners (FY 96)

Branch	Govt. Employees (Law 32)	Public/private employees (Law 79)	Pensioners/ Widows	Students	Average
North West Delta	1.32	3.78	0.98	1.48	2.10
Middle Delta	1.52	3.11	2.67	0.75	1.12
East Delta	1.05	2.77	0.95	0.61	0.82
Canal	1.37	3.35	0.63	0.79	1.10
Cairo	1.18	2.81	0.88	1.56	1.73
North Upper Egypt	1.46	1.91	0.42	0.92	1.07
Middle Upper Egypt	1.74	3.30	0.75	1.40	1.52
South Upper Egypt	0.88	1.82	0.33	0.59	0.69
Average	1.33	3.07	1.05	0.99	1.29

Table 14 presents FY 96 utilization rates for specialists across all HIO programs and branches, calculated as the average number of visits per beneficiary per year. The average utilization rate for specialists across all HIO programs and branches was 0.73 visits per beneficiary per year. Among HIO programs, pensioned and widowed beneficiaries had the highest rate of visits per year at 3.13. Among geographic areas, beneficiaries in the Cairo branch had the highest utilization rate at 1.10, and beneficiaries in the South Upper Egypt branch had the lowest rate at 0.33.

Table 14. Utilization Rates for Specialist (FY 96)

Branch	Govt. Employees (Law 32)	Public/Private Employees (Law 79)	Pensioners / Widows	Students	Average
Cairo	1.40	1.98	3.67	0.52	1.10
North West Delta	0.98	2.11	2.61	0.44	1.10
Middle Delta	1.21	0.46	4.56	0.20	0.55
East Delta	1.00	1.80	3.22	0.19	0.48
North Upper Egypt	1.60	2.80	2.25	0.30	0.75
Middle Upper Egypt	1.15	2.13	2.06	0.46	0.68
South Upper Egypt	0.65	0.92	1.57	0.20	0.33
Canal	1.37	2.16	3.83	0.26	0.76
Average	1.20	1.97	3.13	0.31	0.73

4. Financial Analysis

4.1 Sources of Funding

The Health Insurance Organization is primarily funded through a system of premiums and co-payments for services rendered. Table 15 provides the details of the premium and co-payment schedules. Mandated premiums from covered employees and employers are collected by the Social Insurance Organization (SIO), while the Pensions and Insurance Organization collects premiums from pensioners. Both these organizations work under the oversight of the Ministry of Social Affairs. The 1 percent labor accident premiums collected from workers are divided equally between the HIO and SIO. This is because the SIO provides early retirement benefits to those who can no longer work because of work-related accidents. In practice, the SIO does not provide reliable information to the HIO on the identity or number of beneficiaries enrolled, so it is not possible for HIO to check whether all premiums due it have been collected and transferred.

The Student Health Insurance Plan is financed by a system of individual premiums paid by enrolled students (LE 4 per child), a government contribution of LE 12 per child, and a cigarette tax of 10 piastres per packet.

In addition, the HIO has received additional transfers from the Ministry of Finance to cover operational losses. The largest such transfer was LE 430 million to wipe out an accumulated deficit and raise the standard of services provided by the HIO.

Premium levels and co-payments have not been changed since the inception of these programs. For example, the premiums and co-payments under Law 32 have remained the same since 1975; those under Law 79, which adopted 1964 rates, also have remained the same. The HIO's beneficiary base (excluding students) is relatively small and the majority of the country's labor force is not enrolled in an HIO program. Data on labor participation for the year 1992 shows that many workers are self-employed, and others work in the informal sector or in very large companies which are not required to enroll. One estimate projected that in FY 92, HIO funding from payroll taxes was based on less than 2 percent of total applicable wages.[2]

[2] See Rannan-Eliya, Ravindra P., Khaled H. Nada, Abeer M. Kamal and Ahmed Ibrahim Ali.1997. *Egypt National Health Accounts.* Special Initiatives Report 3. Bethesda, MD: Partnerships for Health Reform, Abt Associates Inc.

