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HEALTH POLICY REVIEW

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HEALTH SECTOR POLICY REVIEW

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1982 Health Sector Assessment, Egypt

HEALTH POLICY REVIEW

Dr. James Jeffers

Executive Summary

The policy issues and problems of the MOH health services delivery system are in large measure a direct reflection of more general GOE policies and of consequent problems existing within the context of Egypt's overall social and economic development strategy. This strategy emphasizes import substitution as the principal means of promoting industrialization. It also emphasizes equity, at times at the expense of promoting efficiency in the production and distribution of goods and services. Fiscal tax and transfer mechanisms are very undeveloped, and equity is promoted through an elaborate price subsidy scheme. There is, in principle, virtually unrestricted and free education at all, including professional, levels. Export of skills and labor is an important (but inefficiently exploited) source of foreign exchange. University graduates are guaranteed employment within the government and public enterprise sectors, which constitute roughly 80 percent of total economic activity. Industry, agriculture, transportation and communication, and other productive sectors, all receive high development priority. "Nonproductive" sectors, including health, receive relatively low priorities. Government expenditures are highly price elastic, while revenues are highly price inelastic, producing rising deficits as inflation continues over time. Decentralization of much GOE administration to the 26 governorates has proceeded slowly, due to well-entrenched centralized bureaucracies and to problems in strengthening and expanding governorate level finances and administrative and technical capacities.

Free education has resulted in an enormous increase in enrollments in universities, including medical schools. Those members of the HSA team who appraised the quality of health sector education and the quality of health services delivered concluded that too-rapid expansion of medical school enrollments has resulted in low quality medical education and in the production of large numbers of low quality medical graduates. The MOH has followed the policy of creating jobs for these physicians in the government and public medical sectors in connection with doing a superb job of expanding health infrastructure in rural areas. However, the large number of physicians absorbed into these systems has placed a very large burden on the MOH recurrent budget; this has made it difficult for the MOH to also allocate sufficient funds for supplies and for maintenance of buildings and equipment. The result is that the public health system is adequately capitalized in terms of infrastructure, but is undercapitalized in terms of quality of health professionals and is underfunded in terms of complementary resources, all of which unfortunately result in a low quality of health services delivered.

Only a few hundred physicians are in completely private practice, although the majority of GOE-salaried physicians also offer their services as private physicians. This is partly due to rent control policies which have led to a black market pricing mechanism in the housing (and office) market. Space is only leased at the official rental rates after occupants have paid "key money" in quantities reflecting the present value of market clearing rental rates that would prevail during the period of future occupancy. The high levels of "key money" required for physicians to acquire sufficient space for private clinics are increasingly discouraging the entry of physicians into full-time private practice. The availability of free government housing for rural physicians, combined with the current policy of permitting them to also practice privately and the greatly-increased availability of cash among the rural people, has made more physicians opt to remain in rural assignments after their initial obligatory national service. Thus the common practice is for physicians to remain in government service (rural or, preferably, urban), accumulate GOE pension credits, and operate part-time private clinics on scales which are not technologically efficient.

Government pharmaceutical subsidy programs (L.E. 15.0 millions in 1981) encourage the consumption of drugs, which is very high in Egypt in comparison with other countries. Drug utilization and consumption is growing roughly 20-25 percent per year. (See HSA report on Pharmacies.) Drug costs constituted roughly 40 percent of total recurrent spending on private and public sector health services delivery activities in 1978. This high consumption of drugs also appears to be related to the low level of physician quality (unsure physicians may prescribe too many drugs), to the fact that most drugs can be purchased over-the-counter without prescription, and to pharmacists' de facto diagnostic and prescribing roles. The GOE policy of drug price subsidies is part and parcel of the overall strategy of promoting industrialization through development of import substitution. Currently, approximately 80.0 percent of drugs consumed in Egypt are produced locally. This policy is likely to be continued in the future. Largely due to the massive consumption of drugs by private sector individuals, private sector outlays constitute 54.0 percent of total recurrent health sector spending.

Government policies of subsidizing the prices of basic commodities (especially food and fuel) and social services (water, sewage, electricity, etc., in addition to education and health services) place an enormous burden on the public sector recurrent budget. Since health services delivery is viewed as a consumption activity, low priority is given to allocating funds to the health sector. Given the low elasticity of revenues and the high elasticity of expenditures relative to prices, inflation places an increasing real burden on the government recurrent budget. Economic authorities feel that the money that is required to expand or adequately support public health services delivery simply does not exist. The GOE/MDH response has been to become increasingly intrigued with the idea of foisting responsibility for expansion of health services delivery onto the Government Health Insurance Organization (GHIO) and the private sector. This policy strategy has considerable merit from the public finance point of view.

The policy strategy of giving dominant responsibility for the expansion of health services delivery to the GHIO and the private medical system raises some very significant issues and problems. The private sector is geared up to serve the high to middle income segment of the market for health services. Encouraging the expansion of the private sector in the interests of relieving the public sector of part of the burden of health services delivery leaves the public sector with the dominant responsibility for delivering health services to the poor (23-30 percent of the population), who have little with which to pay for services. Given the lack of developed fiscal policy tax and transfer mechanisms, currently there is little or no government capacity to subsidize incomes of the poor to enable them to consume private sector services. Government hopes that the GHIO eventually will be able to provide health services to the entire population. However, the analyses in Section 2.0 of this paper show that currently the GHIO is servicing middle to upper middle income class consumers and is barely breaking even. It is clear that as the GHIO is forced to expand coverage, revenues will not cover costs and the GHIO would either incur deficits (and thus require government subsidy) or be forced to provide increasingly lower quality health services. A major issue concerns government's capacity to financially support the GHIO and at the same time to assure access to health services on the part of the poor, who have access to neither the GHIO nor to the private medical sector.

However, it should be emphasized that Egypt's health sector has some rather fundamental policy issues and problems which cannot be solved by rearrangements of financial mechanisms alone. Those fundamental problems must be addressed directly in order to achieve progress toward resolving them. Some of the major problems and issues identified in Phase I of the health Sector Assessment and analyzed here from a policy and finance viewpoint (in Section 3.0) include:

- Low priority to health, suggesting that in the future government will continue to allocate insufficient funds on current account to effectively develop and sustain the levels of services which potentially could be produced as result of large capital investments made in prior periods (Section 3.1).
- Rigid health planning, operating, and budgeting procedures, which inhibit replication of innovative or more effective health programs, including those developed with donor support (Section 3.3).
- Government plans to further increase the rate of graduation of physicians (from 5,000 currently to 7,000 annually), whose predictable low quality and absorption into the public system would probably lead (both directly and through further budget distortions) to further declines in the quality of health care in that system (Section 3.4).
- The inefficient collection of foreign exchange earnings of physicians (and others) working abroad is one factor leading to primary reliance on producing large numbers of health professionals for export in the interest of continuing to increase the volumes of foreign exchange thus acquired. However, the level of demand for Egyptian health professional services on the part of traditional

foreign consumers is now expected to diminish, eventually requiring absorption of larger numbers of health professionals by the government and public health systems (Section 3.4).

- Low status and pay accorded the nursing profession lead to unfilled capacities in training schools, low average quality in some categories, short working lives for nurses, a probable negative return on nursing education, and a definite shortage of nurses relative to doctors (Section 3.4).

- Low incentives lead to low levels of job performance in government service, due also to distractions presented by opportunities for private practice. Low pay in government service, coupled with high rates of earnings available in private practice after (and perhaps during) government working hours, dampens incentives for high performance in government service. This raises a question as to whether Egypt (or any country) can successfully operate a public system in which professionals are allowed to provide fee-for-service activity while in government service (Section 3.5).

- Lack of management, supervision and discipline make the public system unable to redress the low job performance of government health workers stemming from poor training, lack of complementary supplies, low pay, and distractions offered by opportunities for private practice. The government system is coming dangerously close to serving as a "front" (i.e., as a referral system) for private practice (Section 3.5).

- Lack of MDH programs aimed at upgrading skills and providing continuing medical education to government, public or private health services providers. Licensure is perfunctory upon graduation from medical school and registration with the Medical Syndicate. Relicensure, competency-based recertification, and continuing education are not now required of physicians or nurses (Section 3.5).

- Lack of MDH capacity to recruit and retain medical administrators and managers. The rapid growth and earnings of private practice are dampening incentives for physicians to seek careers as administrators and managers and thus are "gutting" the capacity of the MDH to manage its own system. The number of physicians in key MDH health administration and management positions is predicted to decline from 350 now to approximately 70 in the next five to ten years (Section 3.5).

- The tendency for the private medical sector to concentrate on high income segments of the medical market place. The demand for private health services appears to be highly income elastic, leading to a very rapid growth in private practice activity as real income grows over time. Evidence concerning the distribution of private practice clinics and hospitals shows that they are preponderantly concentrated in Cairo and Alexandria and in the upper tier of remaining governorates which rank high in levels of income and quality of life factors generally. Thus it may be concluded that the private medical services delivery activities are targeted at "skimming the cream" off the top of the medical market leaving it to government sponsored health agencies to provide services to low and middle class consumers (Section 3.5).

- Lack of adequate capacity for effectively monitoring, supervising, and regulating private medical practice. While the MDH has drafted laws to license private practice clinics and hospitals and proposes to regulate standards of performance and fees charged, it has little or no capacity in terms of data collection procedures, adequate numbers of staff, or staff who are trained to undertake these functions (Section 3.5).

- Previous lack of high level political leadership and commitment to family planning. Health professionals lack training in family planning.

- Although nutrition in general is good, it depends on costly general subsidy programs and services don't focus on groups and individuals at risk or in need. Health professionals lack knowledge and skills in nutrition surveillance and in monitoring in general. Food distribution programs appear to lack targeting to populations at greatest risk, largely due to lack of training and direction and to the absence of data identifying income levels and other family circumstances involved in determining need and risk. The GOE appears not to have developed a comprehensive nutrition policy and strategy. (Section 3.6)

- The failure of the GHIO to offer preventive and promotive health services and family planning services (Section 3.6). This is a very serious issue, in view of the heavy reliance government is placing on expanding the role of the GHIO in the future.

- Environmental sanitation is poor, and conditions are getting worse. There is a lack of adequately trained personnel in this area, and salaries are too low to elicit levels of service performance required to maintain water and sewerage systems. There appears to be no policy of assessing the health implications of new water and sewerage programs; hence such assessments are not made. There is a shortage of trained staff and of other environmental health resources. Subsidized prices encourage utilization of services, but yield low volumes of revenues with which to maintain service systems. (Section 3.6)

- The probable failure of the GOE/MDH planned policy to solve health systems delivery problems with principal reliance on expanded private and GHIO health services and population coverage. The private sector will at best serve roughly 20 percent of the upper and upper-middle income segment of the population. Without either government subsidy or serious deterioration in the quality of services provided, it would appear the GHIO and other public organizations could serve maximally an additional 60.0 percent of the total population, leaving roughly 20 percent of the poorest of the poor with no service. (Section 3.7)

- It appears inescapable that government must find ways to insure access to health services on the part of the very poor. This could be done by creating a medicaid-type system, retaining and reforming elements of the strictly government free curative health services system, introducing tax-and-subsidy or sliding fee schedule schemes, or subsidizing directly the GHIO and other

elements of the public system. However, policy and practical procedures for implementing such schemes do not currently exist (Section 3.7).

In view of the pervasive and fundamental nature of existing health services delivery problems in Egypt, little can be done by way of substantive USAID assistance unless government is willing to undertake major revisions in health sector policies. The decision to revise or not to revise policies is the strict prerogative of the GOE. However, in the absence of GOE willingness to effectively redress serious policy issues and problems, USAID assistance for health sector development, rationally, would be minimal. This assistance would then perhaps consist primarily of relatively small transfers of health services commodities, thus preserving a greater share of U.S. economic aid for allocation to other sectors of Egypt's economy.

However, the author has been impressed with the receptiveness, candor, and recognition of problems and issues articulated by the MOH officials, including His Excellency the Minister of Health and certain First Undersecretaries of State for Health. There thus appears to be willingness and commitment in the MOH to take steps toward revising major policies and thus resolving major issues and problems, along with a genuine desire for USAID assistance in doing so.

In Section 3.0 of this report, the author has proposed sets of broad policy revision options, in descending order of severity in terms of deviations from existing policies, and has suggested various ways in which USAID could collaborate in assisting the MOH in rationally developing the health services delivery system depending on policy options, revisions and initiatives taken by the GOE. Section 4.0 (and especially Table 4.2.1) summarizes suggested categories of possible USAID assistance in relation to importance, timing and types of assistance which might be required in order to support implementation of adopted revisions of GOE policies and practices and consequent resolution or amelioration of major issues and problems.

Major issues constituting constraints on health sector development are summarized below, with corresponding policy options and related possibilities for USAID assistance.

Issue - Low Priority placed on Health Sector

The first major issue raised in Section 3.1 concerns the relatively low priority given to health by the GOE. It is suggested that unless the GOE is willing to give added priority to health, USAID assistance rationally would be minimal in terms of types of assistance and levels of funding. Minimal health sector assistance would be directed toward illness prevention and promotive health activities, with a primary focus on strengthening capacities for family planning and on upgrading existing stocks of health facilities, equipment and manpower. Assistance would be targeted toward those urban and rural populations which currently are, or in the future will become, relatively disadvantaged with respect to accessibility to health services. As an alternative, transfers of commodities could be effected to health services

providers (government, public, and private, or to providers administered by other ministries or sectors) which are deeply engaged in serving medically disadvantaged population groups. Commodities transferred could consist of replacement parts for vehicles and equipment and consignments of other specifically needed medical requisites such as disposable syringes, nonlocally produced pharmaceuticals, etc.

However, if the GOE were to exercise the policy options of giving higher priority to health generally and to addressing other major policy issues raised in the HSA report, a more substantial volume of USAID assistance rationally could be allocated to Egypt's health sector development.

Issue - Rigid Health Planning, Operating and Budgeting Processes

A major issue exists in connection with the apparent top-down approach to planning, budgeting, and operating policies, all of which predominantly focus on capital development or health facilities. There appears to be little targeting of populations at risk and of health problems which are most important and for which effective medical interventions exist. There is inadequate provision in MDH services for selection of alternative staff, management, and incentives constituting appropriate health programs selected from alternatives. There also appears to be little flexibility in the specification of staffing and medical requisite complements that are functionally related to probable and actual rates of utilization. The USAID-supported Strengthening Rural Health Delivery Project was originally designed to test alternative incentive, supervision, and management support systems in terms of medical effectiveness, administrative feasibility, and cost-effectiveness as prerequisites for system-wide replication. While information concerning this project is sparse, the evidence suggests an unwillingness or inability for the MDH to experiment with alternative ways of overcoming some key health services delivery issues and problems, which the MDH itself had identified and selected during the course of project design. This raises a serious issue concerning the types of support USAID can rationally provide in the future. Related issues concern whether existing planning, operating and budgeting procedures can accommodate experimentation, replication of pilot projects nationwide, or attempts on the part of local communities to plan, adapt, or initiate innovative health services delivery programs with appropriate budgeting, planning, and administrative accommodation. (Note that this view of the project is partly based on the HSA report on the Strengthening Rural Health Service Delivery Project, dated April 19, 1982, which Dr. Almotaz B. Mobarak has indicated will be revised by the MDH.)

Assuming that the GOE is willing to initiate policies involving experimenting with loosening-up its planning, operational, and budgetary processes, USAID could provide assistance in connection with such efforts. One or more projects aimed at developing flexible planning, operational and budgetary policies and procedures involving the MDH, MDF, and the MDP could be initiated at governorate levels. Such projects could involve training of health planners, administrators, health personnel, budget officers and local

community leaders as appropriate as well as provide needed vehicles, supplies and equipment. The focus of these projects would be on institutionalizing planning, operating, and budgeting guidelines, policies and procedures that would sharpen targeting on selected populations at risk, disease entities, and resource requirements involved in using appropriate medical, administrative, organizational, training, and management technologies.

Issue - Educational and Training Policies in the Health Sector

The central issue in this area concerns the training of excessive numbers of physicians, resulting in a low quality of medical practice generally throughout the health system. A second issue concerns the low levels of incentives and status accorded to nurses, resulting in unfilled training slots, short working life expectancy, probable negative social returns on nursing education, and resulting shortages of nurses relative to physicians.

Given that the number of physicians being trained appears to be excessive, and given the low quality of training received, it appears that USAID assistance to increase numbers of medical graduates would not be required or appropriate. It also appears that further efforts to upgrade the quality of medical education beyond the current Suez Canal University effort would be appropriate only if the medical education establishment, consisting of already existing medical schools, has a strong interest in and commitment to such curriculum revision. There is little evidence that this is the case. In view of the low pay and status of nursing, it appears that USAID assistance in training greater numbers of nurses or in upgrading the quality of nursing education would also not be appropriate.

Several policy options are posed. First, independently of other policy options discussed, the GOE should be encouraged to extract greater volumes of foreign exchange from health professionals (and possibly others) working abroad, perhaps using approaches proven successful in other nations (e.g., in the Republic of South Korea). This would reduce the perceived necessity of producing large numbers of physicians for export. This is important, because it appears to this author and to others that opportunities to export physician services will diminish in the near future. Second, a severe policy option involving a planned reduction in the number of physicians trained is proposed in the interests of permitting the upgrading of the quality of physician training, raising salaries of physicians employed in government services, and also in the interests of relieving government training budgets. Third, an equally severe policy is proposed, consisting of bonding physicians in government service for comparatively long periods (8-10 years) while prohibiting them from engaging in private practice or to take leave abroad until such a time as government realizes a positive return on investment in their medical education. While serving in the government system, physicians would have the opportunity to undertake continuing education and would be licensed for private practice or practice abroad based on competency certification. The rationale for this policy is to build in a progression of opportunity to advance in earnings that is ascending in terms of length of government service and demonstrated competency. Fourth, the least severe

policy option that is proposed, one which is an essential minimum, would be to require all physicians (those currently in service and those newly graduated) to be relicensed, undertake upgrading of skills, undertake continuing education, and undertake periodic recertification based on competency examinations. Similar programs focused on upgrading first the status and later the skills and competency of nursing personnel are also minimally essential. Election of any of these policy options by the GOE would appear to merit USAID assistance, with levels of assistance directly related to the severity of the policy revision or initiative undertaken by the GOE.

Issue - Government Relationships with Private Sector

The term "private medical sector" is a misnomer in the context of Egypt. Differentiation between public and private sectors implies separation and independence that simply does not exist, since government and private health services delivery activities are performed by the same individuals. The distinction between public and private medical sectors is in reality a distinction between activities which are differentiated in the main on the basis of the time of day, whether or not patients pay for services out-of-pocket, perception of quality of care provided, and to some extent the site on which services are rendered. Realistically, public and private "sectors" must be viewed as greatly overlapping parallel activities and not as separate and independent service sectors. The major factor differentiating between these activities is the method by which patients pay for services (collectively through taxes in the case of public services and individually through out-of-pocket payment in the case of private practice activities).

When incomes in Egypt were low, allowing government physicians to also engage in private practice may have been necessary to retain physicians in government service. However, now that incomes are higher and growing rapidly, private practice earning possibilities are high and are growing by leaps and bounds. The fact that government salaries have not grown as rapidly as private practice earning opportunities has resulted in a steady diminution in incentives for physicians to perform well in government service, and is also reducing incentives for physicians to seek medical administration careers in government service. The government service provides an income that is certain, a pension scheme, free housing and tax advantages in the case of rural physicians, and a referral point for private practice activity later in the day, in both rural and urban areas. A very major issue concerns whether Egypt or any country can successfully operate a public system in which medical professionals are allowed to practice fee-for-service activity while in government service.

A severe policy option - consisting of restricting government physicians from engaging in private practice, reducing the universities' output of physicians, bonding physicians for longer periods in government services but providing skill upgrading and continuing education opportunities while raising physician salaries - would have to be introduced gradually over time. A less severe policy option would require licensure of physicians (public and private), competency-based recertification, and strict regulation of private practice

activities, which would also be heavily taxed in order to retard the rate of growth in the gap between government physician salaries and private practice earning opportunities.

In any event, it is very clear that the GOE must begin to closely monitor and regulate private medical service delivery activities. In particular, the GOE should establish an independent secretariat to serve the new High Council on Medical Insurance. USAID can assist the GOE in establishing policies, policy standards, data systems, certification and licensure examinations training systems and procedures for administering them. Also USAID can assist the GOE in developing new schemes of service including revised schedules of compensation and training of health administrators and managers.

Issues - Related Sector Policies Impacting on Health

Issues in this area may be stated briefly (not ranked according to priority of issue) as follows:

- a. Family planning until recently has lacked the backing and commitment of political leaders.
- b. Health professionals generally lack training in family planning.
- c. Health professionals lack training in nutrition surveillance and monitoring.
- d. Food distribution programs appear to lack precise targeting to populations at greatest risk, largely due to imprecise data concerning income levels and other circumstances of need.
- e. The GHIO offers little or no preventive or promotive health services, including family planning, at present.
- f. It appears that service and maintenance personnel in areas of water and sewerage supply are not well-trained to maintain systems.
- g. Salaries of water and sewerage service maintenance personnel are too low to provide adequate incentives to elicit levels of service performance that are required.
- h. The GOE has no policy requiring assessment of the health implications of new water and sewerage programs; hence, such assessments are not made.
- i. There does not appear to be a well-defined and comprehensive nutrition strategy and policy in Egypt.