Table 15. Beneficiary Premiums and Co-payments

Beneficiary Group	Salary Contribution	Benefits and Co-payments
Government employees (Law 32)	Employer 1.5%; Employee 0.5%	Complete with co-payment GP visit: LE 0.05 Specialist: LE 0.10 Home visit: LE 0.20 Inpatient day: LE 0.25-LE 0.50 Lab test: 25%, maximum of LE 1 Clinic service: 25%, maximum of LE 1 Prescription: LE 1 Prosthetics: 50%
Government employees (Law 79)	Employer 3% Employee 1%	Complete coverage, no co-payments
Public/private sector employees (Law 79)	Employer 3% Employee 1%	Complete coverage, no co-payments
Pensioners and widows	1% of base pension	Complete coverage, no co-payments
Labor accident cases	Employer 1%	Complete coverage, no co-payments
Students	Student: LE 4	Complete coverage
	Cigarette tax: LE 0.10 per packet Ministry of Finance: LE 12 per student	33% co-payment for drugs for outpatient care. No co-payment for inpatient care and chronic diseases

Source: HIO

Table 16 shows that the total revenues of HIO in FY 95 were LE 1,035.7 million. Of this, 68 percent came from premiums, 22 percent from the tax on cigarettes, 5.7 percent from other operational revenues, less than 3 percent from co-payments, and one percent from the sale of services to non-HIO beneficiaries. Clearly co-payments constitute a very small part of total revenues.

Table 16. HIO Revenue Sources by Program for FY 95 (millions of LE)

Revenue Source by Program	Amount	Percentage
Premiums		
Labor Accident	144.7	
Law 32	72.4	
Law 79	226.6	
Pensioners and widows	21.4	
Companies with waivers	13.3	
Law 99 (government plus student)	224.7	
Total premiums	703.1	67.9
Co-payments		
Law 32	9.0	
Law 79	0.0	
Pensioners and widows	0.0	
Law 99 (students)	21.3	
Total co-payments	30.3	2.9
Revenue from cigarette tax	233.3	22.5
Sale of services	10.0	1.0
Other operational revenues	59.0	5.7
Total	1035.7	100.0

Source: HIO, 1997

4.2 Expenditures

Table 17 presents HIO expenditures for FY 95, which totaled LE 969.7 million, or LE 45.93 per beneficiary. This is nearly twice what the MOHP spends per capita on providing health care to the entire population of Egypt.

Expenditure on drugs is a major area of concern. Forty-five percent of total expenditures are spent on drugs. Analysis by category of beneficiary shows that expenditure on drugs accounted for 50 percent of the expenditure on workers, 69 percent of expenditures on pensioners and widows, and 27 percent of expenditures under SHIP. HIO spent nearly the same amount on providing drugs to 767,697 widows and pensioners as it did for 14,890,165 students.

Nearly 24 percent of HIO's expenditures was spent on salaries. Salary costs were less than 15 percent of total expenditures under the program for workers, pensioners, and widows, whereas salaries accounted for 39 percent of expenditures under SHIP. The salary expenditures under SHIP might be high because the entire staff from the MOHP's school health department was transferred to the HIO.

Table 17. HIO Expenditures for FY 95 (in millions of LE)

Expenditures	Amount	Percentage
Expenditures by Program		
Workers	488.5	50%
Pensioners and widows	134.0	14%
SHIP	347.2	36%
Total	969.7	100%
Drugs		
Workers	244.0	25%
Pensioners and widows	92.2	10%
SHIP	94.5	10%
Total Drugs	430.7	44%
Salaries		
Workers, pensioners, and widows	92.5	10%
SHIP	135.9	14%
Total salaries	228.4	24%
Total Expenditures	969.7	100%

Source: HIO

4.3 Financial Viability and Equity

Table 18 shows HIO revenues and costs per beneficiary. All other HIO programs other than SHIP are either breaking even or losing money. In FY 95, the HIO broke even on public and private sector workers covered under Law 79 and incurred losses of LE 46.50 per beneficiary for government workers covered under Law 32 and LE 154.1 per pensioner and widow. The HIO has a small surplus of LE 8.5 per school child, but this surplus is very fragile. As a subsequent section will show, realistic

assumptions about costs, revenues, and utilization indicate increasing deficits in the coming years. The financial viability of HIO programs remains an area of concern.

Table 18. Revenues and Cost per Beneficiary for FY 95 (in LE)

Beneficiary Group	Average Revenue	Average Cost	Surplus/(Deficit)
Workers Law 32	31.1	77.6	(46.5)
Workers Law 79	98.9	98.9	0.0
Pensioners and Widows	29.1	183.2	(154.1)
SHIP	34.8	25.3	8.5

Source: HIO

Table 19 presents the surplus or deficit by type of beneficiary. For purposes of these calculations the average number of beneficiaries (and not the final number of beneficiaries) is used, therefore the revenue and expenditure figures are not the same as those presented in Tables 16 and 17.

The HIO incurred a loss of LE 246 million on programs that cover workers, widows, and pensioners, while SHIP generated a surplus of LE 112.2 million. Since SHIP is managed separately, its surplus is not available to offset the loss on other programs.

Table 19. Annual Surplus of Deficit by Beneficiary Category for FY 95 (millions of LE)

Beneficiary Group	Average Number of Beneficiaries	Total Revenues	Total Costs	Surplus (Deficit)
Workers Law 32	2,872,500	89.33	222.91	(133.57)
Workers Law 79	2,425,500	239.89	239.89	0.00
Pensioners and Widows	733,900	21.43	134.52	(113.09)
SHIP	13,201,520	459.41	347.20	112.21

Source: HIO

Tables 20 compares HIO expenditures per beneficiary by program and across HIO regional branches. The lowest level of spending is in South Upper Egypt and highest level is in the Canal branch. For example, in FY 95 the HIO spent 4.58 times as much on students in the Cairo branch as it did on students in South Upper Egypt. The HIO is already incurring a deficit per student in the Cairo branch, and the same might soon be true in the Canal branch. Thus, revenues collected from Upper Egypt, where per capita incomes are lower than the rest of the country, are being used to subsidize students residing in areas with higher per capita income. Similarly, the expenditure per beneficiary in the Canal branch, under the scheme for pensioners and widows, was more than twice that in South Upper Egypt. Under Law 79, beneficiaries in the Canal branch received 3.4 times as much as their counterparts in South Upper Egypt. These results point to the inequity in HIO spending.

Table 20. Comparison of HIO Expenditures Per Beneficiary by Branch, FY 95

Branch	Govt. Employees (Law 32)	Public/Private Employees (Law 79)	Pensioners / Widows	Students
Cairo	101.30	116.30	174.20	35.30
North West Delta	32.10	67.60	170.90	28.70
Middle Delta	73.10	124.10	205.60	16.10
East Delta	71.00	105.90	173.50	18.10
North Upper Egypt	104.50	125.70	202.20	27.80
Middle Upper Egypt	71.60	123.70	165.60	22.20
South Upper Egypt	37.30	48.80	129.20	7.70
Canal	105.50	166.60	256.80	30.90
Total	77.60	98.90	183.33	26.30

Source: HIO

4.4 Financial Projections

The current financing structure for HIO is not viable. Tables 21 and 22 project estimated revenues and expenditures for HIO for 1996 to 2000. The assumptions underlying these projections were based upon an analysis of data of HIO's financial results from 1993 to 1995. Separate projections are presented for SHIP and all other programs (public and private sector employees, widows, and pensioners), reflecting the very different financing base and utilization patterns for these groups.

4.4.1 Financial Projections for Programs Covering Employees, Widows, and Pensioners

The following assumptions were used to project revenues and expenditures for these programs:

> The beneficiary population was projected to increase by 5 percent per annum.

> Costs were projected to increase by 14 percent per annum based on actual cost increases since 1993 for these programs. This rate is roughly 6 percent above the national inflation rate.