- j. Water, sewerage and other environmental control activities lack coordination across ministries and vertically among ascending and descending levels of government.

As stated above, the absence of a nutritional policy is not so crucial given that studies have shown that nutritional status in Egypt is rather high as compared to other countries, perhaps due to general food subsidy programs. However, family planning and environmental health issues are vital.

Family planning activities appear to have excellent prospects for moving ahead, if political commitment and leadership are sustained. The time appears ripe for USAID to assist the GOE to incorporate family planning activities into the mix of services offered by the GHIO. The GHIO has requested assistance from USAID in this area. Also USAID could meaningfully assist the MOH in its general family planning activities and to introduce population education into school health programs.

The several areas of environmental health present some difficulties, particularly as these concern water and sewerage program assistance, areas in which donors have already committed over \$2.0 billion (USAID \$1.4 billion and other donors \$.528 billions). In the absence of measures to increase incentive structures, additional USAID assistance in training, capital investment, replacement parts and equipment would not have great impact in the long-run. In spite of reservations, the author feels that more can be done in these areas, particularly at local levels. However government must be sensitive to the need to raise prices for services generally in the interests of raising sufficient revenues with which to maintain systems.

Issue - Health Sector Financing Arrangements and Assuring Access to Health Services on the Part of the Poor

The central issue here concerns government's recent policy decision to place principal reliance on the private sector and the GHIO for the future expansion of the health services delivery system. Government's decision is based on the rationale that by doing this the public sector will be substantially relieved of the burdens of curative health services delivery and thus be able to concentrate more on illness prevention. It is also perceived that more revenues will be brought to bear on health services delivery through expanded private sector outlays and through assessments on wage and other income by expansion of GHIO coverage and subscriptions. This policy of increasing reliance on private sector and GHIO expansion represents a de facto shift from a policy of free health care to a policy of fostering the provision of a reasonable quality of health services available at reasonable prices (wages assessments in the case of GHIO and fees for services in the case of private health services provision). There is a great deal of merit to this GOE policy initiative, but there are problems posed by this policy direction as well.

Reference has already been made to the tendency of the "private sector" to "skim the cream" of the medical market place by concentrating service delivery on the upper 20 percent of the income distribution. Both the private sector

and the GHIO provide only curative services, leaving to the MDH responsibility for the provision of essentially all preventive services. In principle the GHIO could provide both curative and preventive services to middle and lower income populations. However, the GHIO currently is just breaking even, is covering predominantly a low-risk class of the population (urban workers), and is just beginning to experiment in expanding coverage to high-risk groups and consequently to high utilizers of health services (i.e., worker dependents and pensioners). The GHIO is now breaking even by virtue of surpluses generated from industrial accident funds. However, even expansion to cover the number of pensioners that will be eligible for coverage by the system in the next decade--by 1992--would force the GHIO to incur large annual operating deficits (conservatively estimated at L.E. 117.0 millions) or to seriously reduce the quality of services delivered.

The public sector system operated by the MDH is woefully underfunded on current account. Government has no surplus of funds in the national budget with which to greatly increase allocations to the public health services delivery system at levels that are needed. Similarly, there is no indication that funds are readily available to provide subsidies that eventually will be required by the GHIO in order to expand its coverage without deterioration in quality of services.

Turning the high income segment of the medical market place over to the private sector tends to isolate the MDH from potential access to needed revenues which could be used to expand medical services to the poor. This suggests that if government adopts the policy of turning the high income segment of the population over to the private for-profit medical sector, some thought should be given to levying additional taxes on private providers in order to generate revenues with which to assist government in providing services to the poor.

It also seems clear that as the GHIO begins to expand coverage and take over MDH clinics and hospitals, it will be able to maintain management control and thereby maintain existing levels of efficiency and cost control. As expansion occurs, per unit costs are likely to rise significantly. As the private sector expands, unless fees are strictly regulated or taxed, the level of earnings from private practice will rise; this will in turn result in a corresponding increase in the rates of remuneration physicians will require as levels of remuneration for GHIO service, causing the GHIO cost structure to rise over time. This is particularly likely to be the case as the GHIO, the private sector, and other public health delivery organizations compete for a comparatively small number of "high quality" physicians who are primarily associated with Egypt's medical schools, and who are already heavily involved in teaching, private practice, conducting special private medical examination tutorials (paid for by the students), and writing books and notes for sale to medical students.

Further, unless the High Council on Medical Insurance is supported by a sizeable and competent staff of highly trained health system planners, policy analysts, and data analysts, and unless decision makers heed their

suggestions; it is doubtful that the GOE will be able to regulate the complex system that will evolve over time.

It seems somewhat improbable that a division of labor in the provision of curative services delivery between the private sector and the GHIO, on the one hand, coupled with the provision of preventive services by the MDH on the other, would be very effective in the near future. How could the MDH actually provide preventive services if (as appears likely) it turns over its outreach infrastructure to the GHIO? Indeed what would seem likely to occur is that the MDH would serve as a kind of directorate of the whole system, issuing laws and edicts requiring preventive measures to be provided in private practice activities and by the GHIO. But the MDH would then have the task of enforcing its directives over systems that it no longer directly managed. This works in the U.S. and other western countries, but only because of effective decentralization, and only after a long period of developmental evolution did such a division of responsibility become effective.

Since it is difficult to capture fees from all but a small portion of preventive measures and practices, compliance with MDH directives on the part of the private sector would be minimal at best. The GHIO would have an incentive to provide preventive services in the interests of holding down costs, but only if revenues are held to low levels. However, since this is likely to be the case, prospects of delivery of preventive services on the part of the GHIO would appear favorable. However, cost and revenue assessment circumstances suggest that the real capacity of the GHIO to expand coverage rapidly or very far is in fact rather limited. Also, the provision of preventive services essentially would be a new area of activity to the GHIO.

The conclusion appears inescapable that government's objective of relying on the private sector and the GHIO to provide reasonable quality curative health services to the entire population, leaving the MDH to concentrate on provision of preventive services, is likely to fail, unless the private sector is rather strictly regulated, the GHIO is heavily subsidized, or some combination of these events is effected.

Also, it seems clear that if the poor are to have access to effective health services, either part of the government curative health services delivery system must be retained and reformed, or the poor, constituting a medically indigent class of health care consumers, must be given access to reasonable care provided by the nongovernmental health services units.

USAID could assist the government in selecting the best policy from those available and then assist in the GOE implementation of the policy selected.

Three sets of policy options are proposed (Section 3.7.4). The first would consist of following up on previously considered policies designed to rationalize educational policies and government relationships with the private sector. The policy would consider a more balanced expansion of the existing system, expanding only elements of the government system serving the urban and rural poor, raising salaries of government physicians, reassigning physicians

to nongovernment health system posts, restricting government physicians from private practice, and bonding physicians in government services for appreciable periods of time. The GHIO would expand gradually only to cover a maximum of 50-60 percent of the population in the next 10-20 years. This would relieve pressure on the government system and allow it to upgrade services and to target free services toward the rural and urban poor.

A second broad policy option adheres more closely to current policy directions, but adds some features that the author, based on this policy analysis believes would be required. If government virtually phases out of providing curative services entirely, no coverage would be available to 20-30 percent of the population living below the poverty line. Thus provision must be made for subsidizing an adequate level of consumption of health services on the part of the poor. Options exist to require curative service units to employ sliding fee schedules, lump-sum licensure taxes, or user taxes at the source of private practice service delivery transactions. The latter tax would consist of a source tax on prescriptions that would provide a basis for pharmaceutical audit, monitoring of physician prescribing patterns, and a record of private physician visits that could serve to assist more effective collection of income taxes from private medical service activities. Additional tax revenues could be used to subsidize the consumption of health services on the part of the medically disadvantaged. The sliding fee and tax mechanisms could be coupled with a policy of identifying the class of medically indigent who would be issued passbooks permitting them access to any of the health delivery units existing in the system; those units would be obligated to provide service to them at set rates of reimbursement from the government. If the medically indigent program were administered through decentralized governorate levels, with governorates granted tax authority to raise revenues with which to match central government health grant-in-aid funds, the result would be similar to the medicaid program in the U.S.

A third broad policy option is for government to phase out of providing curative services and to foster the development of competing private health insurance plans. This has been advocated by some as having the advantage of fostering price and quality competition, to the ultimate advantage of consumers of health services. Both the advantages and disadvantages of the development of private health insurance in general as well as those of fostering competing schemes are reviewed in some depth. The present author concludes that the introduction of competing private health insurance schemes would be the least desirable financial policy option of those available to be elected by the GOE. However, the author recognizes that other policy options may be available and may be proposed by U.S. and Egyptian experts involved in Phase II.

Regardless of which general policy framework is selected, it will be necessary to strengthen MOH management and administration, data collection, and data and policy analysis capabilities. Also, it will be necessary to provide assistance in training, supply, commodities, etc., in efforts to upgrade and help expand various components of the health services delivery system.

In the event government redresses current health sector financial policy issues, the following specific types of AID assistance could be considered:

- a. Assistance in policy analysis and development.
- b. Strengthening the management, data analysis, cost control, copayment setting, risk assessment and actuarial bases for GHIO operations, perhaps beyond levels currently contemplated in connection with the Urban Health Project.
- c. Assist the GOE to establish an independent Secretariat to the newly-created High Council on Medical Insurance. This would involve establishing a cadre of policy analysts and planners who would assist the MDH general directorates in monitoring the system, coordinating data collection and analysis, and preparing position papers on conditions and circumstances of government, public and private sector medical practice, schemes of service, fees and costs, copayment rates, subscription and assessment rates, etc. Assistance could be provided to train personnel, develop organizational structure, develop job descriptions, and establish communication and monitoring linkages to the various directorates in the MDH and to other ministries.
- d. Assist in developing programs of skill upgrading and continuing education of health professionals, with primary focus on, but not restricted to, physicians and nurses.
- e. Assistance in the design and development of a coordinated health information system which would continuously collect data from government (all levels), public, and private sources.
- f. Commodity transfers of supplies, materials, and other items needed to assist in upgrading the health services delivery system.
- g. Assistance in integrating preventive and promotive health services, including family planning services, with the regular curative services already being provided by the GHIO.

A list of issues, corresponding GOE policy options, and types of USAID assistance appropriate to support GOE policy initiatives, with suggestions as to timing and of general levels of funding, is provided in Table 4.2 in the text. Readers are referred to this table in the course of reading this report.

TABLE 4.2.1

ISSUES, POLICY OPTIONS, TYPES OF USAID ASSISTANCE, TIMING AND DURATION OF FUNDING, AND FUNDING LEVELS

<u>Issue</u>	<u>GOE Policy Options</u> •	<u>Type of USAID Assistance</u>	<u>Timing and Duration</u>	<u>Funding Levels</u>
I. Major Health System Constraints				
1. Low health priority in GOE budgets.	A. No change in priority given to health.	A. Commodity transfers only.	A. Initiate as soon as need is determined and complete as soon as possible. Duration: medium term only.	A. Minimal.
	B. Elevate priority given to health and address other major health system policy issues and problems.	B. Broadest range of assistance needed to rationalize the system.	B. Initiate commodity transfers, technical assistance and other programs. Medium and long-run duration.	B. As needed.
2. Rigid health planning and budgeting procedures and processes.	A. No change in existing procedures and processes.	A. Selected programs designed to upgrade components of the system.	A. As programs are identified and designed of short duration.	A. Minimal to moderate.
	B. Initiate changes toward greater planning and budgeting flexibility.	B. Multiple programs: 1. Programs to improve planning and budgeting procedures at national and local government levels. 2. Broad range of programs potentially suitable for system-wide replication.	B. Immediate and medium range programs with long term implications would be designed as soon as possible.	B. Moderate to substantial.
3. Personnel incentives, management, and supervision.	A. No change in current incentives, management and supervision.	A. Training programs to upgrade skill levels of existing physicians and nurses, elevate status of nurses, and increase length of nurses' working life expectancy.	A. Initiate as soon as need is determined and complete as soon as possible, for medium term duration	A. Minimal to moderate.
	B. GOE initiates policies to increase personnel incentives and improve management and administration of system, including licensure, relicensure, and competency-based certification programs.	B. All of the above plus programs to assist in developing and implementing licensure, relicensure and competency based recertification programs. Also programs designed to develop schemes of service to encourage careers in medical administration and management.	B. Initiate as soon as programs are designed and approved and initiate medium to long-range programs.	B. Moderate to substantial.

4. Low quality of training and service.	<p>A. No change in rates of physician training or other efforts to upgrade medical education.</p> <p>B. QOE policies initiated to restrict growth in medical enrollments and to upgrade medical education.</p> <p>C. Adopt policies of bonding physicians in government service for longer periods, & prohibiting private practice and emigration abroad until government receives a positive return on cost of education, plus continuing education and competency based certification.</p> <p>D. Adoption of continuing education and competency-based certification policies.</p>	<p>A. No programs for training new health professionals beyond already funded programs.</p> <p>B. Programs to upgrade medical education and to support training of new health personnel.</p> <p>C. Assistance in developing continuing education skill-building and competency-based certification programs.</p> <p>D. Assistance in developing continuing education and competency-based certification programs.</p>	<p>A. Length of existing funded Suez University project.</p> <p>B. Build on Suez University program, make appropriate modifications, and develop similar programs on behalf of nurses and other health personnel as soon as possible. Programs would be medium to long term.</p> <p>D. Initiate design of medium term continuing education and competency based certification programs as soon as possible.</p>	<p>A. As approved</p> <p>Substantial.</p> <p>C. Moderate.</p> <p>D. Minimal.</p>
5. Relationships with private sector.	<p>A. No change.</p> <p>B. Initiation of policies to restrict private practice on part of government physicians and otherwise to regulate private practice activities (including increasing the efficiency of foreign exchange acquisition).</p>	<p>A. No program initiatives.</p> <p>B. Programs to support development of regulatory agencies, staff of High Council on Medical Insurance.</p>	<p>A. Zero.</p> <p>B. Design technical assistance program as soon as possible.</p>	<p>A. No funding.</p> <p>B. As much as needed to development in this area.</p>
6. Health sector financing arrangements and assuring access to services on the part of the poor.	<p>A. No policy in this area is not a QOE option, as it is inconsistent with predominant goal of equity.</p> <p>B. Policies to rationalize educational policies and government relationships with private sector, 3.B & 5.B above, and to encourage GHIO, private sector, and other public sector health service delivery units to grow in balanced fashion, while targeting government delivery system toward rural and urban poor populations.</p>	<p>A. -</p> <p>B. If in conjunction with policy options 3.B and 5.B above, then 3.B & 5.B assistance, plus selective support of government health services delivery system expansion targeted at poor rural and urban populations, programs of technical assistance (actuarial sciences and economics) to GHIO and the High Institute of Public Health.</p>	<p>A. -</p> <p>B. As soon as 6.B is designed and selective programs and projects can be designed, with medium to long-range impact.</p>	<p>A. -</p> <p>B. Substantial.</p>

- C. OOE adopts policies of sliding fee schedules, lump-sum, licensure or user taxes and/or establishes programs for identifying and serving medically indigent classes.
- C. Programs to assist establishment of fee schedules, new tax programs, and medical indigent programs, possibly administered at local government levels.
- C. Initiate medium term programs as soon as possible.
- C. Moderate.
- D. Policy to promote growth in competing private health insurance schemes.
- D. The technical assistance to develop private insurance schemes.
- D. As soon as policy is formulated, initiate start-up short-run program only.
- D. Minimal

7. Family planning and other illness prevention and health promotion activities.	A. No new policy.	A. Continue existing programs.	A. As programmed.	A. Existing levels.
	B. Initiate policy to incorporate family planning and other preventive services to GHIO service activities and to introduce family planning into school health programs.	B. Technical assistance and general program assistance to GHIO and to MOH, training of additional health professionals, and supply and resupply of contraceptives to GHIO.	B. As soon as policies are formulated and project designs can be completed. Projects would be of medium to long-term duration.	B. Substantial increases above existing levels of support.

<u>Issue</u>	<u>OOE Policy Options</u>	<u>Type of USAID Assistance</u>	<u>Timing and Duration</u>	<u>Funding Levels</u>
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II. Improvements in Other Sectors Related to Health.

1. Nutrition strategy and policy.	A. OOE development of a comprehensive unified nutrition strategy and policy.	A. Technical assistance for policy development and continued food commodity transfers in this area, training of health professionals in nutrition surveillance and monitoring, and development of programs to assist more precise targeting to populations in greatest need.	A. As soon as policy is formulated. Projects would necessarily be of medium term duration only.	A. Moderate.
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2. Environmental health.	A. No changes in levels of salary; no assessment of health implications of new water and sewerage projects; no gradual changes in rates charged for services.	A. No programs to be newly initiated.	A. Length of current projects.	A. Existing levels.
	B. OOE policy initiatives to increase personnel incentives, gradually raise charges for services, and adopt and implement policy of assessing health implications of new water and sewerage projects.	B. New programs of training of maintenance personnel, providing replacement parts, and otherwise upgrading systems; technical assistance in developing appropriate pricing and retail distribution procedures; management development.	B. As soon as policies are formulated and in place and programs are designed. Program support would be of medium to long term duration.	B. Substantial.

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The views expressed in this report are the author's own and do not necessarily reflect those of the APHA or of the Egyptian or U.S. Governments. The author alone is responsible for any errors and notable omissions of content.

Health Policy Review

Dr. James Jeffers

1.0 Introduction to the 1982 Health Sector Assessment Report on Egyptian Health Policy

1.1 General Considerations - Equity and Efficiency

Every economic activity, transaction and policy involves issues of equity and efficiency. Equity is a normative concept of what is fair or just. Resolution of this issue involves a value judgment. The exercise of this judgment, necessarily, is rooted in the culture, mentality, previous historical experience and current stage of social, political and economic evolution of individuals as well as nations. For some individuals and nations perfect equality of shares is equitable. For others distribution of benefit or product on the basis of need is the only acceptable standard of equity. In the case of market system economies, distribution of benefit or product in proportion to contribution to production (productivity) is the standard of equity. Even in a market-oriented society, as in all others, attention is given to providing benefit or product to those in need due to circumstances beyond their control (e.g., in cases of illness, flood, natural catastrophe, etc.), either through philanthropy or through social programs sanctioned by the State (welfare, Medicaid in the case of health care in the U.S., etc.).

1.1.1 Trade-offs Between Efficiency and Equity

Rarely is it possible to achieve progress in one of these areas without sacrifice in the other. It is almost impossible to achieve greater efficiency by intervening in the status quo without making someone worse off who will claim that they have suffered an inequity in the process. Similarly, it is very difficult to achieve greater equity without the prospect of reducing output on the part of some producer using existing resources or causing some resources to be withdrawn from production. This is because efficiency and equity are intimately linked through the structure of incentives. The level of outputs of products and benefits is limited by the intensity with which the existing quantities and qualities of resources are utilized. The intensity with which stocks of resources are utilized depends on the incentive structure that exists within the production unit -- individual, sectoral, or national. Policy intervention on behalf of increasing efficiency or equity almost always alters the incentive structure by causing some individuals to gain and some individuals to lose and thus has consequences for both efficiency and equity. This is why the selection of appropriate policies is necessarily a political process. It is through a political process that a determination is made as to the acceptability of some individuals' losing and some individuals' gaining as a consequence the adoption of a specific policy. The acceptability of a particular type of policy must be determined in light of the existing cultural

values, the mentality of the people (the way people reason, feel, and think), historical experience, and stage of social, political and economic development.

1.1.2 Acceptability of policy instruments

Not only must specific policies be judged in terms of their acceptability in light of local and temporal circumstances, but policy mechanisms must also be appraised in terms of their acceptability in the same way. For example, Western societies take a redistributive fiscal policy consisting of progressive income taxation and regressive transfer payments axiomatically to be an acceptable way in which to redress inequity in income distribution. Egypt, like many other non-western countries, has no effective machinery for effective personal income taxation and transfer. In light of this, a Western style fiscal policy of income redistribution would not appear to be an acceptable policy mechanism instrument. However, "hidden" taxation and redistribution of income through a fixed price structure favoring the poor is an acceptable instrument. A "poor" farmer can bemoan the fact that agricultural prices are low, on the one hand, but at the same time be grateful that the price of bread and other staples is also low. On balance, as real purchasing power increases over time, the fixed pricing policy may be regarded as highly acceptable. Under such circumstances, a sudden change that would involve letting agricultural prices rise to "border" price levels and terminating fixed price ceilings on bread and other staples, coupled with the introduction of progressive income taxes and regressive transfer payments favoring low income groups, is likely to be beyond the capacity of government effectively to implement and to administer.