> Since these groups already have high utilization rates of outpatient and inpatient health services, it was assumed that utilization rates per beneficiary would remain constant over the next five years.

> It was assumed that premiums would increase 10 percent annually. This takes into account the fact that under Law 32 premiums are levied on base salary whereas under Law 79 they are on gross salary.

Over the next five years the number of beneficiaries is projected to increase from 6 million to over 7 million. While revenues are expected to more than double over the next five years, expenditures will increase at a faster rate. Consequently, the annual deficit under these programs is

projected to increase from LE 246 million in FY 95 to LE 750 million by the year 2000. In other words, HIO's losses per beneficiary in the worker, pensioner and widows programs will increase from LE 41 in FY 95 to LE 97 in FY 2000.

Table 21. Enrollment, Revenues, and Expenditures for HIO Programs for Workers, Widows, and Pensioners: Actual 1995, Projected 1996–2000

Year	Number of Beneficiaries	Revenue (millions LE)	Expenditures (millions LE)	Deficit (millions LE)
1995	6,031,950	350.65	597.32	-246.67
1996	6,333,548	405.00	714.99	-309.99
1997	6,650,225	467.78	855.84	-388.06
1998	6,982,736	540.28	1024.44	-484.16
1999	7,331,873	624.03	1226.26	-602.23
2000	7,698,467	720.75	1467.83	-747.08

4.4.2 Financial Projections for SHIP

The following assumptions were used to project revenues and expenditures for SHIP:

> The number of new school children added to the program was projected to increase by 6 percent annually. This is based upon the Ministry of Education's data on the percentage of new children attending school each year and an adjustment for attrition in attendance over the course of the year.

> Costs were projected to increase by 14 percent per annum based on actual cost increases since 1993 for these programs. This rate is roughly 6 percent above the national inflation rate.

> Utilization rates for outpatient services were projected to increase by 5 percent annually. The Egyptian Household Health Care Utilization and Expenditure Survey showed that children in this age group use nearly twice as many outpatient visits as those currently occurring under SHIP. It is expected that more students will use the SHIP to pay for health services due to increased accessibility to physicians and greater awareness of program benefits.

> It was assumed that inpatient admission rates would remain the same.

> Premiums were assumed to remain at LE 16 per students. Of this, LE 4 would continue to come from the student and LE 12 as a transfer from the Ministry of Finance.

> Revenues from cigarette tax were assumed to increase by 5 percent annually. This is based upon the increase in consumption of cigarettes and assumes that that the tax per packet will not change over the next five years.

Over the next five years the number of students covered through the school health insurance program is projected to increase from 13.2 million to 16.85 million. Over the same period, revenues are projected to increase from LE 444.52 million to LE 567.34 million. However, expenditures will increase from LE 315.4 million to LE 918.44 million. This will mean that the current surplus of LE 129 million per year will be transformed into an annual loss of LE 351 million by the year 2000.

Table 22. Enrollment, Revenues and Expenditures under SHIP: Actual 1995, Projected 1996-2000

Year	Number of Beneficiaries	Revenue (millions LE)	Expenditures (millions LE)	Deficit (millions LE)
1995	13,201,520	444.52	315.40	129.13
1996	13,861,596	466.75	390.17	76.58
1997	14,554,676	490.09	482.92	7.17
1998	15,282,410	514.59	598.02	-83.43
1999	16,046,530	540.32	740.93	-200.61
2000	16,848,857	567.34	918.44	-351.10

While these estimates are very preliminary and probably require modifications based on more detailed analysis, the finding clearly points to fact that HIO's deficits will increase unless remedial measures are taken immediately.

4.5 Conclusions

Many factors contribute to the lack of financial viability and equity in HIO programs:

> Contribution rates and co-payments are low relative to current levels of household spending and have remained unchanged since their enactment.

> Employers are able to opt out of HIO coverage for employees if they purchase similar coverage elsewhere, paying only 1 percent employer premiums.

> Financing is not equitable, with beneficiaries in regions with lower incomes bearing a larger burden than those living in regions with higher incomes.