A related matter in this context is that major policy shifts involve substantial political risks. Westerners take political stability for granted. This is particularly the case in non-parliamentarian systems like the U.S. in which potential changes of administrations occur at predictable and regularized intervals (every four years, in the U.S.). The process of change in power is in all respects also more predictable and gradual in two party systems in which the two parties hold, in the main, similar if not identical values and philosophies. Changes in political power that do occur thereby take on more the aspect of a tilt or gradual shift in emphasis, rather than an abrupt or sudden swing of an extreme nature. This is not the case in many countries in the world.

Actual or potential political instability requires that policy changes be introduced slowly and that political leaders carefully build a base of political consensus as policy changes are gradually introduced.

1.1.1.3 Roles of Technical Experts

Technical experts should appreciate all of this. It is very difficult if not impossible for outsiders to judge the degree to which suggested policy changes are acceptable. However, this should in no way inhibit technical experts from identifying the adverse consequences of existing policies and strategies and offering suggestions as to possible policy alternatives. It is also important

that technical experts provide some rough ordering or quantitative estimates of the relative magnitudes of adverse consequence associated with each current policy, procedure or practice; such estimates can assist local decision makers to better order their own priorities concerning the relative importance of making certain changes, as well as the administrative and political feasibility of making them.

The review and analysis of current and prospective policies, strategies and practices presented in this document may appear to be overly critical. However, it is the experience of the author that local authorities are well aware of their own problems but expect competent experts to make note of them. Perhaps of greatest use to local authorities is the relative importance attached to various problems, identification of solutions that have been tried in other nations which have not produced favorable results, and suggestions of new remedies that have a fair degree of potential success in the present context.

1.2 Review of Past and Current Egyptian Social and Economic Development Policies and Strategies

There are two reasons to review overall social and economic development policies and strategies before reviewing those of the health sector. First, such a review provides a perspective or context without which health sector policies and strategies can be understood or interpreted. Second, such a review serves to identify general development policies and strategies which have particular relevance to the performance of the health sector. General policies may serve as constraints to national health sector development, or as vehicles assisting health sector development and performance. Since such a review involves macro-economic considerations, emphasis is naturally on matters of finance. Readers should not, however, be left with the mistaken impression that only financial problems exist or that all problems can be solved by changes in financial arrangements. Indeed one central theme of this review deserves emphasis at this point: While inappropriate financial arrangements can cause many problems, few fundamental problems can be solved by only rearranging financial mechanisms without also making other fundamental changes.

1.2.1 An Overview of Egyptian National Policy Development

Since the Officers Revolt of 1952, Egypt has made a substantial effort to establish a socialistic economy. This involved a development strategy which gave priority to import substitution as a means of achieving growth in industry, and to government control over industrial and agricultural production. The banking system, public utilities, and the bulk of industrial production were nationalized in the 1960s. Gradually, fixed prices and marketing controls were introduced throughout most of the economy. Prices for primary and intermediate agricultural and industrial products were established at levels to make it profitable to produce goods in measure consistent with a strategy of industrial development through import substitution. Government has priced public utilities, water and sewage, and energy at prices below full

costs. Government also has established rent controls on housing at less than market clearing levels and has attempted to provide health and educational services broadly to the population "free". Jobs are guaranteed to university graduates, and government has fostered the notion that everyone is entitled to a job, with the public industrial sector and central government serving as an employer of "last resort" or more correctly as employer of first or only resort in some cases.

In establishing a structure of fixed prices, agricultural prices are established at levels far below export levels. At the same time, prices of key consumer staples (bread, rice, sugar, etc.) have been maintained at nearly stable levels for decades, requiring increasingly large subsidies to processors and distributors of these items. These policies and strategies are administered through the formation of a massive central government bureaucracy managing a vast and complex array of administrative regulations.

After Anwar Sadat became president in 1971, forces were set in motion to liberalize, at least to some extent, the all-pervasive grip of government bureaucracy on economic activities. These forces resulted in the announcement of the "Open Door Policy" in 1975. However the regulatory and administrative changes necessary to implement this policy were not sufficiently developed until 1979. The process of implementation is still continuing under the leadership of President Mubarak today but is proceeding with modification and adjustment.

In broad outline, the Open Door Policy consists of the following elements:

- a. Decentralization of government from central level to local levels, including governorates and villages.
- b. Institutionalization of a quasi private sector by allowing greater management control and decision making on the part of managers of selected economic and service "authorities" and loosening of the control previously exercised by government bureaucrats.
- c. Creating Port Said as a "free trade zone" and encouraging joint venture activities between Egyptian and foreign firms in the interests of encouraging foreign investment.

1.2.2 Investment Plan Priorities

Past development plans have favored the growth of public sector enterprises (particularly transportation and public utilities), petroleum, and agriculture as high priorities. In the 1978-82 development plan, the government plan was allocated among principle sectors as presented in Table 1.2.2.1 below.

Table 1.2.2.1: Percentage Allocation of Investment
by Major Sectors - 1978-1982 Development Plan

<u>Sector</u>	<u>Percent Allocation of Investment Funds</u>
1. Transportation, ports, communications, electricity and utilities	38.4%
2. Food and public needs including feeds, chemicals, and fertilizers	21.4%
3. Suez Canal and petroleum	13.2%
4. Heavy industry and war production	5.0%
5. Building materials	4.2%
6. Education	6.2%
7. Health	2.0%
Total	100.0%

Source: Investment Plan: Budget 1978-1982, ARE, 1980.

The breakdown between health and education (total 8.2%) reflects some rather arbitrary distinctions, since teaching hospitals supply large quantities of health services, but are included under the education sector budget.

Total investment plans called for L.E. 2.5 billion, with an additional L.E. .35 billion of investment expected to be provided by joint venture foreign capital contributions in the petroleum sector.

1.2.3. Current Expenditures

Figures on current accounts are seldom provided in plan budgets. However functional classifications of current expenditures (lagged by 1 year) are available for recent years and are presented in Table 1.2.3.1 below. The table demonstrates that health receives a very low priority in the current budget, receiving only 4.9% of central government expenditures on total government current account.

Table 1.2.3.1 Egypt: Functional Classification of Current Expenditure, 1976-1980/81 ^{1/}
(In millions of Egyptian pounds)

	1976	1977	1978	1979	Estimates Jan.-June 1980 ^{2/}	Budget Estimates 1980/81
General public services	306.8	428.9	467.0	572.2	506.0	1,161.8
General administration ^{3/}	(220.7)	(323.6)	(344.3)	(414.3)	(422.0)	(931.9)
Public order and safety	(86.1)	(105a.3)	(122.7)	(157.9)	(84.0)	(229.9)
Defense	452.7	343.2	339.4	772.0	324.0	921.6
Education	240.1	243.6	296.9	364.6	157.0	420.4
Health	80.2	79.7	96.2	114.9	57.0	149.7
Community and social services	29.0	29.9	53.8	86.4	40.0	111.6
Economic services	72.2	69.4	89.7	100.8	50.0	133.7
Agriculture	(26.2))	(62.7))	(83.5)	(48.0)	(23.0))	(112.4)
Irrigation	(34.7))))	(50.3)	(19.0)))
Transportation and communication	(11.3)	(6.7)	(6.2)	(2.5)	(8.0)	(21.3)
Central government current expenditure	<u>1,181.0</u>	<u>1,194.7</u>	<u>1,343.0</u>	<u>2,010.9</u>	<u>1,134.0</u>	<u>2,898.8</u>
Local government current expenditure	<u>108.6</u>	<u>116.7</u>	<u>135.3</u>	<u>161.8</u>	<u>67.0</u>	<u>163.4</u>
Emergency Fund deficit	<u>303.0</u>	<u>256.0</u>	<u>370.0</u>	--	--	--
Total current expenditure	<u>1,592.6</u>	<u>1,567.4</u>	<u>1,848.3</u>	<u>2,172.7</u>	<u>1,201.0</u>	<u>3,062.2</u>

Source: Reproduced from IMF/ARE "Recent Economic Developments", February 9, 1981, p. 78

^{1/} Excludes subsidies, transfers to public authorities, and most expenditure from the Treasury and Investment Funds. Expenditure from the Emergency Fund has been allocated to functional categories beginning in 1979, but a classification of net expenditure from the Emergency Fund is not available for the period 1976-78.

^{2/} Total is estimated based on preliminary actual revenue and financing data. Components are adjusted proportionately from the revised budget estimates as agreed with the authorities in February 1980.

^{3/} Includes Investment Fund current operating expenditure and Treasury Fund outlays for pensions and contingencies.

1.2.4 Revenues

Principal sources of revenues include business profits taxes, direct transfer of profits, and self-financed investment derived from public enterprises (55%); customs duties (28%); taxes on production, consumption and price differential assessments (4%); and income taxes (1.0%); with the remainder of revenue being generated from foreign aid (8%) and miscellaneous sources (4%). Note that the U.S. contributes roughly 75.0 percent of total foreign aid, constituting approximately 6.0 percent of GOE annual expenditures.

One of the problems concerning government's current revenue-generating and expenditure structure is the relative elasticity of expenditures with respect to prices and the relative inelasticity of revenues with respect to prices. Thus increases in international and domestic prices cause expenditures to rise more rapidly than revenues. Consequently, fiscal deficits have been growing over time, and the current deficit is projected at L.E. 3.0 or roughly 15% of current government spending.

1.2.5. Foreign Exchange

Principle sources of foreign exchange include Suez Canal duties, petroleum exports, foreign aid, and worker remittances from abroad. The latter category (currently reported at L.E. 3.0 billion but believed to be vastly under-reported) reflects the export of labor (estimated at 1.8 million people currently abroad). This practice has lessened pressures on the local labor market and consequently on government (which, as noted above, serves as employer of last resort). Labor force participation is very low, estimated at 26 percent of a population of 44.0 million, largely due to the low participation of women (currently estimated at less than 8 percent). As a consequence of worker emigration, growth in employment has kept pace with growth in the labor force, although considerable disguised unemployment exists. Shortages in certain critical skills areas are also becoming increasingly common.

1.2.6. Wage Structure

The wage structure in Egypt is based on minimum wages and allowances, supplemented by fringe benefits that are established by government. In addition, some public sector employees supplement the basic wage and fringe benefit package with incentive bonuses and even profit sharing in certain cases. In recent years government has increased public economic sector real wages. Wages were raised by roughly 40 percent in 1979. (IMF/ARE "Recent Economic Developments", February 9, 1981, p. 6) In 1980, in the interest of reforming the cost and price structure, government attempted to reduce price subsidies while simultaneously raising allowances of all public sector employees, including civil servants, members of the armed forces, and social security and pension recipients. Reductions of price subsidies were met by widespread public protest and thus were reinstated along with retention of upward wage adjustments. These adjustments added 25 percent to the public sector wage and salary bill. As a consequence real wages as deflated by the

index of domestic prices, have risen significantly over the period 1976 to 1982. However, the index of domestic prices incorporates price increases that are lower than international prices, due to the effects of domestic price subsidies. Thus the upward drift in actual nominal wages represents a less significant increase in real wages when deflated by international prices (which do not reflect the effects of domestic subsidies) than when real wages are calculated by deflating nominal wages by indices of prevailing domestic prices.

1.2.7 Income Distribution

Unfortunately not as much is known about distribution of income in Egypt as would be desirable. However, some study has been done. Income distribution studies of 1975 data have been undertaken by the World Bank (ARE/World Bank Volume IV). Also see Radwan, "Agrarian Reform and Rural Poverty: Egypt 1952-1975"; Ilya Harik, "Socio-Economic Profile of Rural Egypt"; Khalid Ikram, "Meeting Basic Needs in Egypt; John Waterbury, "Patterns of Urbanization and Income Distribution in Egypt". The author also benefited from a preliminary paper authored by Mr. James Dalton, HSA Consultant, which is incorporated in the text here.

Authorities differ, in some degree, about the appropriate level of income for drawing a "poverty line" for a five-person Egyptian family. Generally however, in 1975 it appeared that an annual income of LE 250 per family, or LE 50 per individual, comprised an acceptable norm.

Using that norm, the various authorities estimated that the rural population living below the "poverty line" in 1975 as somewhere between 5,000,000 and 7,000,000 individuals. That is, the rural poor of the lowest economic levels numbered between 23% and 30% of the rural population. As will be noted below, a considerable portion of that number were rather far below the "poverty line". In connection with this it must be observed that authorities agree that the statistical data on the rural populace' incomes are difficult to obtain and to interpret. Therefore, some segments of the rural populace may be better off than reported. Also, the effects of subsidization on certain consumer goods clearly have an ameliorative effect upon those living below the "poverty line" in both rural and urban areas. In any case, the figures available in 1975, when differentiated by area, reveal a much higher percentage of rural inhabitants falling below the "poverty line" in Upper Egypt than in the rest of the nation.

The urban populations were somewhat better off, with somewhere between 2,500,000 and 4,000,000 individuals below the "poverty line", ranging from 18% to 21%.

In summary, as shown in Table 2.7, in 1975 for Egypt as a whole the "poverty line" included 7,500,000 to 12,000,000 persons, approximately 23% to 30% of the entire population. Most authorities agree that individuals living in urban areas earn on the average twice that earned by individuals living in rural areas, the latter constituting about 56.0 percent of the population.

Achievement of an egalitarian society has been a stated goal of the Egyptian leadership since 1960. While there are few large concentrations of wealth, income differentials appear to exist within the entire span of population, constituting inequities. For example, within urban or rural areas, average families in the top one-sixth of the population have ten times the average income of families in the bottom one-sixth. However, the bottom 16% in the rural areas obtain less than L.E. 100/year, far below "poverty line" levels, while 38% of rural households obtain L.E. 1,000 or more in annual household income. Similarly, in urban areas the bottom 18% obtain less than L.E. 200/year, but 40% of urban households earn L.E. 1,600 or more in annual household income. Thus, analysis of income distribution data clearly suggest that rather wide differences in income distribution existed in 1975.

Changes in this entire situation since 1975 remain a matter for continuing intensive study. It seems evident that improvements in the Egyptian economy, both rural and urban, since 1975 have altered the personal income situations for many families. In general, there has been an overall increase in earnings at all levels within the Gulf States and the ensuing flow of remittances to Egypt has selectively altered individual family conditions. Balanced against these favoring circumstances, there has been steady inflation in prices, not all of which has been off-set by domestic subsidies.

Some authorities have already formulated conclusions about the changes. Ibrahim El-Issawy, writing about "Egypt's Income Distribution and Economic Growth", observes that for the period 1974 to 1979:

"...Inequality tends to increase sectorally and inter-sectorally. This is the Open Door era which has witnessed a slackening of inequality-reducing measures and encouraged private enterprise to contribute to growth regardless of distributional consequences. Growth policies contributed to the increase in equity through the neglect of agriculture, the lack of employment growth in agriculture and its slow growth in industry, the changed character of the services sector, and the acceptance of inequality-promoting terms of foreign aid...."

The suggestion is that income distribution has become more unequal over time since 1975.

1.2.8 Egypt in Comparison with Other Nations

In income and health indicators, in 1978 Egypt ranked among a number of other nations of like circumstances as presented in Table 1.2.8.1 below.

Table 1.2.8.1: Egypt Income and Health Status
Compared to Nations of Like Circumstances - 1978

	<u>GNP/Pop.</u>	<u>Births/1000</u>	<u>Deaths</u>
Egypt	276	37.2	10.5
Pakistan	230	45	15
People's Republic of China	230	18	6
Lesotho	280	40	16
Mauratania	270	50	22
Tanzania	230	48	16

Source: Health Problems and Policies in the Developing Countries, World Bank Staff Working Paper No. 412, August 1980.

However, Egypt is the poorest country in the Middle East in terms of per capita GNP figures, as shown in Table 1.2.8.2 below;

Table 1.2.8.2: Egypt and Gulf States Per Capita
GNP Compared - 1978

<u>Country</u>	<u>Per Capita GNP</u>
Iraq	1,860
Algeria	1,260
Turkey	1,200
Jordan	1,050
Tunisia	950
Syria	930
Morocco	670
Yemen	580
Yemen (S)	420

Source: HSA Consultant James Dalton.

1.2.9 Recent Economic Performance

For the last seven years Egypt's rate of development has been impressive: growth rates have averaged roughly 8 percent. Table 1.2.9.1 presents levels of GNP, population and per capita GNP for years 1975-81.

Table 1.2.9.1 Egypt
GNP, Population and Per Capita GNP,
1975 - 1981 (1000 L.E.)

	<u>GNP</u>	<u>Population</u>	<u>GNP/Population</u>
1975	5,230	36,980	145
1976	6,837	37,891	184
1977	8,643	38,794	227
1978	10,765	39,743	276
1979	13,235	40,897	303
1980	16,384	42,176	376
1981*	19,209	42,869	448
1982*	21,881	44,000	469

* Estimates

Sources: Compiled from IMF, USAID, and U.S Embassy documents.

Some of this economic performance can be attributed to shifts in economic policies initiated in 1975 and continuing up to the present. Part also has been due to factors external to the Egyptian economy. Such external factors include the growth in the work opportunities of Egyptians abroad and the resulting flow of remittances, 1979 OPEC price increases occurring at the time of the return of Egyptian oil fields to production, and an increased flow of foreign aid.

Whether or not Egypt can continue the rates of growth experienced in the recent past is an open question. Several factors loom on the horizon which suggest that this may not be possible. For example, worker remittances and petroleum export potential, as well as other traditional sources of wealth (including tourism) are levelling off. In addition, certain structural problems inherited from the past are having a cumulative effect of a magnitude which warrants addressing them now as a requisite for improved economic performance in the future.

Egyptian authorities are well aware of the nature of these problems. Recently numerous economic conferences and seminars have been commissioned by government in the interest of developing an expanded set of policy issues and possible solutions. A central overall issue concerns whether or not Egypt can

continue to serve as a welfare state on behalf of its citizens as it has been doing up to now. Until recently, dominant emphasis has been on wealth redistribution (equity). This has been effected through partially foregoing some opportunities to increase efficiencies of various sorts in order to increase equity. Income redistribution has been accomplished through an elaborate structure of fixed price subsidy schemes that have produced gross price distortions which have blunted incentives for greater efficiency throughout the economy. Some observers find it tragic that government did not take the opportunity to significantly dismantle the fixed price subsidy scheme in connection with the government initiative to raise real wages in recent years. Had this been done, government would be in a much better position to respond to the economic and social welfare challenges that will confront the Egyptian people during the coming decade.

Major policies impacting on the health sector are discussed immediately below.

1.2.10 Summary Discussion of Major Policies Impacting on the Health Sector

Free education has resulted in an enormous increase in enrollments in universities, including medical schools. Those members of the HSA team appraising the quality of education and the quality of health services delivered have concluded that too-rapid expansion of medical school enrollments has resulted in low quality medical education and in the production of large numbers of low quality medical graduates. Government has followed the policy of creating jobs for these physicians in the public medical sector. The large number of physicians absorbed into the public system places a large burden on GOE recurrent funds for the health sector, making it difficult for government to also allocate sufficient funds for supplies, maintenance of buildings and equipment. The result is that the public system is undercapitalized in terms of quality of health professionals and underfunded in terms of complementary resources, with the result that technological inefficiency prevails in the delivery of public medical services.

Rent control policies have led to a black market pricing mechanism in the housing market. Space is only leased at the official rental rates after occupants have paid "key money" in quantities reflecting the present value of market clearing rental rates that would prevail during the period of future occupancy. The high levels of "key money" required for physicians to acquire sufficient space for private clinics is increasingly discouraging the entry of physicians into full-time private practice. Thus the common practice, particularly in Cairo, is for physicians to remain in government service and to operate part-time private clinics on scales which are not technologically efficient.

Government subsidy programs encourage the consumption of drugs. Egypt by comparison with other countries appears to be a very high drug utilizing nation. Drug costs constitute roughly 40 percent of the recurrent costs of the total of private and public sector health services delivery systems. This high consumption of drugs appears to be related to the low level of physician quality; i.e., unsure physicians tend to prescribe too many drugs. The

government policy of subsidizing the manufacture and distribution of drugs is part and parcel of the overall strategy of promoting industrialization through development of import substitution. This policy is likely to be continued in the future.

Overall, government policies of subsidizing the prices of basic commodities and social services (water, sewage, etc.) place an enormous burden on the public sector recurrent budget. Since health services delivery is viewed as a consumption activity (and therefore not viewed as "productive"), low priority is given to allocating funds to the health sector. Given the low elasticity of revenues and the high elasticity of expenditures, relative to prices, over time inflation places an increasing real burden on the government recurrent budget. Government feels that the money to expand public health services delivery simply does not exist. The result is that government is becoming increasingly intrigued with the idea of foisting responsibility for expansion of health services delivery onto the Government Health Insurance Organization (GHIO) and the private sector. The MOH is in step with this general policy strategy.

The policy strategy of giving dominant responsibility for the expansion of health services delivery to the GHIO and the private medical system raises some very significant issues. These issues are elaborated in depth in Section 3.0 of this report, but can be briefly stated here.

Basically, the private sector is geared up to serve the high to middle income segment of the market for health services. Thus, encouraging the expansion of the private sector in the interests of relieving the public sector of part of the burden of health services delivery leaves the public sector with the dominant responsibility for delivering health services to the poor majority, who have little with which to pay for services. Given the lack of developed fiscal policy tax and transfer mechanisms, there is little or no capacity to subsidize incomes of the poor to enable them to consume private sector services. This suggests that government would have to increase public sector funding to enable the poor to consume a quantity and quality of medical services comparable to those available to high income consumers who have access to private health services.

Government hopes that the GHIO eventually will be able to provide health services to the entire population. However, the analysis in Section 2.0 of this paper show that currently the GHIO is servicing middle to upper middle class consumers and is just barely breaking even. It is clear that as the GHIO is forced to expand coverage, revenues will not cover costs and the GHIO would become insolvent and thus would require government subsidy. A major issue exists concerning government's financial capacity to both maintain the financial viability of the GHIO and at the same time upgrade the public sector's health services delivery capacity to service the needs of the poorest of the poor, who do not have access to either the GHIO or private sector. However, it should be emphasized that Egypt's health sector problems are part and parcel of fundamental problems afflicting the nation generally.

The thesis advanced in this review is that health sector problems cannot be solved by rearrangements of financial mechanisms alone. Existing fundamental problems must be addressed directly in order to achieve progress toward resolving them. Some of the major problems and issues are identified in connection with the review of health sector policies presented in Section 2.0 immediately below. Analysis of policy issues are presented in Section 3.0 along with USAID assistance options. Section 4.0 summarizes major issues and presents suggested types, timing and levels of possible USAID assistance.

2. Plans, Policies and Strategies Affecting Health

2.1 Health Sector Policies

2.1.1 Introduction to the Section

This review of health sector policies briefly summarizes recent planning history from 1952 and the formal planning process that has evolved since the 1960's. Attention is given to each of the four Five-Year Development Plans spanning the years 1960-1980. This summary has been abstracted from several primary sources which are as follows:

a. Ramsis A. Goma, M.D., Undersecretary of State, MOH. "A Case Study on the Health Planning Experience in the Arab Republic of Egypt," International Health Planning Experience in the Arab Republic of Egypt, U.S. Department of Health and Human Services, Health Resources Administration, Washington, D.C., 1980.

b. Sara Loza Ph.D., et al., Professed Policies and Implementation, Monograph prepared in connection with the Urban Health Delivery System Project Health Sector Assessment, conducted by ECTOR Health Services Research Group and sponsored by USAID Grant No. 63-0065, and

c. Health Sector General Strategy 1980-1981, Arab Republic of Egypt. Ministry of Health (no authors designated).

The examination of present plans is supplemented with a general appraisal of accomplishments, drawing on findings of other 1982 Health Sector Assessment team members when possible. Projections of future policy directions are also presented, based on interviews conducted with various officials and on the author's calculations and thinking concerning these matters.

2.1.2 Goals and Objectives of the Planning Process

In this connection, following Goma (cited above), it is most appropriate to quote the Egyptian Constitution, viz.,

"The health welfare is the right of all Egyptians maintained by the State through the establishment and expansion of various hospitals and health institutions."

In 1962, the basic right to free health care was elaborated in the National Charter issued by the President indicating the health goals for the nation as follows:

"Equal opportunity, which is expressive of social freedom, can be defined in terms of assuring basic rights for every citizen. Every effort should be dedicated to the realization of this

goal. The right to health welfare is foremost among the rights of every citizen. To ensure this right, medical treatment and pharmaceuticals should not be reduced to mere commodities subject to sale and purchase, but should be guaranteed to be available free of charge to every citizen ... that health insurance should be expanded to bring under its protection the masses of the people."

Gomaa has suggested that the MOH has operationalized these goals into more detailed outlines as follows:

- "1. Mobilizing all efforts towards the implementation of the programs of emergency services during war time (1967 onward).
2. Developing and extending of the curative services to cope with the health needs of the growing population and raising the standards of health care service in hospitals and specialized institutes.
3. Emphasis on providing sufficient rural health services for farmers who have been deprived in the past of any health care (1962 onwards).
4. Combating endemic diseases such as schistosomiasis, tuberculosis, trachoma, nutritional diseases, and gastrointestinal diseases of children.
5. Prevention and control of communicable diseases.
6. Achieving good standards of scientific and technological knowledge and experience of the health personnel.
7. Achieving self sufficiency in drug manufacture to cope with the rising drug consumption.
8. Promoting medical and operational research in the field of public health.
9. Reviewing the laws, rules and regulations to ensure their continuous renewal, reform or updating."

There is a real question as to whether the GOE de facto is continuing to realize the goals stated in the constitution and the presidentially issued National Charter of 1962, particularly as concerns providing free health care. This issue is explored in Sections 2.1.5.3 and 3.7 below.

2.1.3 Recent Planning History: 1952-1980

An excellent summary of the history of Organization of Health Services in Egypt appears in Appendix 1 of the study by Dr. Sara Loza et al., cited above. For our purposes, the review of planning processes begins with the year 1952. In that year, after the revolution of July 23, 1952, the concept of central planning was adopted. In 1953 the leadership established the Council of National Production and the Permanent Council for Public Services, which together were charged with the responsibility of planning and implementing industrial and agricultural development and the development of social services.

Coordination was lacking between these two distinct bodies. An effort was made to remedy this situation by the creation of the National Planning Commission in 1960. While this body was not given executive responsibility, it was charged with preparing the detailed plans and programs of the First Five-Year Development Plan, within the framework of a decade beginning in 1960. The main objective over the course of the decade 1960-1970 was to double the national income, with 40 percent of the increase occurring in the interval 1960-1965 and the remaining 60 percent during the interval 1965-1970. Within this framework, the health plan was to be formulated into a series of steps, starting with the basic popular local administrative level and proceeding up to higher administrative levels within the central government.

However, initially planning proceeded on a foundation of very little fact and limited policy guidelines. In 1964 the Central Agency for General Mobilization and Statistics was created to conduct surveys and studies intended to assist planning and administration.

The Supreme Council of health (chaired by the Minister of Health), comprised of representatives of all public and private agencies of concern to the health sector, was created in 1960 as a standing body to advise on policy and planning coordination and implementation. This was followed in 1973 by Public Law No. 70, which formulated the procedures and guidelines for the formulation of the State General Plan and for its follow-up execution. In 1974, Decree No. 1102 strengthened the organization of the Ministry of Planning. In the same year, Prime Minister's Act No. 203 established the functions of technical planning committees. A planning and research directorate was formally established in the Ministry of Health only in 1975.

The general conclusion that can be reached on the basis of this brief review is two-fold. First, formal planning is a rather new activity in the ARE. Second, it remains in an evolutionary stage. Processes and procedures are still being worked out. Additionally, it should be pointed out that changes in the structure of government often have a major impact on the planning process. For example, very early in the establishment of the national planning process, a stated objective was to involve local authorities thoroughly in the planning process. However, progress towards realizing this objective did not receive real impetus until the passage of the

decentralization laws of 1965, 1970, 1975 and 1981, all of which gave local governments greater responsibilities and authorities over many things, including planning. As a result, last year was the first year that actual plan budgets were initiated at local levels. Up to that time planning, in reality, was a central government responsibility. In many important respects it remains so today.

2.1.4 Review of Planning Process

The process that exists at the current stage of the evolution of the ARE's planning experience is a fairly complicated one. Obviously the process can only be briefly outlined here.

All of the units appearing in the government budget are government "creatures". Each Sector Budget includes central ministerial and governorate units, public service enterprises that are nationalized or tightly controlled by government, and various economic and service authorities. The latter entities are more loosely controlled by government and usually generate the bulk of revenues from their own operations. Those which produce products and, potentially, generate surpluses are designated as economic authorities. Those organizations which do not produce a product yielding a surplus are designated as service authorities.

The planning process centers around the investment budget. In government budget parlance there are four broad budget categories or titles (sometimes referred to as schedules or babs as alternatives designations). Title I consists of wages and salaries, Title II pertains to running costs (including drugs, food, fuel, supplies and requisites, etc.), Title III consists of the investment budget indicating line item capital development projects, and Title IV consists of investment transfers. Transfers consist of supplemental allocations by government on behalf of specific investment projects financed by donors, government funds, or surpluses of public sector enterprises or economic authorities (often the same enterprise receiving the transfer). Running cost transfers are incorporated into Title II.

Transfers may also be negative, indicating government borrowing of capital funds from surpluses of public sector enterprises or economic authorities. In the event that transfers are negative, interest is due on the funds borrowed and interest, if paid, takes the form of higher positive transfers to these units in the future.

Obviously Title IV is a very special budget category and reflects governments willingness and ability to shift investment funds between units within a given sector, say the health sector, or even into other sectors, from health to, say, defense. Thus Title IV is somewhat beyond the purview of sector planning responsibilities, authorities, and actual activity. Transfer decisions are determined at highest political levels and may be paid from or contribute to various contingency reserves maintained on behalf of the State.

Planning activity centers around Title III, the investment category, for many reasons. Title IV is largely beyond the sectoral planning activity. Title II funds are allocated by a formula that is tied to line items in Title III, the investment budget component. For example, a hospital or newly proposed hospital with a bed capacity of a certain level is allowed Title II allocations based on the "standard" of running costs existing for those types of beds. Minor provision or adjustment of running cost allocations are made for considerations of size of population to be served. But in general, Title II allocations are based on Title III items by fixed formulas based on pre-set standards. (This procedure obviously simplifies the budget allocation process.) Finally, Title I (wages and salaries) allocations are also made on the basis of the numbers and levels of personnel posts that are allocated to each facility according to fixed standards. However, the numbers and levels of posts are ultimately assigned by the Central Agency for Organization and Management. This agency assigns posts, taking into account ministerial requests, on the basis of national need. The latter takes into account the pool of unemployed, the number of new graduates that will be seeking jobs during the course of the plan, and other elements reflecting national need. Thus on balance the number of posts assigned is beyond sectoral planning authority.

The net result of the foregoing, given some obvious oversimplification, is that Title II is tied rather closely to Title III, Title I is partially tied to Title III but is also beyond sectoral plan making authority, and Title IV is completely beyond sectoral planning authorities (except possibly at the ministerial level). The only clear-cut discretion that planners have at sectoral levels, lower than the minister, concerns requests for investment projects which are presented as Title III.

There is one clear and obvious consequence of the budget structure and of the fact that most budget components are closely bound to Title III: Planning, at least at local levels, is health facility focused, not health program focused. Programmatic focus can be provided at the central level only by initiating central programs to lower levels through trimming, altering, and augmenting the numbers and types of facilities which emphasize the delivery of certain types of services. However, this is a very unwieldy way to go about strategically selecting certain health problems and populations at risk and formulating and implementing specific programs to bring about changes in health status. The current budget procedure locks planning into a static facility coverage strategy that may bear little or no relationship to actual or desired accessibility and utilization. Facilities that are well-sited in poor communities, the members of which would want to take advantage of free health services, are likely to perform below community expectations, causing community members to become discouraged. Since running costs and staffing are based on physical capacity and type of facility and not on actual rates of utilization, high rates of utilization will quickly generate outages of drugs and supplies and other factors resulting in low quality of service, thus frustrating the communities. This also results in the perception of the existence of an "unsatisfied" market for health services delivery on the part of government physicians and of others who are part of the health facility

staff and who are likely to exploit the situation through "private sector" health services delivery.

This year's budgets were initiated at local village levels and passed up to governorates. Governorates, as in past years, in turn send their health budgets to the planning division in the MOH. At this point Title III projects are reviewed, trimmed, augmented and revised in consultation with governorate officials. It is at this point that governorate budgets are melded into a national plan strategy devised by the MOH. Once changes have been agreed to in the Title III budget, the budget (including Titles I, II, and III) is submitted to various agencies at central levels.

Title III budgets are submitted to the MOP. MOH officials attend these meetings and assist governorates in defending their budget requests and provide technical assistance concerning cost estimates.

Title I (wages and salaries) components are sent to the Central Agency for Organization and Management, where needs for personnel posts are determined and assigned to each health unit. After this determination, Title I budgets are sent to the MOF and eventually back to the governorates through the MOH. Title II budgets (running costs) are sent directly from governorates through the MOH, to the MOF. Title III budgets, as stated above, are sent to the MOP and defended, and up until last year were sent from MOP to the MOF. However, in 1981 investment budget decision making discretion was transferred from the MOF to the recently formed (1980) National Investment Bank. While the MOF handles funding level determination of Titles I, II, and IV, Title III funding determination is now the responsibility of the National Investment Bank (NIB).

The rationale for creating the NIB is not entirely clear. Up until a few years ago it was common practice to reallocate unspent investment funds (Title III funds) to recurrent expense accounts (Title II). However, the inappropriateness of this funding practice was recognized, possibly partly as a result of donor objections, and in recent years this transfer and spending practice has been disallowed. Some have suggested that the formation of the NIB represents a very visible and credible separation of investment and recurrent account funding decisions, which goes far toward convincing current and potential donors that investment and recurrent spending will continue to remain distinct in the future.

Others indicate that the creation of the NIB is more than symbolic. They suggest that eventually the agency will play a greater "banking role" in investment funding allocations, looking closely at probable economic and social rates of return and at capacity to generate revenues with which to sustain operations and generate surpluses in connection with committing funds to individual investment projects. Unspent investment funds will be reallocated to the most "profitable" sector in terms of economic and social benefits. In short, some observers see the NIB as a vehicle to substitute more rational economic bases (cost-benefit comparisons) for what up to now has largely been a political basis for investment fund allocations decisions.

The MOP reached an apex of influence around 1975, when its power began to wane. However, since the creation of the NIB, the MOP seems to be growing in influence and is working more closely with the MOF and particularly with the NIB.

As far as decentralization concerns the planning process, it should be clear that central levels continue to exercise a dominant influence. While local authorities (village, district, and governorate) have authority and responsibility to prepare and initiate budgets, local governments receive their funds from central government levels. Central agencies MOP, MOF, etc. set the guidelines for planning procedures, establish national targets and goals, specify sub-item categories or "line items" in each budget category, determine the standards for allocating running costs per investment project, and make personnel posting assignments. Local governments have no authority to tax, and only within limits, are able to borrow limited funds from the banking system. (See the Health Services Systems report, by James Dalton et al for a detailed discussion of decentralization processes and progress).

This year, governorates have been given some flexibility to reallocate aggregate investment funds among approved projects once budgets are approved, so long as priority is given to projects already begun. However, strict separation between Titles I, III, and IV funds must be maintained. Thus there is no authority to increase running cost expenditures at the expense of either wages and salaries or investment fund spending. This implies that spending is not very flexible. Thus any given project cannot allocate staff and running cost support according to target rates of output performance. As a result, health units cannot be responsive to actual or desired rates of service delivery or utilization.

Note that plans are "rolling" and that revised budgets are submitted each year. Supplemental requests for funds, particularly Title II can be submitted biannually and requests to offset increased food and drug costs are usually funded from contingency reserves.

2.1.5 Brief Review of Past Health Plans

Four health sector plans have been developed in the past. The fifth health sector plan is in the process of being prepared and is expected to be completed by July 1982. Rather complete descriptions of past plans are presented in Loza et al (ECTOR) and Goma, both cited above. Plans are only briefly reviewed here. Greater emphasis is given to the strategy of the plan that is currently under preparation.

2.1.5.1 First Five-Year Health Plan (1960-1965)

The primary objective of the First Five-Year Health Plan was to undertake the broad scale expansion of coverage of the rural population, which at that time comprised roughly 65 percent of the total population. In addition, provision was made to improve potential performance of rural health facilities through allocation of manpower, drugs, supplies and equipment. Drug prices were

reduced and local drug companies were encouraged to increase supplies. Improvements were made in the level and scope of training and research. Preventive programs were launched against schistosomiasis, tuberculosis, and malaria. Efforts were made to study occupational diseases and injuries. Plans were made to develop the Government Health Insurance Organization (GHIO), which eventually was organized in 1964.

The Minister of Health gave highest priority to the introduction of Rural Health Unit projects. A Rural Health Directorate was established in the MOH in 1962. At the time it was clear that there existed an "excessive number of physicians" and the Medical Syndicate (MS) warned against possible unemployment among physicians. Therefore, the Rural Health Unit project had two major aims:

- a. To provide medical services to rural populations who were then deprived of access to even minimal services, and
- b. To absorb any surplus of physicians.

The Rural Health Unit concept which was developed built on the prior concepts of the Rural Health Center (1942) and Combined Units (1954). Rural Health Centers were established to each cover a target population of 15,000 persons residing in 1-5 villages in catchment areas which varied in size. Within each center, 15-20 inpatient beds were to be provided. By 1954 the philosophy of a Combined Unit was advanced. A Combined Unit was envisioned as a community development unit "comprising a health center, a primary school and a number of socio-economic development centers" within the 15,000 target population originally proposed in connection with the Rural Health Center (1942) concept. (See "Egyptian Experience in Primary Health Care," Ministry of Health, A.R.E. - undated.)

The Rural Health Unit (1962) concept extended the coverage of the Rural Health Center, recognizing that most rural dwellers had to travel relatively long distances in order to have contact with the public system. A Rural Health Unit is a smaller health services delivery point; in principle, such units are evenly spaced within the Combined Units, so that each serves a single village of no larger than 4,000 persons or a group of villages no farther than 3 kms from one another comprising a total population of no more than 5,000 persons. In the case of smaller concentrations of villages spread over wide areas, local communities can prepare a clinic site (health post) that in principle can be visited by health unit staff members 2-3 times weekly.

In order to achieve desired coverage, 2,500 units were needed. Each district (139 in all) was to be provided with a hospital as a district referral center. In addition, Rural Health Centers were to serve as referral centers for Rural Health Units. Governorate and urban public hospitals were envisioned as handling all cases of referral from district and governorate levels respectively.

An initial investment of L.E. 15.0 million was provided for Rural Health Delivery expansion in 1960. Through annual revisions this was revised upward to L.E. 17.0 million, and L.E. 16.0 was actually expended. (Gomaa). (More complete budget data are provided in Section 2.1.5 below.)

2.1.5.2 Second Five-Year Health Plan (1965 - 1970/1972)

The Second Five-Year Health Plan tended to continue and to reinforce the themes of the First Five-Year Health Plan. Review of this plan will be brief and will only emphasize new initiatives and variations in degrees of emphasis.

It should be noted that national planning was seriously disrupted by the War of 1967. This resulted in a mid-period revision and an extension of the plan period by two years to 1972 and in consequent downward revisions in both aggregate funding over the period and annual allocations to the health sector as "National Action" objectives took highest priority. Also, President Sadat took office in 1971 and a new Minister of Health was appointed that year, later followed by a new Minister who, for the first time in the ARE, ordered the drafting of a Health Policy Statement (issued in 1972).

During the period 1965-1970, the principle objectives and priorities of the First Five-Year Health Plan were reinforced. However, execution was hindered by reductions in funding levels. Two new themes appeared in the Plan document. First, the theme of fulfilling democracy of management of health services, meaning greater local participation in the planning and administration of local health agencies, was strongly advanced. Second, the theme of decentralization was advanced.

The original Plan in 1965 called for an appropriation of L.E. 46.5 million for the health sector. This was later revised downward to L.E. 25.7 and the Plan period was lengthened by two years. Later, in 1966-67, what was then a Seven-Year Plan was replaced by what was called a Three-Year Accomplishment Plan which started that fiscal year with L.E. 11.5 million.

Clearly, throughout the period 1965-1972 things were very disrupted by various events and it was all the Ministry of Health could do to continue progress along lines previously advanced. This took the form of attempting to complete as many investment projects that were already begun as was possible under the then prevailing circumstances.

2.1.5.3 Third Five-Year Health Plan (1970-1975)

In 1970, the Supreme Council for Health Services undertook executive responsibility for preparing the Plan over the period 1970-1975. This super-coordinating body attempted to develop a sectoral plan that was interministerial in scope. Each of the relevant components of the "health sector" were invited to submit their proposals for the health plan.

It would appear that this laudable exercise was hampered by various events and resulted in a budget document accompanied by statements and adjectives that

are recognized as restatements of past themes. The budget itself was overtaken by events, both internal and external. Matters were improved somewhat by the first MOH Health Policy Statement, written in 1972 under the direction of Dr. Mahfouz who became Minister of Health in January of that year.

The MOH Health Policy Statement of July 1972 provided clear statements of objectives, strategy, principles, and priorities. Since that time the Supreme Council for Health Services has been publishing periodic reports and policy statements, often in English, covering the entire health sector. These reports vary in the degree of specificity and detail. As a consequence of this variation, it is not possible to sequentially track consistency of policy themes and to compare progress in the development of the expansion of the health sector. Comprehensive expenditures data, particularly on current account, are usually not included in these reports.