> Beneficiary coverage fragments households and services. For example, employees are covered but their families are not, school children are covered whereas their parents might not be.

> Management of HIO programs is inefficient. The management of SHIP is separate from other HIO programs. This not only precludes pooling of risk across age groups but also leads to duplication of administrative functions and service delivery.

> Due to pressures to maintain hospital services and invest in new technology, scarce HIO resources are being diverted to hospital-based services.

> The HIO faces significant problems in controlling drug costs. They account for 69 percent of expenditures on widows and pensioners, 50 percent of expenditures on employees, but only 28 percent of expenditures under SHIP. The expenditures under SHIP are low primarily because there is a co-payment for drugs.

The HIO is rapidly becoming a purchaser of health services, instead of a supplier of health services, through increasing use of contracted private providers in order to meet the needs of its beneficiaries. Today, 65 percent of physicians under SHIP are contracted. Forty-one percent of hospital admissions under Law 32 and 79 and 58 percent of admissions under SHIP occur in

contracted facilities. Admissions at contracted hospitals account for 61 percent of inpatient costs under Laws 32 and 79 and 60 percent of inpatient costs under SHIP. The HIO reimburses contracted providers largely on a fee-for-service basis, which may encourage over-provision of services and contribute to higher costs. For example, HIO spends 2.5 times more per admission in a contracted facility as compared with the cost per admission at its own facility.

5. A Reform Strategy for the HIO

5.1 Principles Underlying the Reform Strategy

Based on the preceding review of Health Insurance Organization operations and finances, many problems and opportunities can be identified that point the way to a reform strategy. A reform strategy for the HIO was formulated based on the following principles that underlie a future vision for the organization:

> Universality: All Egyptians should be assured coverage for a basic set of primary care services.

> Equity: The financial burden of providing the covered services should be shared fairly. No one should be denied covered services for want of ability to pay.

> Efficiency: Services should be provided in a cost-effective way in keeping with the principles of universality and quality.

> Quality: Covered services should be provided according to accepted standards of scientific and clinical practice and at a level that will be perceived as adequate by the beneficiaries.

> Sustainability: There should be enough resources to adequately finance the basic set of services in the short and long term.

It is evident that the HIO currently does not meet any of the principles stated above. The current system fragments population by employment status, school enrollment, or age (pensioners and widows). The burden of premiums as well as benefits from expenditures are not distributed equitably. There exist both technical and allocative inefficiencies. Quality is perceived as being poor, and it is not financially sustainable either in the short or long run. Quite clearly, reforms are required for the HIO to meet its potential and contribute to achieve the principles described above.

5.2 Elements of a Reform Strategy

The reform strategy has four elements:

> A basic package of benefits (health services) with associated standards of quality. This package should emphasize cost-effective interventions to improve the health of the population and reduce the burden of illness. An appropriate balance must be found between the breadth of benefits and the financial resources available.

> Sustainable and equitable financing to assure access to the basic package at an adequate level of quality. Significant increases in funding will be required to improve access to and quality of health care services. Resources may be derived from a number of sources. The financing structure should remedy the current inequities due to lower-income regions

contributing relatively more than higher-income regions. Introducing incentive payments for providers can contribute to sustainability.

> Reorganization of beneficiary coverage and the provision of health services to obtain greater efficiency and quality. The fragmented coverage does not permit appropriate pooling of risks, and leads to cumbersome and expensive duplication of administrative functions. Significant reorganization of the existing system is required.

> Strengthen the HIO organizationally, increase its capacity for planning and management, and upgrade its information systems.

> Specific reform recommendations are discussed under each of these four elements.

5.3 Basic Benefits Package

Even though the HIO provides a very comprehensive and deep set of benefits to most of its beneficiaries, access is probably limited due to financial constraints. Laws 32 and 79 allow treatment outside the country. There are no limits on the amount of services (including drugs) that a beneficiary can consume. Preventive health care services are provided only to school children. The current package does not adequately emphasize certain health promotion and behavior-change interventions that could lead to significant reductions in future disease burdens that are now predictable as a result of health transition process.