The Health Policy Statement of 1972 deserves attention. The highlights of that statement are summarized in outline form below (Loza et al):

A. Objectives

1. Prevention of illness
2. Curative, diagnosis and medicine
3. Emergency service

B. Strategy

1. Improvement of emergency services
2. Expansion in preventive and public health services
3. Improvement in the organization, level efficiency and effectiveness of curative services.
4. Rationalization of the production, consumption, and distribution of medicine
5. Improvement and coordination of rural and urban health services
6. Promotion of public health services
7. Promotion of health insurance
8. Promotion of family planning services
9. Promotion of mother and child and school-age services

C. Priorities

1. Emergency services (because of state of war)
2. Environmental health, mother, child and school-age and family planning
3. Improvement of efficiency and effectiveness of existing health services
4. Completion of unfinished capital projects
5. Strengthening planning, data collection and analysis and general health knowledge
6. Expansion of training to meet domestic and international needs for nurses and other technical personnel
7. Coordination between health services and family

- planning to facilitate progress in reducing rates of population increase
8. Construction of a scientific library
 9. Increased training of statistical and clerical personnel to assist health planning
 10. Improve interministerial coordination in areas of public health and sanitation
 11. Targeting increased foreign aid toward alleviation of local problems

The bulk of the Health Policy Statement deals with resource plans, including statements of intention to increase numbers of staff, delivery facilities, training facilities, etc. The Statement represents a watershed of collective thinking and apparent commitment to improving the delivery of health services.

However laudable the intention, the Statement lacks specificity with respect to targets, both in terms of goals toward improving health status and of the extent to which achievement of plans for expanding resources will meet plan goals. An exception to this is the clear-cut target of reducing the rate of population increase from 2.5 percent annually to 1.7 percent by 1980, a goal which was not achieved. What is lacking is more target setting, selection of programs from alternatives, and a rational calculation of resources required to support programs designed to meet targeted goals and objectives. There is a big jump from statements of priorities to statements of resource requirements. There is a distinct lack of a well-conceived implementation plan or strategy linking priorities, targets and goals, programs needed, and resource requirements. Little attention is paid to changing basic elements of the system, such as training curricula. Still, a significant number of worthy programs were identified as commanding emphasis.

One reason possibly explaining the lack of linkage between priorities of statements of objectives and implementation planning required to meet objectives lies in the stated policy of transferring responsibility for execution of planning from central to local levels. This was viewed as an important step in the process of decentralization. The responsibility for executing the plan was transferred to local levels, but without a commensurate transfer of authority and command over resources. True decentralization requires transfer of responsibility, authority and resources. The latter transfer has not been effected up to the current time.

Yet overall, one must give high marks to the 1972 Health Policy Statement and to the planning it reflected. It is a pity that funding and other resource generation and allocation processes were disrupted by external and internal events--war and political difficulties. Subsequent Health Policy Statements (1974-1977) followed the pattern of the first such Statement issued in 1972. By 1978, Health Policy Statements have been issued in connection with annual plan revisions, following the rolling plan procedure adopted by the ARE.

2.1.5.4 Fourth Five-Year Health Plan (1975-1980)

The Fourth Five-Year Health Plan was actually not issued until 1977, but was preceded by a Health Policy Statement in 1974. Both the Health Policy Statement of 1974 and the Fourth Five-Year Health Plan in large measure expanded on the themes established in 1972, even though three different Ministers of Health served between 1972 and 1980. The appointment of new ministers naturally resulted in some differences in emphasis. The 1977 Health Policy Statement provides the guiding principles for the Fourth Five-Year Health Development Plan.

The Fourth Five-Year Health Plan is distinctive in incorporating a projection of a health manpower plan, setting more specific targets and goals, and paving the way for the reorganization of the MOH. It is also distinctive by comparison with others in taking projected population growth rates into account in connection with plan formulation and with developing alternative resource plans, indicating the extent to which progress toward achieving goals would be made under each configuration. For example, "Alternative I" presumed an allocation of resources (costed out in terms of funds) that would just sustain the existing basic standards of service. "Alternative II" allowed for a two-fold increase in resources which, obviously, would result in a considerable improvement in services delivery. Other alternatives were specified. Baseline data were provided, targets objectives were set and investment and recurrent resources were allocated as rationally as possible (given existing budget rigidities) among plan components more or less reflecting programs established to achieve progress toward attaining goals. Foreign donor projects aimed at experimenting with alternative policies, procedures, and methods for delivering selected health services were designed and initiated. Emphasis is placed on management, although this concern was largely focused on the MOH headquarters and on the scope of activities of the Supreme Council for Health. However, the plan took into account the law establishing regional councils for Health Services in each governorate to assist in coordinating the health services of the government sector.

Highlights of the Fourth Five-Year Health Plan include the following:

1. The launching of a national program of vaccination against poliomyelitis involving 5.5 million children (3 doses over a six week period). Ministerial Decree No. 388 (1977) made vaccination against measles compulsory for all newborns. By the end of 1977, 1.25 million children were purportedly vaccinated. A national program for T.B. vaccination was launched in 1977.
2. The MOH promised to decrease the infant mortality rate from 118/1000 in 1977 to 100/1000 in 1980, through adopting improved measures (rehydration) to reduce infant mortality from diarrhea with the assistance of UNICEF.
3. The budget for food projects (Supramine) was doubled with food distributed at MOH centers.

4. A project was launched cooperatively with USAID to improve Rural Health Services delivery.
5. Reorganization of the MOH headquarters so as to concentrate only on planning and supervision. (See Loza et al, pp. 34-36) In this connection, it may be noted that Family Planning (FP) was raised to the level of a General Directory. A Supreme Committee for FP was formed to coordinate services provided by the MOH and other FP service providers and a committee was formed to prepare a national FP plan and program.
6. Continued emphasis on rural coverage, MCH, and school health.
7. Expansion of health insurance coverage to include government employees and conversion of the Government Health Insurance Organization (GHIO) to an economic authority (1979).
8. Strengthening needed research.
9. Stimulate production of drugs and vaccines.
10. Strengthen Emergency Medical Services (EMS) under foreign assistance (US). (Details are provided in the EMS report prepared for the 1982 Health Sector Assessment .)

Since the Fourth Five-Year Health Plan in large measure represents an extension and elaboration of policies established earlier, little comment is necessary. However, clearly the technology of plan preparation or writing shows improvement, greater acceptance of foreign assistance is evident, and efforts were made to place health care delivery on a more scientific footing. It should be noted that the plan reflects that in this period policies of medical education became oriented toward the export of health professionals. The plan reflects little concern that overproduction of health professionals was in any sense a problem or could create problems such as diminishing the quality of medical and health technical education.

2.1.6 Strategy of the Current Plan

The Fifth Five-Year Health Plan is in the process of preparation and thus few plan documents are available. However, the "Health Sector General Strategy" ARE document is available in translated form. MOH officials have stated that this document provides the basic outline for preparing the next plan. The Health Sector General Strategy, 1980-1981 (HSGS) is 30 pages in length and thus can only be briefly summarized in the space available.

The HSGS contains 11 categories of emphasis. The contents of these will be summarized under individual headings below.

a. Health Insurance Coverage

The HSGS provides for expansion of the Government Health Insurance Organization (GHIO) coverage to completely cover civil servants in 15 governorates out of 26 in the nation (and all industrial workers employed by firms of 500 or more employees). This in effect would result in the coverage of 3.0 million persons by the end of 1982. (In 1982 the General Assembly announced the desired acceleration of the rate of expansion of GHIO coverage, to increase total coverage by 5.0 million persons annually. MOH officials (do not believe that this can be done.) Bed space and other physical capacity would be largely leased from the MOH. The MOH claims that priority will be given to the GHIO in terms of staffing. Industrial accident coverage will increase to 6.0 million laborers by 1982. The implementation of GHIO coverage to cover the majority of the population will be facilitated by the establishment of the High Council on Medical Insurance (COMI). The mandate to this council is sweepingly broad and would appear to have the potential of becoming the highest curative health care policy-making body in the nation. The chairman of the HCMI is the Minister of Health. The secretariat is the GHIO. The HCMI will have broad executive powers.

Among the powers held by the HCMI is the authority to "lay down performance rates and specify the minimum service levels to be observed by any organization or agency dealing with insurance treatment of any type of medical care as regards their staff." The HCMI further requires that all (public and private) organizations register with the Council "in order to insure that they meet the terms and specifications required in any insurance treatment body and to insure that these schemes and substitutes do not affect the social insurance in its broad concept. The terms of reference further elaborate the theme that the HCMI will have super coordinating powers over all private and public insurance/health delivery schemes. (See HSGS, pp. 3-4).

(Note that since the policy with regard to expanding the GHIO is the most important policy initiative and strategy that has recently been adopted by the GOE, it is analyzed in detail in Sections 2.2, 3.0, and 3.1.6 of this report.)

b. Drug Policy - (Public and Private Drugs)

The MOH subsidizes drug prices to below cost. Drug prices are strictly and effectively regulated. This is accomplished by subsidizing the Public Sector Pharmaceutical firms (e.g., The Egyptian Medicine Trading Co.) from profits expropriated from "private" firms (L.E. 9.0 million expropriated from private firms and L.E. 6.0 million provided by State fund general revenues in 1981). The GOE's goal is to increase domestic production from 81.0 percent of total domestic consumption to 85.0 percent of total domestic consumption by 1985. Quality control will be upgraded, assisted by L.E. 0.5 million of U.S.-provided funds. The GOE has targets for exports of drugs to rise from the current level of L.E. 4.5 million to

L.E. 6.0 million by 1985. Exports would principally go to Arab and African nations. Priority will be given to increasing joint ventures with foreign drug companies. Efforts will be made to increase production of insulin and antibiotics and other requisites, upgrade bottling and packaging, and improve distribution, marketing and storage through acquisition of modern data processing equipment. Special attention will be given to distribution of drugs to remote governorates and to improve maintenance of medical equipment and appliances. New companies will be formed to undertake these responsibilities. A Director General for pharmacy will be appointed in every governorate.

c. Decentralization

For the first time, the Ministry is developing target staffing ratios for various medical establishments as guidelines for local units. It is also developing rates for periodic maintenance of buildings and other installations, and consolidating operational statistical data processing and collection efforts at both central and local levels. Thus, the MOH is formally recognizing its role as a planning coordinating unit and serving as a binder on behalf of government among external agencies, including donors, and local health agencies. A General Directorate for Research has been established, whose activities are coordinated by a Higher Committee for Research. This committee will coordinate both domestically funded research and that funded through foreign sources, including family planning and population research/service activities (World Bank \$60.0 millions and USAID \$27.0 millions).

The MOH will still assign posts for medical personnel to local areas and will coordinate foreign donor supported training programs. It will also control and coordinate post-graduate study both locally and abroad.

d. Medical Treatment Services

Although the GHIO coverage will be expanded to cover increasingly larger proportions of the population, provision of free medical services to the medically indigent is a continuing responsibility of the MOH. The MOH plans to continue to develop central and local government level hospitals and to convert Rural Health Centers into village hospitals to insure provision of adequate quality and quantities of publicly provided health services to rural and urban populations on an equitable basis. A project will be undertaken to upgrade 23 central hospitals and to establish medical specializations in additional hospitals, with emphasis on those in remote areas.

The MOH has submitted a draft law proposing to regulate conditions, rates and quality of services, as well as prices of nongovernmental (private sector) health services providers. Price lists will be developed, and all private clinics will be licensed. Linkages of referral will be established between public and private clinics and hospitals and the Cairo and Alexandria Curative Care Organizations, in order to take advantage of

the high medical technology available in the latter organizations. Public Hospital beds will be expanded by 2,000.

The MOH plans to expand dental services by creating 64 new dental units and 19 new dental laboratories. The MOH has proposed increased salaries for nursing personnel. MOH plans in the area of EMS are extensive and are reviewed in detail in the EMS report of the HSA. A comprehensive plan is being developed. Elements of such a plan include development of public hospital reception areas, establishing new burn treatment units, consolidation of first-aid services through the supply of vehicles equipped to provide emergency surgery, establishment of first aid points on major highways, consolidation of radio communication networks, and the consolidation of blood banks.

The MOH also plans to construct two additional intensive care units and two new such units for premature babies in Lower and Upper Egypt, respectively.

e. Preventive Services

The MOH maintains, rhetorically, that prevention is much more important and cheaper than treatment services. The MOH plans to expand programs of early detection and treatment (follow-up) of infectious diseases, consolidate quarantine premises at Port Said and the Suez and develop radio communication between Port Said, Suez and the MOH headquarters.

The MOH has developed a project to produce various serums, and measles and mumps vaccines and to make this inoculation mandatory through national campaigns. In order to do this, it is necessary to improve the cold chain at basic health units.

The MOH has developed an integrated plan to consolidate efforts concerning maintaining food security, easily extract samples and the development of central laboratories for rapid analysis. The MOH has reached agreement with food manufactures to display expiry dates on all food items. The MOH has commissioned a series of studies of eating habits, nutritional needs, nutritional standards, nutritional content of traditional foods, and studies of economic, environmental and social factors influencing choices of foods and selection of alternatives.

As concerns environmental health, high priority is attached to hazards accompanying development of industry and agriculture, including problems of dissemination of dangerous gases and vapors, water pollution, and problems associated with the use of insecticides and fertilizers. The MOH has submitted a number of memoranda requesting authority to coordinate control and treatment measures among the various ministries of concern. The MOH plans to expand its monitoring and research activities (some of which are conducted in collaboration with international organizations) concerning potable water, air quality, rodent control and other environmental factors.

The MOH conducts health/culture education programs through the media, with primary focus on family health. It is expanding its program of treatment of school boys by providing special services in free of charge hospitals and rural clinics. It is also studying ways to extend GHIO coverage to schoolboys, but no such study and plans for extension are contemplated for school girls. Boys eventually will be given medical record cards.

f. Basic Medical Care and Family Health in Urban and Rural Areas

The Ministry plans to continue to extend basic medical services to the whole nation and strengthen referral systems between rural medical units and hospitals. During 1980/1981, 63 urban centers were scheduled for completion in 17 governorates. In addition, 19 medical centers are also in the process of completion.

A highlight of MOH efforts to improve rural health services concerns the consolidation of rural health services being conducted with USAID assistance (\$8.0 million and L.E. 600,000). The project covers ten administrative centers in four governorates. The MOH hopes to generalize this experience to the rest of the nation. (See The Rural Health Services Project Summary of the HSA for a detailed description of this project.) In addition, the MOH cites the USAID urban health project as a major vehicle for eventually upgrading urban health services in greater Cairo (See The Urban Health Project Summary for more details.)

g. Population

The 1980/1981 strategy places considerable importance on population problems, considering population growth as the "origin of all its economical problems." Efforts of the various ministeries and organizations involved are coordinated through the High Council for Housing and Control of Family.

MOH stress is placed on the consolidation of medical services (integrated approach) incorporating family planning as a basic service in all health units to the extent possible. The MOH is committed to expanding family planning services throughout the health system. Great relevance is placed on donor assistance in this area. Three major donor projects provide momentum in this area, including the World Bank (\$25.0 million, operating in four governorates, including Cairo), USAID (\$26.7 million, operating in three governorates), and a Federal Republic of Germany project (DM .75 million, currently operating in three governorates, with plans to expand activities during the next five years).

MOH operational efforts over the next five years will be targeted on distribution of contraceptives, training of volunteer and members of other ministeries, training of MOH personnel, and increasing the flow of family planning information.

The Minister of Health serves as chairman of the High Council for Organization and Control of Family and Population. The Council has formulated a national plan based on three major objectives: (See HSGS, ps. 24-25)

- A. Increasing supplies of contraceptives through the MOH and its units and by the continued subsidization of the prices of birth control means and devices offered through commercial sources.
- B. A comprehensive plan at governorate level aimed to increase family income and to enhance the role of women involving families and local political and religious leaders, with USAID assistance
- C. An information plan which relies on media in addition to personal contact and house visits, supported by World Bank and USAID funds.

h. General Organization for Hospitals and Teaching Institutes

Nine Teaching Hospitals (non-university) and eight Research Institutes monitored by the Minister of Health provide post-graduate study opportunities (M.A. and Ph. D.). These institutions will be expanded by a total of 700 beds. Construction of an Infant Paralysis Institute will be completed, and an Institute for Cardiac Surgery will also be constructed.

i. General Organization for Bio-Preparations and Serums

The MOH plans to increase production of serums and vaccines to support the national vaccination campaign in cooperation with foreign governments and organizations.

j. Development of Law and Regulations

The MOH plans to strengthen the philosophy of centralized planning and decentralized implementation. New regulations are proposed to clarify working relationships between central and local governments. As noted earlier, the MOH plans to expand GHIO coverage of the population rapidly in the next few years and also to accomplish regulation of all health services delivery institutions throughout the nation. In these connections, the following laws and regulations are proposed for appraisal and implementation:

- A. The MOH has proposed the creation of the High Council of Medical Insurance (COMI) (described in "1. Medical Insurance" reviewed at the beginning of this section) to establish rates of performance and standards of service which are to be observed by any health security insurance units, public or private.

B. The MOH has drafted and, upon approval, plans to implement the establishment of an organizational strategy for providing urgent medical services (EMS), to be provided under any circumstances without previous conditions. The intent of the law is to make urgent medical services freely available throughout the nation, "without financial bounds".

C. The MOH has proposed the amendment of Law No. 490 (1955) concerning the administration of non-governmental medical treatment establishments. It proposes mandatory licensure of all health care delivery units at governorate level, after its registration with the Medical Syndicate. The law assigns liability for the appropriate conditions of medical practice institutions to the licensed physician(s) serving the establishment, calls for annual inspection, and grants authority for closing down any establishment failing to meet prescribed standards of adequacy of tools, equipment, and treatment until such a time as conditions are brought up to standard. Construction fees involved in opening treatment establishments must be advertised and recorded with the MOH and the Medical Syndicate.

D. The MOH has proposed a law to specify methods, facilities and modalities of care for the mentally ill. Provision is made for the production of "up-to-date drugs." It proposes the establishment of a High Council for Mental Diseases and the formation of regional councils in governorates. The High Council would have responsibility to examine cases of transfer by judicial order, and authority to issue licenses for the construction of mental hospitals. Regional councils would have responsibility and authority for detention and release of patients.

k. Development of Services and Increase in the Rate of Expenditures

In order to improve standards of services at various health units and to compensate for inflation, the MOH has increased "standards" of running costs (Title II) as follows:

A. Rural-Health Units--from L.E. 2200 to L.E. 2500 per year.

B. Inpatient beds of Rural Hospitals from L.E. 270 to L.E. 330 per year.

- C. Urban maternity and childhood protection centers--increased by L.E. 500 per year overall, and inpatient bed rates from L.E. 270 to L.E. 330 per year.
- D. Infectious Fever Hospital beds--from L.E. 270 to L.E. 330 per year.
- E. Beds of General and Central Hospitals--from L.E. 300 to L.E. 360 per year.

2.2 Non-Health Policies with Major Impacts on Health

2.2.1 Family Planning

In preparing this section, principle reliance was placed on reference materials provided by the Population Assessment Team and the "National Strategy Framework for Population, Human Resources Development and the Family Planning Program," A.R.E., December 1980, USAID Cairo Family Planning officials and a publication by Dr. H. T. Crowley entitled "United Arab Republic," Country Profiles, Population Council, Columbia University, August 1969.

The subject of family planning in Egypt is covered extensively in the Population Health Sector Assessment Team Report. The purpose of this section of this report is to outline existing policy in this area and to relate it to health sector policies when relevant. Of particular interest are cases in which health services delivery policies, strategies and activities interface with those of family planning, thus presenting opportunities for the initiation and/or expansion of joint programs.

2.2.1.1 Brief Review of Family Planning and Population Policy

It is well-known that President Nasser had marked negative feelings about family planning. However, the National Charter of 1962 recognized rapid population growth as an obstacle to economic development. In 1965 an interministerial committee, the Supreme Council of Family Planning, was established by Presidential decree. The Council was headed by the Prime Minister. This was followed by the establishment of an Executive Board of Family Planning which was entrusted with the responsibility of launching a national family planning program utilizing the health infrastructure of health clinics. The Egyptian family planning organization undertook responsibility for coordinating private voluntary organizations in association with the Planned Parenthood Federation.

The birth rate dipped downward from the 1950s and this decline continued into the mid-60s. However, little credit can be given to organized, policy-directed efforts in the area of family planning, since thereafter the birth rate rose to levels close to those attained during the 1940s (40/1000). The two decade drop in the birth rate is largely explained by environmental and social factors set in motion in earlier periods.

In 1973, with the assumption of the "socio-economic" approach to fertility reduction, national policy began to take a more aggressive shape and posture. The policy showed signs of recognizing the interrelatedness of the role of family size and consequent standard of living, social security, and reduction of infant mortality. The policy also recognized the importance of mechanization and industrialization to the role of women and changes in traditional patterns of activity and employment. The policy also recognized the importance of linking the provision of information and publicity (demand creation) to provision of health, including family planning, services (supply).

However, in spite of the improvement in the intellectual perception of causality and simultaneity of socio-economic forces in connection with decisions concerning family size, family planning continued to rank very low in terms of national priorities.

In 1975 the GOE adopted the community as its focus, and transferred responsibilities to local governments to implement family planning. This policy shift in responsibility for implementation from central to local governmental levels was consistent with government's thrust toward decentralization, as a major premise of the "open door" policy initiated in 1975.

The most recent policy strategy is the "National Population, Human Resources Development and Family Planning Program Strategy" announced in 1980. This statement is comprehensive in scope, but focuses directly on reduction in fertility by giving major emphasis to improving family planning services (increasing supply). The new strategy targets a 20 percentage point reduction in the birth rate by the year 2000. The means by which this objective is to be achieved is by increasing the prevalence rate of use of contraceptives.

The national program has the following components:

- a. A program of upgrading family planning services, integrating them into health services delivery and social activities.
- b. A program of institutionalizing community based programs of social and economic development which are conducive to family planning practices.
- c. A program of strengthening educational, population education, and IEC programs promoting fertility behavioral change, small family norms, and increased use of contraceptives.

In the policy area, one of the prime inhibitors of actual implementation has been the past lack of political will and commitment. However, in February 1982 President Mubarak spoke forcefully on the need to reduce the rate of population growth in Egypt. It is expected that President Mubarak will provide both the political commitment and leadership in family planning that was lacking in the past.

2.2.1.2 Components of Implementation of Family Planning and Population Policy

Time and space do not permit summarizing the many subcomponents of the current family planning programs constituting Egypt's strategy and policy in the areas of population control. This is done in the population Sector Assessment Team Report. However, areas of interface with health services delivery policy, strategy, and activities warrant discussion here.

First, the primary vehicle used for distribution of family planning services is the public health services delivery system. Since the GOE recent major

policy initiative is to expand the GHIO to cover at least the majority of the population in the next 10 years, it is imperative that family planning services be incorporated into the integrated package of services to be provided by this organization. The GHIO has requested general developmental assistance from USAID and also has expressed an interest in technical assistance in the area of family planning. The latter expression of interest occurred recently in connection with a GHIO pilot program providing coverage to 30,000 worker dependents in Alexandria in 1981, the majority of beneficiaries consisting of women and children.

Second, one of the GOE health programs with great potential appears to be the MOE/MOH sponsored school health program. Since roughly 45 percent of Egypt's population is under 15 years of age, IEC and other educational programs could be integrated into school health activities, with major impacts. Note that after approximately four years of primary school the number of women attending school drops off precipitously. Thus the principal population at risk, young women, would not be reached effectively by a school based fertility reduction educational program unless introduced at early ages in the school health program.

The school health program is currently administered jointly by the MOH and the MOE. Plans are underway to explore possibilities of transferring responsibility for school health programs to GHIO, via a financial mechanism and framework similar to the industrial accident program on behalf of industrial workers. If this were to occur GHIO, which currently operates primarily as a curative health services delivery organization, would have an expanded opportunity to undertake responsibility for fertility reduction (as well as other health promotion and illness prevention educational programs). This would serve the long-term interests of both GHIO and those responsible for national programs in population and family planning.

However, there are some limitations to the capacity of the GHIO to expand its coverage. These issues are discussed in Sections 2.0 and 3.0 of this report.

2.2.2 Nutrition Policies

The policy discussion in the nutrition area is based on the IOM main report and the background study by Bell. Like most countries in the world, developed and less developed, Egypt has no explicitly formulated unified policy for nutrition. While the Five-Year Plan (1978-82) provides statements of objectives concerning agricultural development targets, strategies tying increased food production to national nutritional status goals and objectives are absent.

2.2.2.1 Joint Ministerial Responsibilities

Egypt also is like most other nations in that nutritional programs are shared among several ministries. In Egypt, responsibility is shared among the ministries of Agriculture, Health, and Education.

The Ministry of Agriculture (MOA), in collaboration with University of California, Davis (with USAID assistance), has developed a capacity for policy analysis and planning for agricultural development. Several trained nutritionists are already working in the MOA. The elaborate food subsidy program conducted by the GOE clearly has a significant positive impact on nutritional status in Egypt.

The MOH established a Nutrition Institute in 1955 and includes statements of its objectives and programs in health plans and annual policy statements (See HSCS in Section 2.1.4.1, item e of this report.) Nutrition Institute (NI) activities consist primarily of research on nutritional status, eating habits, etc., as reported in Section 2.1.4 above. The NI is encouraged to collaborate its research activities with other ministries and with international organizations and agencies, and with voluntary organizations.

In addition to research studies, the MOH conducts maternal and child health feeding program assisted by the Catholic Field Services targeted at high nutritional risk populations in various segments of the nation. However, it is clear that these programs are not comprehensive in their coverage and thus do not constitute a general strategy of nutrition intervention. Attempts have been made by the MOH to develop a national nutrition strategy, but a comprehensive plan and strategy complete with selected interventions programs have not been forthcoming.

The Ministry of Education (MOE) is largely administratively responsible for school feeding programs, although this became blurred at local government levels with the MOH playing a strong role in evaluating and administering feeding programs at village level. Food for these programs has been contributed by the World Food Program (WFP) and the U.S. Government under Title II of Public Law 480.

Recently, 1980, USAID decided to terminate Title II food allocations to school age children in favor of allocations to more vulnerable preschool age populations. It is estimated that the bulk of avoidable mortality occurs in children under five years of age and that the great majority of causes of this mortality are nutritionally related.

2.2.2.2 Ministry of Health/USAID Priorities

USAID's decisions in the matter of targetting Title II food allocations are in conformity with MOH priorities. Since 1973, MOH has given highest priority to the nutritional needs of children under three years of age. In that year local production of infant weaning foods (Supramine) was initiated in Egypt, with the assistance of UNICEF which donated manufacturing equipment as well as foodstuffs. Supramine production has been plagued with many problems. Costs are higher than anticipated, and quality of output has been poor. Pricing policies of government have provided little incentive for production. Roughly 50.0 percent of output is sold commercially; the remaining output is distributed by the MOH through its health units and MCH clinics.

The MOH has concentrated its distribution efforts on rural preschool populations. Efforts have been made to distribute fortified wheat-soy blend flours, bulgar wheat, and oils to clinics at one to three month intervals, with surpluses allocated on the basis of estimates of the number of children under three years of age who are members of low income families served by each facility. However, estimates of eligible populations at risk in the catchment areas of facilities have been poor, leading to rapid distribution of food within a few days after arrival with much food going to nontargeted populations.

2.2.2.3 Problems and Issues

An issue exists concerning the extent to which rural Health Unit personnel are committed to accepting responsibility for the distribution of "scarce" commodities when pressures to receive them are great and the distribution of commodities is a non-clinical task for which health personnel have not been trained. Efforts apparently have been made to integrate food distribution as an element of the package of basic health services constituting a comprehensive strategy of primary health services delivery. Demand, however, is said to far exceed amounts currently available. Thus it is difficult for health personnel to screen potential recipients who are in greatest need.

A major problem exists in the fact that health personnel are not well trained to assess nutritional status as a factor contributing to illness. Recall that the majority of health personnel serving rural health units are from the local community. While there are obvious advantages in this, there is a tendency for health personnel to seek and maintain community acceptance by continuing to adhere to local beliefs and customs. One belief of particular relevance in this connection, is the belief that intake of food and beverages should be withheld in cases of children suffering enteric illness and diarrhea. Thus if food supplement rationing decisions are made, they often are perverse in their effects on health status of infants.

Another problem is that health personnel have little regular contact with children after the age of 15 months at which time children, in principle, have received mandatory immunizations. Since some children tend to continue to be breast fed up to this time, nutritional problems are not so evident at this stage. Yet it is at the stage of weaning, between the ages of 9 months and two years in rural Egypt, that nutritional deficiencies appear and begin to accelerate their development.

Another major problem exists in that health centers are poorly equipped with growth charts and scales and other tools with which to detect and monitor the progress of nutritional development or underdevelopment. Most growth charts do not go beyond one year. Community outreach and education of mothers concerning infant weaning and feeding practices are not well defined in the job descriptions of health workers, and with rare exceptions workers are not trained adequately to perform these functions. Thus nutrition surveillance, monitoring and evaluation information are virtually nonexistent as a practical matter. In the absence of a unified strategy and policy coupled with a requisite implementation strategy involving upgrading of training, equipment

supply, outreach and education, there is very little prospect that assistance would result in an effective improvement in the nutritional status of the populations of preschool children targeted as being of highest risk of becoming seriously malnourished.

2.2.3 Environmental Health Policy

The brief review of policy in this area is largely based on Environmental Health in Egypt: A Sectoral Assessment and Recommendations, WASH Field Report No. 33, April 1982, prepared by D. B. Warner and D. Donaldson, with the assistance of Joseph Haratani (USAID Contract No. AID/DSPE-C-0080, Project No. 931-1176, hereafter referred to as the WASH Report). Major policy themes and their relation to problems are only sketched in this report and readers are referred to the WASH Report cited immediately above.

Egypt presents a harsh health environment. One of the largest problems confronting the health services delivery system is that upon successful treatment of illness, patients are likely to recontract illness upon returning to the same uncharged environment which was largely responsible for the original illness for which patients sought treatment. It is not uncommon for children to suffer seven or eight episodes of enteric illness in a single year. If health services delivery services were entirely free and otherwise completely accessible, and acceptable by the population, it would be possible that annual patient visits would be in the range of double digits annually, at least for children.

From the standpoint of policy one of the major problems is that in the area of environment, like nutrition, responsibilities are shared among ministries. However this is in part explained by the multi-facted nature of environmental problems. Very broadly, environmental conditions span a vast range of occupational and residential settings. Environmental health problems relate to water supply, domestic and industrial waste disposal (water and chemicals), solid waste disposal, occupational health, housing, food hygiene and matters involved with the prevention of air, water, soil, and food pollution. 2.2.3.1 Environmental Health Policy

The environmental problems of Egypt, as quoted from the WASH Report Executive Summary, are as follows:

- a. Inadequate coverage by properly operating facilities.
- b. A multitude of organizations and agencies with little intrasectoral coordination.
- c. Insufficient numbers of personnel experienced in public health measures.
- d. Over-aged equipment and physical plants that are both difficult to operate and expensive to maintain.

- e. A lack of basic data for planning purposes.
- f. The absence of a central unit capable of providing leadership under the present crisis condition.

Egyptian cities are growing at rapid rates and are increasingly unable to supply basic services to expanding populations. Population densities in inhabited Egyptian areas are among the highest in the world and are estimated to be 2,400 per square mile. It is clear that conventional strategies are inadequate to handle current problems which will become larger and more complex over time.

Until 1951 responsibility for sanitation services was placed on the MOH. However, in that year a Ministry for Housing and Public Utilities (later called Housing and Reconstruction) was created. This ministry was given responsibility for housing, sewerage facilities, public works, and for the licensing of ships and other facilities requiring inspection. Committees were established to provide coordination between the Central Ministries of Health, Housing and Reconstruction, and governorate levels. A division of labor was created between the MOH and the Ministry of Housing. In this division of labor, which is still effected today, the MOH sets standards for water purity and sewerage effluents and provides technical assistance and guidance for sanitary facilities. The Ministry of Housing and Reconstruction is responsible for the construction of improved housing, water works, and sewerage disposal plants.

In general the central government has responsibility for the planning, design, construction and financing of public utilities, including water and sanitation facilities, with standards set by the MOH. However, responsibility for operations and maintenance rest with local authorities, including governorates and city and village councils. The MOH is the most important institution as far as setting standards, monitoring all water and sewerage facilities, sampling and performing laboratory analyses, and providing advisory services at all levels of government.

Within the MOH, environmental activities are carried out by a General Directorate of Environmental Health with divisions of water quality, waste water control and general sanitation. A Department of Occupational and Industrial Hygiene and Air Pollution Control conducts studies of occupational safety and air pollution problems, although inspections are carried out by the Ministry of Manpower and Training.

2.2.3.2 Environmental Health Policy Strategy

The current general environmental policy strategy of the MOH has been reported in Section 2.1.4.1 under item e above. More specific components of strategy include the following (WASH Report, pp. 50-51).

- a. Early discovery of infectious diseases and monitoring national epidemic;

- b- Augmenting health quarantine capabilities in the Republic's ports-of-entry;
- c. Securing required vaccines and sera;
- d. Establishing general administration of food monitoring (Safety and Inspection)... This has necessitated the development of Central Laboratories for monitoring food;
- e. Controlling disease transporting insects and rodents;
- f. Speedy discovery of infectious diseases, their control by epidemic eradication, early discovery and national followup; and
- g. Formation of new Technical Committees (for environmental health)... The opening of Imbaba Environmental Research Center. This center will be the National Research Center.

2.2.2.3 Water Sector Policies and Strategies

Sector strategy in water supply and sewerage has been formulated by the ODE in both the long-run, to the year 2000 and in the intermediate-run, 1981-85 (See Table 2.2.2.3.1 below. Long-run objectives for treating water include the following (WASH Report, p. 52).

- a. To increase production in order to serve the growing population and to achieve the following per capita consumption rates:
- b. To increase the efficiency of water utilities.
- c. To prevent pipe bursts in the distribution system.
- d. To reduce the number of people unserved with drinking water in the rural areas from 4.5 million in 1979 to 3.0 million in 1985 and to serve all with adequate supplies by the year 2000.

Table 2.2.2.3.1.: Projected Planned Per Capita
Water Consumption (litres/day)

Region	1980	1985	1990	2000
Cairo	255	295	330	400
Alexandria	170	200	220	370
Other Cities	65	100	110	240
Rural Areas	55	70	77	150

2.2.2.4 Sewerage Policies and Strategies

Long-run policy are targets for sewerage are presented in Table 2.2.2.4.1 below. Long range goals include the following (WASH Report, pp. 52-53).

- a. To increase sewage inflows in proportion to water consumption and to achieve the following per capita flows in sewered cities:
- b. To increase the efficiency of sewerage utilities and prevent sewage flooding.
- c. To provide sewerage in all cities by the year 2000.
- d. To provide sewerage in all inhabited areas of cities.
- e. To reduce the number of people in the cities unserved with sewerage from 6.2 million in 1979 to 5.0 million in 1985 and to serve all with sewerage by the year 2000.

Table 2.2.2.4.1: Projected Planned Per Capita
Sewerage Flow (litre/day)

Region	1980	1985	1990	2000
Cairo	206	265	290	380
Alexandria	100	170	190	350
Other Cities	90	120	130	190

Source: WASH Report, P. 53

2.2.3.5 Discussion of Environmental Policy and Strategy Issues

High priority has been given to water and sewerage projects in industrial zones. The general objectives seem to be to support the continuing process of industrial expansion as well as to overcome existing deficits in the production of drinking water and the capacity of sewerage systems, and to meet maintenance requirements and emergency situations. An overall objective is to develop sufficient water and sewerage utilities to attract foreign investment in other sectors.

Two points warrant attention. First, health consequences do not appear to be an explicit component of long-term strategy in the water and sewerage sector. This reflects a rather narrow vision on the part of the GOE, as failure to consider health hazard creation at the onset of new projects is likely to result in enormous problems in the future. Attention to this matter requires the formulation of policy and its implementation.

A second issue concerns the ability of the current staff of the MOH to take on responsibilities that would be involved in developing a comprehensive policy to include health environmental assessment and monitoring activities in all existing and new water and sewerage projects. A related issue concerns both the low prices charged for water and sewerage services and the low wages and salaries paid to personnel. Low prices for services encourage high utilization, but result in low levels of revenues flowing to government that can be used to maintain service systems. Low wages and salaries paid to maintenance personnel, coupled with low levels of training and consequently low levels of work performance, suggest that investment in this area would not be very promising unless provisions were made for redressing personnel, training, services, and personnel remuneration issues.

2.3 Budgets and Expenditures

Gross budget expenditure data are available over the period FY 1966 to FY 1967 from Loza, et al, cited above. Data for years 1976 through 1981 were to be made available from the Financial Flows study conducted by the University of Michigan. However, due to various problems the data available from that source for those years could not be used in this review. The data available consisted of only preliminary estimates which require refinement; hopefully they will be refined and will be made available to the Phase II HSA team. Detailed estimates pertaining to the private sector, as well as estimates of selected per unit costs of various governmental, economic and service authorities for the year 1978, are available from Dr. Ramsis Gomaa's Report entitled "Study on Health Financing and Expenditures in Egypt" (April 1980), which was based on the Health Profile of Egypt survey. Additional cost data were available to the present author from various reports and interviews and from representatives of the GHIO; all of these were subjected to the author's calculations. Crude linear projections of future costs to the year 1992 on the basis of rough assumptions are among the product of such calculations.

2.3.1 Governmental Expenditures, 1966-1976

Central government and governorate level expenditures, aggregated over Titles I-III (wages and salaries, running costs, and investment project expenditures), along with these expenditures calculated as percentages of total government spending, are presented in Table 2.3.1.1 below.

Table 2.3.1.1 MOH Expenditures by Central and Local Levels, and Percentage of MOH Expenditures to Total Government Spending -- 1966-1976 (L.E. 1000S)

<u>Year</u>	<u>MOH Central</u>	<u>MOH Local</u>	<u>MOH Total</u>	<u>% MOH Total Gov't</u>
66/67	3,528	27,516	31,045	9.1
67/68	3,419	29,606	33,025	4.8
68/69	3,711	33,275	36,986	6.1
69/70	4,069	34,910	38,979	5.8
70/71	4,505	36,508	41,013	5.8
71/72	7,830	58,746	66,576	5.7
1973	7,980	46,573	54,553	6.7
1974	7,003	53,343	60,347	6.7
1975	8,423	61,613	71,036	6.5
1976	10,508	77,399	87,908	5.6

Source: Loza, et. al., p. 141.

Loza, et al remarked that although MOH expenditure increased by 183.0 percent over the period 1966-1976, the share of MOH relative to total government outlays decreased by 38.5 percent over this period, from 9.1 percent to 5.6 percent of total government outlays. During the same period the ratio of central level expenditures to local government expenditures remained roughly constant at 1:75.

Table 2.3.1.2 below presents data showing expenditure allocations to Titles I - III between MOH central and local levels over the period 1966-77.

Table 2.3.1.2

Expenditures of MOH and Local Government
and Percentages Distributions -
Titles I-III, 1966-1976 (L.E. 1,000,000)

Year	Central						Local					
	Expenditures			Percentages			Expenditures			Percentages		
	I	II	III	I	II	III	I	II	III	I	II	III
66/67	2.2	1.1	.3	62	30	8	17.0	9.1	1.3	62	33	5
67/68	2.1	1.0	.3	62	31	8	18.7	9.9	1.0	63	34	3
68/69	2.1	1.0	.6	55	23	17	20.9	11.0	1.3	63	33	4
69/70	2.2	1.3	.4	55	33	6	22.7	11.3	.9	65	32	3
70/71	2.3	2.0	.1	52	45	3	24.3	10.9	1.2	67	30	3
71/72	3.7	3.6	.4	48	47	5	38.6	16.8	3.3	66	29	6
1973	2.7	5.0	.3	33	63	3	32.1	12.4	2.1	69	27	5
1974	2.6	3.9	.5	37	55	7	35.6	15.2	2.6	69	28	5
1975	2.8	5.1	.6	30	53	17	41.0	15.7	4.9	63	30	8
1976	3.2	5.5	1.8	30	53	17	48.5	23.0	5.9	63	30	8

A.A.I.* 4.6% 41% 56%

18.5% 13.1% 52%

* Average Annual Increase

Source: Loza, et al

Table 2.3.1.2 reveals that significant shifts occurred over years 1966-76 in the distribution of expenditures among the three Titles and, just as importantly, among budget categories between the two levels of government. For example, running costs as a percentage of total central budget allocations increased over the period from 1.1 percent to 5.5 percent of total central expenditure. We would expect this to be the case, since additional investment was made continuously over the period. However, turning to local government expenditure allocations, Table 2.3.3.2 reveals that running costs as a percentage of total local expenditures declined from 33 percent to only 30 percent of total local government expenditure. This is surprising considering the fact that investment at local levels increased on the average by 52

percent annually over the period. Annual increases in running costs over the period averaged 41 percent at central level but only averaged 13 percent at local level.

Since the bulk of investment at local levels is allocated to health services delivery on behalf of rural populations, the data suggest that while progress was made in the facility coverage in rural areas, running cost support funds were underallocated, resulting in few gains (and possibly deterioration) in the quality of services at local levels.

Decentralization and outreach are implied by the facts that Title I (wages and salaries) components at central level increased by only 46 percent, but increased by 186 percent at local level over the period 1966-1976. However, when compared to rates of increase in running costs at central and local levels (41 and 13 percent, respectively) the data suggest that expansion at local levels was achieved in terms of significant expansion of staff, but was not accompanied by equally significant increases in drugs, supplies, medical requisites and other materials required to support health services delivery activities at local levels.

One could argue that greater investments were made in secondary and tertiary care hospitals at central levels than at local government levels, thus explaining the higher percentage rate of increase in running costs at central than at local levels. However, this is not supported by the comparative rates of growth in personnel as reflected by rates of growth in Title I allocations (wages and salaries) which were much higher at local levels than at central levels. The data suggest that physicians and other medical personnel were force placed (posted) in large quantities at local levels in newly constructed rural facilities but were not given commensurate support on current account to render effective health service delivery. This leads one to conclude that the MOH policy of expansion of rural services was only successful quantitatively in terms of rural population coverage, and only at the expense of deterioration in the quality of rural services.

The data are consistent with the possibility that the MOH, following the overall government policy of creating jobs for all University graduates, absorbed vast numbers of physicians into the rural public medical sector. This caused wages and salaries as a component of current costs (the sum of wages and salaries and running costs) to increase at the expense of running costs, which in all likelihood led to a deterioration in the quality of rural public health services delivery in Egypt. It is clear that central level functions were supported much better, since running costs increased on the average by 41 percent annually while wage and salaries, largely reflecting personnel postings, increased by only 4.6 percent on the average annually over this period. This suggests that quality of services increased or did not decline so much at central level as was the case at local level.