A key element of the reform is *defining the basic package of health care benefits* to which every Egyptian will have access. The package should cover both primary and curative care services. Development of the package must consider:

> The prevalence of disease in the community,

> The common causes of mortality among different population subgroups, and

> The common causes of morbidity (non-fatal health problems).

Necessary data for the development of a basic benefits package can be made available through household surveys, health facility surveys, service utilization patterns, national health statistics and analysis of burden of disease. The basic benefits package should be financially sustainable, so it is necessary to design a limited package that covers essential services, rather than a broad package that is not sustainable.

The basic benefits package should have the following components:

Preventive care

Preventive care includes a range of services for different age groups including health education, immunization, family planning, and periodic examination.

Primary health care

Primary health care refers to individual-based essential preventive and curative services, which address the most common causes of morbidity and mortality in the community.

Curative care

Since a wide range of services can be provided under curative care, limits must be set according to disease prevalence, causes of mortality and morbidity, financial coverage, and ability to deliver quality service. Curative care services should cover outpatient and inpatient services and include treatment of acute illness and injuries, some chronic conditions, mental disorders, emergencies, and dental care. The package should exclude services such as elective surgeries, private-room hospitalization, and services outside of Egypt. Difficult decisions will have to be made about coverage for organ transplants, renal dialysis, dental services for adults, eyeglasses, etc.

Diagnostic procedures

Laboratory investigations, radiology, and other diagnostic procedures should be included in the package but must be tied to a physician's request and linked to curative care.

Pharmaceuticals

Pharmaceuticals are an important component of the basic benefits package. Estimates show that pharmaceuticals account for almost 60 percent of the HIO's total payments. The package must include an essential drug list. Payments or reimbursement for drugs should rely on generic and non-generic lists where the insured can co-pay for some drugs.

For those who can afford it, private insurance may play a role in covering the costly procedures or benefits not included in the basic benefits package.

5.4 Sustainable and Equitable Financing

As previously discussed, the HIO reinforces inequities in the health system instead of addressing them. The HIO is projected to accumulate increasing deficits. The HIO's current method of paying for health services probably leads to substantial waste and inefficiency. The incentive structures both within HIO and for contracted services do not contribute to improved output or cost containment. Given this, merely increasing public spending on health care will be expensive and will not provide adequate value.

Separation of financing and provision

One of the main methods of improving health system performance is to introduce greater separation between the functions of financing and actual provision of health services. The HIO is already increasingly purchasing services from contracted providers. The complete separation of the financing from provision will permit the HIO greater use of financial incentives to stimulate restructuring of health facilities and efficiency and quality improvements.

Create a fundholding entity

One way to strengthen the separation of the financing and service provision functions is to create a fundholding entity that manages funds to purchase services under the supervision of the government. This entity would be responsible for contracting services, monitoring their quality, and paying service providers. It would also maintain the information system for clients and provider registration. This entity could be within the HIO or a separate entity.

Develop a financing strategy for long-run sustainability

Financing could come from a combination of many sources, including budget transfers, a payroll tax, co-payments, premiums paid by the beneficiary, a consumption tax, and contributions from the local community, district, and governorates. One challenge is that the structural adjustment that is being undertaken in response to macroeconomic pressures threatens public subsidies and spending for health. Thus, other sources need to be tapped for additional resources to finance health care.

Develop a financing strategy to improve equity

The burden of out-of-pocket health expenditures is very regressive. The poor also bear the highest burden of ill health. One of the goals of focusing on the family and designing a package of services is to promote the use of preventive and primary health care. Currently, there is very little demand for these services, and this is particularly true for individuals in Upper Egypt and with lower incomes. Financing should redistribute the burden of paying for health services.

Develop incentive payments for providers

Provider payment methods can be used to rationalize provider behavior. Design of incentive-based provider payment methods should take into consideration the unit of payment, levels of payment, and overall expenditure limits. Options might include capitated payments for outpatient services and diagnosis related group-type payments for inpatient services.