The individual's share of MOH expenditures approximately doubled over the interval 1966-1976 increasing from L.E. 1.4 to 2.9 per capita. However, these gains clearly were wiped out by inflation occurring over this period. Loza

et al report that the cost of a hospital bed was L.E. 1.5 in 1965, but had risen to L.E. 5.0 by 1977. Thus the implication is that government allocations to health services to individuals decreased in real terms over the period 1966-1977. This lends further credence to the conclusion that the quality of public health services declined over the period.

Expenditures of other government-sponsored health organizations over the period 1966-1976 are presented in Table 2.3.1.3 below. Note that no data are available for Bio-Medicine Organizations prior to their formation in 1973.

Table 2.3.1.3

Expenditures of Government Sponsored Health Organizations and
Percentage of Total Government Expenditures (L.E. 1000)

<u>Year</u>	<u>Alexandria Curative</u>	<u>Cairo Curative</u>	<u>Bio-Medical</u>	<u>GHIO</u>	<u>% of Govt. Expenditure</u>
66/67	252	231		2,279	3.8
67/68	223	220		1,259	2.3
68/69	281	524		3,529	3.6
69/70	305	659		4,163	3.6
70/71	336	567		5,772	2.5
71/72	612	758		4,961	3.2
1973	376	508	765 *	6,380	3.1
1974	356	530	1,069	6,470	2.7
1975	575	644	1,002	7,073	3.9
1976	713	845	2,039	17,105	3.8
	283 %	366 %	266 %	750 %	-

* Growth over period 1973-1976 only.

Source: Loza et al, p. 144.

Note that the expenditures indicated in Table 2.3.1.3 do not reflect actual government expenditures in all cases, since the Alexandria and Cairo Curative Organizations generate the bulk of their revenues from sale of services and GHIO revenues in the main are generated as a result of payroll taxes, not from general treasury funds. However, investment outlays (Title III) in these years largely were provided from government (MDF allocations), and the data permit no distinction between Titles or revenue sources. Thus the data serve only to show the growth in the rate of increase in activity levels of these agencies. Of particular interest is the rapid growth of the GHIO over this period, which occurred at a rate at least double that experienced by any other government sponsored health organization.

2.3.2 Health Expenditures, 1978

The data on health expenditures for the year 1978 are taken from Gomaa's study on health financing (cited at the beginning of Section 2.0). Gomaa's study, hereafter referred to as the Financing Study, provides estimates of costs and financing covering many elements of government and private formal sector financing of health services delivery for the year 1978. Unfortunately, no data are available concerning costs and finances with regard to traditional healers and other nonformal deliverers of health services. There is little doubt that some estimates included in the study are very "rough." Yet, the Financing Study is the most comprehensive study of health sector costs and expenditures in Egypt and serves as an appropriate benchmark for projecting health system and health system component costs into the future.

No attempt will be made here to review the methodology of cost and expenditure estimation procedures used in the Financing Study. Essentially it involved extensive use of local consumer surveys (HPOE), examination of actual expenditures (government sources and pharmacy sales), and examination of tax records when appropriate (private medical sector revenues and costs). The methodology described in the text basically appears to be reasonable and appropriate given the constraints posed by local circumstances. Gathering and preparation of raw data and some of the analysis was assisted by the National Center for Health Statistics, Public Health Service, Department of Health and Human Services (DHHS, formerly DHEW, USA, Agreement No. 03-663-R).

Table 2.3.2.1, reproduced from Gomaa's study, shows the financial flows throughout various parts of Egypt's health services delivery systems for the year 1978. Financial data reflecting state budget, private sector individuals, grants and loans are displayed by categories of organizations rendering service. Note that investments (Title III) expenditures are entirely state budgeted outlays. In addition, loans and grants are added together and are included in private current expenditures. Thus, the sum of private outlays includes expenditures by private sector individuals, plus the sum of grants and loans. This sum would constitute the sum of all private outlays corresponding to state budget (Titles I, II and IV) categories. The total of outlays under the first column label, "State", corresponds to total operating expenditures (Titles I, II, and IV). Thus the sum of the first column and the "investments" column constitutes the total of state budget expenditures covering all Titles I - IV.

The last column represents total outlays on health, including both private and State budget spending. Note that State budget spending for GHIO services are from social security revenues rather than from general treasury funds.

Table 2.3.2.1 reveals that total spending on health services as presented in the Financing Survey was L.E. 382.9 millions, of which private sector spending (including grants and loans) totaled 206.7 or 54.0 percent of total health sector spending.

Table 2.3.2.1

HEALTH EXPENDITURES ON MEDICAL SERVICES DISTRIBUTED ON FINANCIAL RESOURCES
AND MEDICAL SERVICES ORGANIZATIONS FOR F.Y. 1978

<u>Financial Resource</u>	State	Private Sector Individuals	Loans	Grants	Investments	Total
<u>ORG. RENDERING SERVICE</u>						
<u>Ministry Of Health:</u>						
Headquarters	12,899,916				8,479,450	21,379,366
Localities	86,329,765	2,715,862	17,827,000	9,224,000	10,827,781	26,969,408
TOTAL	99,229,681	2,715,862			19,307,231	48,348,774
<u>Government Health Insurance Organization:</u>						
Insured Treatment	7,307,765					10,871,127
Complete Treatment	159,712					159,712
Work Injuries	4,176,650					4,176,650
Medical Treatment	353,259	237,826				591,085
TOTAL	11,997,386	3,801,188			1,637,000	17,435,574
<u>Curative Organization Cairo:</u>						
Fee Treatment		4,548,614				4,548,614
3rd Class Reduced	53,700	30,085				83,785
Free	429,099					429,099
TOTAL	482,799	4,578,699			239,500	5,300,998
<u>Curative Organization Alexandria:</u>						
Fee Treatment		1,467,634				1,467,634
3rd Class Reduced	40,055	22,500				628,555
Free	352,000					352,000
TOTAL	392,055	1,490,134			225,000	2,107,189
<u>Biological & Vaccine Production Organization</u>						
		45,380	1,440,000		829,000	2,314,380
<u>Drug Control Organization</u>						
	939,621	16,500			192,000	1,148,121
<u>Hospitals and Educational Institutes Organization:</u>						
	3,492,493	100,520	280,000		2,154,000	6,027,013

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University Hospitals:

Cairo	3,784,283	87,500	345,744	4,217,527
Ein Shams	2,387,497	40,000	749,998	3,177,495
Alexandria	2,555,000	246,000	150,000	2,951,000
Assiut	962,933	37,753	51,888	1,052,574
Tanta	839,000	32,314	173,866	1,045,180
Mansoura	1,092,000	33,958	202,000	1,327,958
Zagazig	893,184	8,198	148,363	1,049,744
Azhar	1,892,113	81,520	1,349,923	3,323,556
TOTAL	14,406,010	567,243		

High Council For
Family Planning &
Population:

1,152,347

630,000 (Samples)

Railway Hospital:

307,561

200,000

1,982,347

Police & Prison:

314,075

165,025

10,300

489,400

Private Sector:

Hospitals

119,100

199,100

Pharmacies

25,000

25,000

Clinics

27,715,878

27,715,878

TOTAL

144,100

27,715,878

27,859,978

Drug Sector:

State Subsidy

4,281,000

4,281,000

Pharmacy Sales
(private)

102,971,969

102,971,969

Local Prod. Profit

17,432,000

17,432,000

Special Import

17,432,000

17,432,000

TOTAL

4,281,000

135,849,769

10,521,000

150,651,769

TOTAL

137,139,128

177,246,199

19,592,000

9,854,000

38,486,812

382,948,138

Source: Dr. R. Gomaa, "Financing Study", MOH, April, 1980, pp. 109 and 110.

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There is considerable reason to believe that private sector out-of-pocket spending is significantly under-estimated. First, private outlays on the services of traditional healers, practitioners, etc., were not included in the study. Second, estimates of outlays on private hospitals, pharmacies and clinics were based on samples of tax records, which authorities agree involve substantial under-reporting of earnings in the interest of avoiding payment of income taxes. In this connection, it is observed that rural-based physicians do not have to report income from private practice delivery activities, all physicians are exempt from income taxes (and hence do not report earnings) for three years after graduation, and the bulk of payment for private health services delivery is in cash thus presenting an ideal circumstance for under-reporting of income. It is not unheard of for some urban-based physicians to demand payment in dollars which is obviously not reported, since such payment is in direct violation of foreign currency exchange laws.

Unfortunately, there is no independent method of estimating the degree of under-reporting of private sector health delivery earnings and expenditures. Development of such a method and its follow-up was beyond the range of the financing study and of this HSA report. Some authorities speculate that under-estimation of private sector spending could range from 20 - 50 percent.

Total private and state budget spending on health totalled L.E. 382.9 millions in 1978, which constituted 4.0 percent of total Gross Domestic Product (GDP). Of this total, L.E. 206.7 million is attributed to private sector spending, constituting 2.1 percent of GDP. Total State budget spending totalled L.E. 175.6 millions, which represented roughly 1.8 percent of GDP, and 3.5 percent of total government expenditures, respectively. State budget current health outlays in 1978 represented 5.0 percent of total government current spending and State budget health investment spending constituted 1.2 percent of total government investment expenditure in that year. These figures exclude health related outlays on food subsidies and outlays on water supply and sewerage environmental control and services activities.

Table 2.3.2.2 below presents aggregated current account expenditure data for 1978 percentage distributions of public and private current expenditures, totals of public and private spending, and percentage of total outlays made from government or private sectors. Note that following GOE practice, private sector spending includes loans (L.E. 19.5 millions) and grants (L.E. 9.85 millions) treated as current outlays. The total of loans and grants is L.E. 29.45 millions constituting roughly 14.2 percent of total private sector outlays on health. The bulk of loans were spent in local governments (L.E. 17.8 millions) and thus their inclusion as current account expenditures is largely responsible for the surprisingly large percentage of private sector spending on the part of local governments (L.E. 29.8 millions), i.e., 25.6 percent.

Table 2.3.2.2

Current Expenses by Government and Private Sector - 1978

ORGANIZATION	State Budget	%	Private	%	Total	% of Total	% State	% Private
RENDERING MEDICAL SERVICES								
<u>Ministry of Health</u>								
Central	12,899,916	9.4	-0-	-0-	12,899,916	3.8	100.0	-0-
Local	86,329,765	63.0	29,766,862	14.4	116,096,627	33.7	74.4	25.6
Total	99,229,681	(72.3)	29,766,862	(14.4)	128,996,543	(37.5)	(76.9)	(23.1)
<u>Other Health Sector</u>								
GHIO	11,997,386	8.7	3,801,188	1.8	15,788,574	4.6	76.0	24.0
Cairo Curative Org.	482,799	.35	4,578,699	2.2	5,061,498	1.4	9.5	90.5
Alex. Curative Org.	392,055	.28	1,490,134	.7	1,872,189	.5	20.9	79.1
Biological & Vaccine	-0-	-0-	1,485,380	.7	1,485,380	.4	-0-	100.0
Drug Control Org.	939,621	0.7	16,500	-0-	956,121	.3	98.3	1.7
Ed. Hosp. & Inst.	3,492,493	2.5	380,520	.2	3,873,013	1.1	90.2	9.8
Total	17,304,354	(12.6)	11,752,421	5.7	29,056,776	(8.4)	(59.6)	(40.7)
<u>University Hospitals</u>	14,406,010	(10.5)	567,243	(.3)	14,973,253	(4.4)	(96.2)	(3.8)
<u>High Council on Family Planning</u>	1,752,347	(.84)	630,000	(.31)	1,782,347	(.5)	(64.7)	(35.3)
<u>Other Agencies</u>								
Railway Hospital	307,561	.2	200,000	.1	507,561	.1	60.6	39.4
Police & Prison Hosp.	314,075	.21	165,025	.1	478,100	.1	65.6	34.4
Total	621,636	(.41)	365,025	(.2)	986,661	(.2)	(63.0)	(37.0)
<u>Drug Sector</u>	4,281,000	(3.1)	135,849,769	(65.7)	140,130,769	(40.8)	(3.0)	(97.0)
<u>Private Sector</u>	144,100	(.1)	27,715,878	(13.4)	27,859,978	(8.1)	(.5)	(99.5)
TOTAL CURRENT EXPENSES	137,139,128	100.0	206,647,199	100.0	343,786,327	100.0	39.9	60.1

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Source: Calculations of the author, based on: Dr. Ramses Gomaa, "Financing Study", MUI, GOE, April 1980, pp. 109 and 110.

The only other significant possible distortions caused by counting all loans and grants as private sector outlays on current account occurs in the case of grants to local governments (L.E. 9.2 millions), loans to biological and vaccine production (L.E. 1.4 millions), loans to Educational Hospitals and Institutes (L.E. .28 millions) and grants largely consisting of contraceptive commodities to the High Council for Family Planning (L.E. .63 millions).

Notwithstanding the distortions created by lumping loans and grants into private sector current expenditures as noted in the two immediately preceding paragraphs, Table 2.3.2.2 provides a rough picture of the relative importance and the distribution of funding by source among the various components of the health services delivery system. Quite clearly the MOH health services delivery system, including Educational Hospitals and Institutes and Drug Control and Production components are very dependent on State budget funds. University hospitals are also predominately financed by State budget appropriations.

The GHIO is more dependent on private out-of-pocket expenditures than would be suggested by existing literature written concerning the nature of this organization. This is also largely the case with police and prison hospitals, although the bulk of funds allocated to support these facilities roughly 64-66 percent, are in the main drawn from State revenues.

Note that the large State subsidy, 60.6 percent, provided to the Railway Hospitals comes from public sector profits which if were not allocated to health care would become general revenue funds and Railway Employees would become covered by the GHIO. In the latter event, the Railway Hospital Organization would still be subsidized by the State budget through social security wage-based contributions.

Table 2.3.2.2, reveals that private sector out-of-pocket outlay on drugs, is the largest component of private sector current expenditure on health services delivery. Indeed, note that drug costs equal 40.8 percent of total costs, the bulk of which are private, 97.0 percent. "Private Sector" outlays consist of expenditures for services rendered in private hospitals, clinics and associated pharmacies of which 99.5 percent are paid by private sector individuals. The sum of the percentage of private drug and private sector health services is 47.65 percent ($40.8 \times .97 + 8.1 \times .995$), which is very surprising for a socialized system. The major factor explaining the high level of private sector individual expenditures is the large volume of private current spending on drugs.

Clearly, Egypt's health system in 1978 essentially was distinctly pro-pharmacy in orientation with the government financing only a small fraction of drug consumption. However this rapidly would be changed, and perhaps already has changed somewhat as a result of government policy to expand GHIO coverage to the bulk of the population, since the GHIO dispenses drugs free to Law 79 beneficiaries (industrial workers). Also it should be noted that 50.0 percent of GHIO total costs consist of outlays on drugs. Thus it would appear that

expansion of the GHIO would constitute the GOE shifting from a pro-pharmacy private out-of-pocket pay private sector drug distribution policy toward a policy of government sponsored dispensation of drugs, financed in the main from state budget sources. This result would be tempered somewhat to the extent that expansion of GHIO coverage were accompanied by substantial drug copayment requirements (See Section 2.4 for a discussion of GHIO activities).

The data based on the 1978 Financing Study are not as disaggregate as would be desirable, particularly as concerns outlays by governorates, categories of expenditures within governorate budgets, the partitioning of outlays between preventive and curative services, and expenditures on training activities. Actually the document claims that roughly 40.0 percent of total current outlays are devoted to preventive activities (Financing Study p. 27). However upon examining the text, one learns that the way in which this was calculated consisted of lumping all non-hospital expenditures on rural health services delivery together and labeling this as preventive health services. Closer examination of the data shows that the bulk of expenses are for curative services although it is impossible to sort out the curative versus preventive mix. It is clear, however, that roughly 64.0 percent of operating expenses are devoted to hospital services (Financing Study pp. 27-28).

2.3.3 Per-unit Costs of Selective Health Services Delivery Components

Total MOH expenditure per capita in 1978 was L.E. 3.6 and MOH expenditure per capita on current account was L.E. 2.5 in that year. However, the breakdown of total MOH per capita outlays on rural dwellers was estimated at L.E. .99 while MOH per capita outlays on those living in urban areas was L.E. 7.20. It should be noted that many rural dwellers seek services in urban areas, i.e., they by-pass rural health service delivery points in favor of urban hospitals, urban outpatient clinics, etc. MOH officials suggest that in view of this, the differential in total outlays between rural and urban populations is less than financial data imply.

Taking account of State budgeted health services not provided by the MOH yields a total State per capita outlay on health services of L.E. 4.4 in 1978. Total per capita outlays from State budgeted current expenditures amounted to L.E. 3.4 in 1978 and upon netting out GHIO populations, the resulting figure is L.E. 3.1 State budgeted current outlays per individual in that year.

Overall, the total of government and private spending on health services per individual in 1978 is estimated at L.E. 9.6 of which L.E. 3.55 was expenditure for drugs (roughly 37.0 percent). While State budgeted expenditures amounted to L.E. 4.4 per capita in that year, only L.E. .57 went for drugs. The total private per capita outlay on health services is estimated at L.E. 5.2, with a large share, L.E. 2.98 (57.3 percent), developed to expenditures for drugs.

In 1978, GHIO total outlays per Law 79 beneficiary (industrial workers subject to no copayments) were L.E. 14.9, but L.E. 7.63 was spent for drugs on behalf of covered beneficiaries. By contrast, GHIO outlays on Law 32 beneficiaries

(government employees subject to copayments) are estimated at L.E. 6.3, with L.E. 3.56 spent for drugs per beneficiary. This is a significant difference, and purportedly represents the effects of copayments required of Law 32 beneficiaries (see Section 2.4 and 3.0 below for a description and analysis of GHIO activities).

2.3.4 Health Expenditure Projections for 1992

Expenditures data are not available after the year 1978. Budget data usually available from government sources on an annual basis, are not available beyond the year 1979. The year 1980 was a year in which the fiscal year was shifted, thus 1980 and 1981 budget data are half-year estimates only. Budget data for the years 1980, 1980/81 and 1981/82 also lack indications of local government Title III investment budgets and MDF officials say that these data and actual expenditures data are not available, due to various "technical problems." Thus projections of State budget health projections can only be based on either 1978 actual expenditures presented in the Financing Study, or on State budget data available for the year 1979.

There is often considerable discrepancy between budgeted figures and actual expenditure figures. Actual expenditures, since they are post hoc are a more accurate indication of actual priorities and represent a reflection of capacity to carry out expenditures based on budget plans. Thus actual expenditures represent a more appropriate basis for projections of probable future levels of expenditures. While attempting expenditure projections over future periods is a hazardous undertaking under the best of circumstances, the circumstances prevailing in Egypt can hardly be characterized as "best," and thus such an exercise is extremely hazardous. It appears necessary, to this author, to base projections for 1992 based on 1978 actual expenditures data and thus the period of forecasted expenditures spans 14 years. Obviously, such projections are subject to considerable error, particularly in light of substantial donor assistance to the health sector that may result from the HSA activity itself.

In order to make projections of possible levels of expenditures, a number of assumptions are necessary. First, it is assumed that GDP grew at a "real" compound average annual rate of 8.6 percent over the period 1978-1982, the average rate estimated by various donor assistance agencies. However, real growth over the period 1982-1992 is projected at only at a compound average annual rate of 6.0 percent. This lower rate of growth projected over the next decade seems appropriate given current uncertainties concerning foreign exchange flows, world oil price trends, and other factors suggesting that past rates of growth are not likely to be sustained in future periods. Second, the proportion of current and investment health outlays to GDP is projected to remain at 1.8 percent as it existed in 1978. (This implicitly assumes a constant share of government outlays to GDP and a constant share of health outlays to total government expenditures as that which existed in 1978.) Third, the ratio of investment outlays to current outlays is projected to remain in the same proportion as existed in 1978, namely 1.2:5.0 or .24.

On the basis of these assumptions, and given the level of GDP in 1978 it is possible to project probable levels of current and investment account health expenditure in the year 1992. However, there remains a vexing problem that concerns the relation between current and investment expenditure. In general net investment in prior periods generates needs for additional recurrent expenditures in subsequent periods. For example, if L.E. 1.0 of capital investment in a given period generates a need for L.E. .2 of recurrent expenditure in all future periods, steady investment in new capital projects of L.E. 1.0 over a period of 14 years, *ceteris paribus*, would add L.E. .2 (14) = L.E. 2.8 to annual recurrent budget needs after 14 years. Thus the ratio of investment expenditure to recurrent expenditure would decline over time if the rate of investment were constant. If the level of investment rises over time, it is not clear on balance what would be the relationship between investment outlays and recurrent expenditures in future periods. Thus readers are alerted to the fact that the assumption of constant proportions between investment and recurrent outlays represents an extreme, but, under the prevailing circumstances, an unavoidable simplifying assumption.