5.5 Reorganize Coverage and Service Provision

Currently, HIO beneficiary coverage fragments households and services. For example, employees are covered but their families are not, school children are covered but their parents might not be. Service delivery in the public health care system is fragmented. There are several health care organizations and a wide range of different service delivery units. In contrast to this fragmentation and variety in the provision of services, individual HIO beneficiaries have little or no choice of provider. They must go to HIO-run or HIO-contracted providers. The HIO does not set or enforce any standards for the quality of service provision.

Make families the focus of service provision

The family unit should be the basis for HIO enrollment and coverage, instead of fragmenting family members with separate, uncoordinated coverage or leaving some members uncovered. The ideal care delivery model would be to have the whole family served by the same family practice physician. This would be more convenient and improve access for the family since they could have their primary health care needs met at a single facility. This care delivery model would also improve the quality of care because it would allow the physician to treat and educate other members of the family who are affected by the health problems of another member of the family.

Permit consumers to choose their providers

An important part of the reform initiative must be to allow beneficiaries to choose their primary care physician. This allows the money to follow the consumer. The government should also broaden choice by defining a role for the non-governmental sector in providing some of the services contained in the benefit package.

Restructure the public provider market

If the family is to be the focus, then it is important to reorganize the various public sector delivery units into “family health units” and/or “family health centers.”

Promote quality in the private provider market

In order for the private sector to play an effective role in a competitive market, it will be necessary to establish standards for service provision not only for the public but also for the private sector. These standards should detail the accreditation requirements for private health units including facility, staff qualifications, equipment and supplies, as well as recordkeeping and reporting/recording requirements. Meeting these requirements would be a prerequisite to participating in the system and receiving payments from the HIO

5.6 Strengthen the HIO Organizationally

The HIO has a centralized organizational structure that directs most aspects of the system. For example, the central office in Cairo determines staffing levels and assignments. The HIO lacks a clear delineation of responsibilities, practices, and standards. The HIO needs to transform itself into an organization that is capable of effectively managing its growing role as a purchaser of health care services. The HIO needs greater contract management capacity including the ability to negotiate, monitor, and assess contracts, quality assurance, and monitoring costs and utilization by beneficiary. Finally, the HIO lacks capacity for strategic and financial analysis and planning.

Since 1997, the HIO has initiated a number of measures aimed at containing costs and improving efficiency. These include setting performance standards for physicians, using generic instead of brand name drugs, and computerized cost accounting systems. The HIO, with assistance from the United States Agency for International Development, has made significant investments in developing and installing 10 information systems modules at the central, branch, and facility levels. These information systems have helped the HIO reconcile the number of beneficiaries, track utilization and cost of providing services by type of intervention, and monitor the consumption and prescription of drugs and quality of care.

The following are recommendations for further strengthening the HIO.

A unified social insurance law

Current social insurance laws that define beneficiaries either on the basis of employment status, school enrollment, or age prevents effective pooling of risk and resources. This detracts from universal coverage, leaves vulnerable segments of the population uninsured, and creates multiple financing mechanisms that lead to significant inefficiencies. It also leads to increased costs because of lack of economies of scale and duplication of administrative functions and legal requirements. The HIO should pursue unifying the current laws into a single law. The new law should also address the financial viability and sustainability of current HIO programs. The HIO has drafted such a law to be presented to the People’s Assembly in the session starting in October.

Invest in the HIO information system

The HIO has already made significant investments in developing information systems. These systems include those for cost analysis, beneficiary registration and monitoring, drug inventory and

control systems, and accounting systems. These systems should be strengthened and expanded, and integrated into the decision-making process

Invest in creating new capacities

The HIO needs greater capacity in policy development and analysis, planning, budgeting, actuarial science, and financial management. This will require significant investment in new training.

Develop a detailed investment plan

The HIO needs to develop a detailed investment plan to upgrade facilities and services.

Develop an appropriate public–private partnership

The HIO should assess the potential of the private sector to perform some of its functions such as maintaining the information systems.

Given the magnitude of reform, it is recommended that the new approach be designed and piloted in a few geographic areas.