Greater difficulties are encountered if one attempts to project private outlays, particularly under different assumptions of GHIO coverage and associated copayment requirements. Matters would be assisted greatly if one had even rough knowledge of income and price elasticities of demand.

In the interests of simplifying matters, projections will be made in real terms, assuming that inflationary factors have been "netted out" and that the elasticity of private health outlays to increases in real income is unity (i.e., health outlays increase in the same proportion as growth in real income). The assumption of unitary income elasticity of demand would appear to be a conservative estimate, since there is some evidence that health services are viewed in Egypt as superior goods. Thus if they could be estimated, income elasticities of demand are likely to exceed unity. However, in the absence of even rough income elasticity of demand estimates, the author has resorted to the assumption of unitary income elasticity purely in the interests of simplifying analysis. Making projections in real terms only, coupled with the added assumption of constant relative prices generally, avoids the necessity of making explicit assumptions of the price elasticity of demand.

Given assumption of growth of GDP described in preceding paragraphs above, GDP is projected to be L.E. 24.09 billions in 1992. Assuming a population rate of growth of 2.8 percent compound annually, 1992 population is estimated at 58.9 million persons. Table 2.3.4/1 below compares 1978 and projected 1992 total health expenditures, broken down by sector (public and private), investment and current account public spending, and outlays per capita broken down between the public and private sectors.

Table 2.3.4.1.Health Expenditures 1978 and Linear Projections to 1992
Based on 1978 Composition of Expenditures

	<u>1978</u>	<u>1992</u>
Total Outlays on Health*	382.3	942.7
Private Outlays*	206.7	509.1
Government Outlays*	175.6	433.6
Investment Account*	38.5	94.9
Current Account*	137.1	338.1
Total Health Outlays per Capita**	9.6	16.0
Private Outlays on Health per capita**	5.2	8.6
Government Outlays on Health per capita**	4.4	7.4

Source: calculations by the author, based on Dr. Ramses Goma, Financing Study, April, 1980.

*L.E. millions.

**1992 Population projected to be 58.9 million, based on 2.8% compounded annual growth from 1978 base of 40 million.

Table 2.3.4.1 is rather self explanatory, since it basically projects expenditure categories in a linear fashion over time. However, the table adequately conveys a picture of the financial resources that could be available in the year 1992, broken down by private and public sector components based on the distribution between these sectors existing in 1978.

However, quite clearly the distribution of outlays between public and private sectors are likely to be much different in 1992 from what they were in 1978, or from what they are presently. Quite a number of interesting analyses could be done within the framework of the aggregate projection of GDP, government revenues and population. Scarcity of time precluded the author from performing these analyses in connection with writing this report. However, it would be useful to list some possible types of analysis which in the author's opinion could be fruitfully carried out in the future. Suggested types of future analysis are presented as follows:

- a. Given assumptions or estimates of the income elasticity of demand for health services, estimate probable private outlays on different types of services.
- b. Given knowledge of planned investment in construction, estimate probable recurrent cost requirements of various components of the system.
- c. Given knowledge of the costs of medical education, estimate the rates of return on various types of medical education.
- d. Given certain assumptions concerning proportions of the population covered by the GHIO, alternative copayment levels and knowledge of price and income elasticities, estimate GHIO revenues and costs, and out-of-pocket expenditures likely to be incurred by beneficiaries.

Other types of studies could be carried out and would be extremely useful for future health planning and health policy formulation.

2.4 Analysis and Evaluation of Future Policies and Strategies

2.4.1 Government Health Insurance Organization

The description of the Government Health Insurance Organization (GHIO) is based extensively on a series of papers written by Dr. Carl Stevens, Professor of Economics, Reed College, and on interviews conducted with various GHIO officials by members of the HSA team. However, since the author of this report has updated and in some cases reinterpreted facts and data, Dr. Stevens should in no way be held responsible for the implications, options and opinions expressed in this report.

Clearly, the most dramatic health policy initiative recently undertaken by government is the decision to rapidly expand the Government Health Insurance Organization (GHIO). The GHIO currently covers 2.5 million people and is

expected to cover 3.0 million by the end of 1982. Some Government representatives aspire to expand GHIO coverage by an additional 5.0 million persons annually. Indeed, a stated objective of a sub-committee of the People's Assembly is to "include all Egyptian citizens within the next ten years". This committee of the People's Assembly estimates costs of maintaining the system at the end of ten years at "L.E. 600 millions". (Egyptian Gazette article, March 1982). Analysis presented below in Section 2.4.1.5.1 of this report suggests that such a cost figure represents a serious underestimate, unless expansion were to be accompanied by a significant reduction in the quality of services delivered.

The decision to expand the GHIO to cover all or even the majority of the citizens of Egypt is highly ambitious and warrants careful analysis and appraisal. The broad outline of the system is described below under several subheadings: Law, Regulation and General Organization; Beneficiaries and Financing; Facilities, Staffing, and Personnel Policies; and Management, Utilization, and Costs.

2.4.1.1 Law, Regulation, and General Organization

The GHIO began operations in 1964 in Alexandria, where the great majority of beneficiaries are still located. The GHIO has branches throughout Egypt, in regions divided as follows: Alexandria and the north and southwest Delta; Canal Zone and the east Delta; Tanta and the center Delta; Cairo, Giza and upper Egypt; and Assiut and upper Egypt.

At its creation in 1964, the GHIO was a public sector Service Authority subject to control and management by the Ministry of Health. However, in 1979, its status was modified and it was converted to an Economic Authority (or Economic Organization, according to some translations). As a health sector Economic Authority, the GHIO has considerable autonomy over management decisions, is able to set rates of remuneration to salaried and contract employees at levels exceeding those admissible for public service government employees, and is able to finance investment projects from operating surpluses or from foreign donors. Yet the GHIO is a government "creature." As such, its activities are monitored by government. Directives are frequently issued by the Minister of Health which are compelling to the organization, such as the directive ordering the GHIO to periodically expand its coverage. All medical posts in the GHIO must be authorized by the Minister of Health, and financing of the organization is administered by government under a network of government-authorized social security schemes. Thus the GHIO is neither wholly private, nor wholly government. It is one of the unique creations of Egyptian law that grew out of the "Open Door Policy" of 1975 designed to give greater flexibility to economic and service organizations and authorities in order to facilitate achieving the goals of the State.

The two major laws authorizing the establishment and operations of the GHIO are Law 79, originally enacted in 1964 and periodically since, and Law 32, enacted in 1975. Initially, public service sector and private employers of 500 or more employees (with some exceptions) in the Alexandria area were to

become members of the GHIO. This was lowered successively to 300 employees and was recently lowered to apply coverage to all nonagricultural employees in Alexandria. The GHIO, in turn was created to provide health services to all workers becoming members of the GHIO. Certain exceptions were and still are allowed in connection with compulsory GHIO membership on the part of firms which already had established health insurance or direct provision of health services plans on behalf of employees. (Firms granted exceptions are required to contribute 1 percent of wages to the GHIO in the interests of "national solidarity.") Many of these plans exist, formed under the aegis of worker cooperatives; they are discussed in a later section below. The point that is important in this connection is that each health insurance or service plan must be approved, case by case, as an exception to GHIO membership. Law 32 required government employees (central, and local governorate) to be brought into the system in 1975.

2.4.1.2 Beneficiaries and Financing

The essential difference between Law 79 and Law 32 concerns methods of financing and level of free benefits. Law 79 beneficiary services are financed by joint contributions of both public service firms and employees (3.0 and 1.0 percent of wages, respectively), which entitles employees to virtually "free" health services. Law 32 beneficiaries are financed by joint contributions of government, and employees (1.5 and .5 percent of wages respectively). However, Law 32 beneficiaries are subject to co-payments up to specified maxima in connection with the receipt of services. Co-payments are scheduled as follows:

- a. 25% of all drugs, outpatient procedures and appliances, with a maximum payment limit of L.E. 1.0. per perscription, procedure or appliance.
- b. L.E. .5 per day of hospitalization during the first two weeks, thereafter reduced to 25 P/day, with all drugs requiring no co-payment while hospitalized.
- c. 5 P per visit to a GP.
- d. 10 P per visit to a specialist.

A related law, the Social Insurance Organization Act, established an industrial accident program which provided for treatment and disability pension services resulting from labor related injuries (trauma and occupationally-caused disease and disability). This program is financed by an employer contribution of 3 percent of wages. Of the contribution to the Social Insurance Organization, the GHIO receives a payment equal to 1.0 percent of wages. These funds are pooled with Law 79 and Law 32 funds. In return for the 1.0 percent of wages contributed under the industrial accident program, the GHIO is obligated to provide treatment of all industrial-related disease and injuries. The GHIO also provides preemployment physical examinations and is obligated to conduct periodic health examinations (annually, biannually,

etc., depending on the type of industry) on behalf of GHIO members. However for this latter service, the GHIO also receives 50 P per examination.

In addition, under the Social Insurance Act Modification of 1980, pensioners may join the GHIO by contributing 1.0 percent of their pension. Widows may also join, by contributing 2.0 percent of their pensions. Widows and pensioners receive services free of copayments.

During a three month period prior to retirement pensioners may elect to join the GHIO system. Under normal circumstances, failing to elect GHIO membership within that period precludes membership at a later date. Initially comparatively few pensioners elected to join the system. However, as costs of service in the private medical sector have risen, more pensioners have wished to become members of the GHIO. Government recently authorized a six-month "open enrollment period" during which pensioners who had not previously joined the GHIO could enroll. The number of pensioners enrolled in the system approximately tripled, from 17,000 to 55,000 currently.

Beginning in January 1982, a trial program of enrollment of dependents was initiated in Alexandria. The initial program was designed by GHIO in collaboration with the High Institute of Public Health in Alexandria. The program currently covers 30,000 dependents of Law 79 beneficiaries. No extended family coverage is provided. Coverage of dependents is financed by a .5 percent of wages contribution by the worker beneficiary for a spouse and each child. This contribution is matched by the employer at the same rate (.5 percent of worker wages for spouse and each child). However, service delivery is accompanied by a schedule of co-payments which is as follows:

- a. 35 percent of drugs, with no limit
- b. 50 percent of the daily cost of hospitalization up to a limit of L.E. 5.0
- c. 50 percent of the cost of X-ray and lab costs with no limit
- d. 15 P per visit to a GP
- e. 30 P per visit to a specialist, and
- f. L.E. 1.25 and L.E. 1.50 for home visits by a GP or specialist, respectively.

Currently the GHIO is said to be preparing to provide school coverage in addition to the population coverage described above, but the nature and extent of that activity are unknown.

Briefly, the current enrollment in the GHIO with members eligible for health services is 2.5 million, of which 55,000 are pensioners and 30,000 are dependents of workers. Total enrollments are expected to reach 3.0 million by the end of 1982 with complete coverage of all nonagricultural workers in

Alexandria. Workers covered under the industrial accident program total roughly 5.0-million. The pool of pensioners potentially eligible stands at nearly 1.0 million. The number of pensioners increases at an annual rate roughly equal to 4.0 percent of the urban labor force of 5.0 million workers. This implies an annual rate of increase of 200,000 in the pool of pensioners who, as will be explained below, consume a value of services (approximately L.E. 44 per pensioner annually, estimated by the Minister of Health, a former Director of the Alexandria GHIO, to be as high as 48 L.E. per pensioner) greatly in excess of revenue contributions to the system (L.E. 4.2 per pensioner annually).

2.4.1.3 Facilities, Staffing, and Personnel Policies

Currently the GHIO operates 20 hospitals under its own control, comprising 3,526 beds. In addition, bed space is leased from the Ministry of Health on a contractual basis. The bed-to-population ratio stands at about 2.2/1000 population, which compares to 2.0/1000 in the government sector. However, since 1979 the GHIO has not received financing for construction or purchase of hospitals from government investment fund sources. Since operating revenues from all sources just barely cover costs, the GHIO is hard pressed to acquire ownership of hospital space. Leasing space from the MOH up to now generally has involved leasing a fraction (a ward, wing, etc.) of MOH facility beds, hospital by hospital. Leasing space fails to provide GHIO with management control over staffing and drug and supply utilization, both of which are essential for medical effectiveness and cost containment; these latter GHIO regards as hallmarks of its system. Also most MOH hospitals physical facilities are not up to GHIO standards.

Staffing ratios have been established and attempts are made to rigidly adhere to them. However, the GHIO has encountered some difficulties in recruiting adequate numbers of staff. Each GP is expected to handle 2000 beneficiaries. A house officer (resident physician) is provided for every hospital department or for every unit of 40 beds, whichever is smaller. One nutrition specialist is provided for every 100 beds, and one assistant for each 50 beds. A nurse-bed ratio of not more than 1.4 is maintained. One laboratory and one X-ray technician are provided for every 50 beds, and a social worker and public relations person for every 100 beds. (A complete list of target staffing ratios for the GHIO Alexandria branch is presented in the Health Manpower Report authored by Dr. Doris Storms.)

The GHIO has five nursing schools. These are certified by the MOE and are believed by GHIO to be of a higher standard of Secondary School than is generally the case in Egypt.

Specialty services are provided in polyclinics, of which 17 are located in Alexandria. A GP clinic is located on the grounds of each firm employing 300 or more workers. Otherwise, GP clinics are located centrally in areas of concentration of small firms.

Medical school faculty members are contracted to work in GHIO hospitals. GHIO estimates that approximately 90% of the medical school faculty in Alexandria work in GHIO hospitals and polyclinics. Beneficiaries cannot choose their own physician. A standard drug list is developed by a board of university professors and is continuously revised. GPs are restricted from prescribing highly specialized drugs. Drug supplies are contracted from pharmaceutical firms which directly supply hospitals and clinics.

GHIO operates by means of both a direct and an indirect method. The direct method involves hospitals and clinics owned or completely controlled by the GHIO and staffed by salaried personnel. The indirect method involves leasing space and contracting for services of personnel.

Since 1979, as an economic service authority or organization, the GHIO has greater flexibility with respect to personnel management, recruitment, and remuneration policies than is the case with public sector enterprises. However, the GHIO is not free to recruit as many salaried physicians as it wants. The GHIO can only recruit up to the number of MOH sanctioned posts. The number of such posts is strictly established by the MOH "on the basis of the national interest." The GHIO complains of a shortage of sanctioned posts and has to resort to indirect service procurement more than it would like. Medical graduates do not express a high preference for GHIO employment. While they receive higher pay than they would receive in government services, the higher pay is for extra work and, if salaried, they are not permitted to engage in private practice.

GHIO pay to salaried physicians and to nurses is based on government rates of pay and allowances. However, the GHIO is able to go beyond this by supplementing physicians and nurses salaries by up to 100 percent. Currently, the GHIO is "getting by" by supplementing physician salaries on the average by around 50 percent, with administrative personnel receiving supplements of up to 70 percent. All receive an annual bonus of one month's salary in addition to the above rates. An Extra service session conducted on a daily basis in the afternoons (2:00 - 4:00) or in the evenings (5:30 - 7:30 p.m.) results in a salaried physician earning to an extra 30-40% of salary. Part-time physicians receive roughly 30 percent above government scale, but of course maintain their own private practices.

Specialty services are contracted on the basis of three-hour sessions at rates of L.E. 3.0 to L.E. 6.0 per session, depending on the physician's experience and the nature of the medical specialty. Generally it is expected that a specialist will see 15 patients during a "session" and can receive pro rata compensation for patient loads in excess of 15. There is no legal (government) limit on rates of pay to GHIO contract physicians, although availability of funds serves as an ultimate constraint and the GHIO is, and must be, extremely cost conscious.

The GHIO has difficulty in recruiting physicians. It is reported that 88.0 percent of GPs are unsalaried part time contract employees. In Alexandria, patient-to-GP ratios average 2400:1, which is beyond the norm of 2000:1. Last

year the Alexandria GHIO branch ran two advertisements for additional physicians (either full-time or contract). Only 200 physicians out of 2,000 or so registered with the medical syndicate expressed any interest. The medical syndicate is "soft" toward the GHIO and is reported to have resisted its expansion, particularly in Cairo. The syndicate has proposed its own scheme of expanded private sector health services delivery to both government and to donors which suggests that it sees the GHIO as a rival.

However, it appears that the GHIO would not have great difficulty in recruiting physicians, if it could afford to offer higher rates of compensation. However, it is clear that whether these rates constitute a sufficient "supply price" is related to rates of earnings available to physicians in the private practice sector, and these latter have been rising very rapidly in recent years.

The GHIO is not able to effectively treat all illnesses with its current facilities and personnel. In 1981, 60 patients were sent for medical treatment abroad. Expenses were paid by the GHIO. The GHIO is anxious to expand its treatment capabilities to a level sufficient to make it unnecessary to send patients abroad for treatment. However, when suggested that a careful cost study might reveal that it is cheaper to send a small number of patients abroad than to develop the technicians, acquire equipment, etc., required to develop a local capacity to treat all illnesses, the GHIO in Alexandria expressed interest in such a study. The Alexandria GHIO is currently exploring the possibility of increasing local referral to university teaching hospitals as an additional option.

2.4.1.4 Management, Utilization and Costs

Each beneficiary of the GHIO carries a passbook containing name, code number, picture, and a medical record. At each contact with the GHIO, diagnostic and treatment record data are entered. This information is also recorded at each point in the GHIO system and is forwarded to a central facility for eventual tabulation. Thus the GHIO is able to maintain excellent records on utilization by type of service, physician, and place of treatment, including drug utilization. In fact, one of the truly impressive aspects of GHIO operation is data collection and management control, including monitoring of utilization and cost rates. The Alexandria GHIO branch is in the process of developing a computerized health information system with USAID assistance.

One area of difficulty concerns drug over-prescription. Drugs constitute 50 percent of total GHIO costs. This high cost percentage is explained by GHIO authorities as a result of the fact that other cost elements are low in price. GHIO authorities also suspect that members sometimes submit themselves as ill for the purpose of acquiring drugs for members of their families or, less frequently, for sale. Other possible explanations include the low quality of contract physicians who tend to overprescribe medications, lack of appropriate laboratory and other diagnostic support elements, and lack of close monitoring and supervision of physicians prescribing patterns. Clearly the GHIO should be doing more in the area of drug cost control, particularly in terms of monitoring prescribing patterns of individual physicians.

GHIO directly controlled hospitals and clinics appear to be well organized and managed, particularly by comparison with MOH facilities. However, in cases where space is leased in MOH facilities, management and organization appears to be a problem. The GHIO beneficiaries expect a higher standard of care in the GHIO wings and wards. Yet, the GHIO has difficulty in maintaining adequate staffing and supplies and in maintaining effective management over portions of facilities that they do not completely control. This suggests that future expansion of GHIO, if carried out with principal reliance on hospitals and clinics leased from the MOH, is not likely to be as smoothly managed as the current smaller system. Moreover, the GHIO has been operating for 18 years principally in the Alexandria area. Principal administrators have been managing the system for at least 12 years. The High Institute of Public Health in Alexandria has been working with the Alexandria GHIO and this has had an important favorable consequence for management and cost control. With massive expansion throughout the nation, new managerial personnel and health professionals will have to be trained and become disciplined to adapt to the practices of the GHIO management and cost control systems. It is not clear whether or not the High Institute of Public Health can stretch its staff to assist the GHIO to expand coverage nationally.

Clearly, expansion is likely to encounter significant management problems, and the implication is that, at least for a time during the expansionary period, costs are likely to be less effectively controlled than they are within the GHIO system at present. Currently, the GHIO can monitor each physician's performance. If dissatisfied with the services of physicians on contract, they can be terminated on one month's notice. However, given massive expansion and the difficulty of recruiting physicians, particularly in view of the plans to expand organized care on the part of the physicians' syndicate and curative treatment organizations (possibly fueled by private health insurance plans), the GHIO will find it difficult to enforce disciplinary sanctions on the limited number of physicians made available for GHIO service.

Review of personal service utilization rates on the part of non-copayment beneficiaries in Alexandria in the year 1981 reveals average annual visits per GP and specialists to be 6.0 and 1.5, respectively. Rates of average annual GP and specialist utilization on the part of Law 32 beneficiaries (co-payment beneficiaries) are 4.0 and 1.0 per GP and specialist, respectively.

2.4.1.4.1 Demand elasticities

A matter of considerable interest pertains to the different rates of utilization of various treatments (X-rays, lab tests, and prescriptions) existing between non-copayment beneficiaries (Law 79) and Law 32 patients, in view of the 25 percent co-payment requirements applying to Law 32 beneficiaries. Of particular interest are the approximate price elasticities of demand implied by observed differences in rates of utilization between these two groups. Assuming that physician judgments, management factors, incidence and prevalence of disease patterns, etc., are the same for non-copayment beneficiaries and Law 32 beneficiary populations, observed differences in utilization, expressed in percentage terms, permits rough

estimates of price effects on utilization. This information is vitally important to forecasting levels of demand for services under varying assumptions of co-payment accompanying the expansion of services to similar populations in the future. It also provides insights as to the probable price, revenue and utilization effects of taxes levied on the source of health services transactions involving similar populations consuming health services in the private medical sector. Data indicating differences in rates of utilization between Law 79 and Law 32 populations are available for the Alexandria area for the year 1980 and are presented in Table 2.4.1.4.1.1 below, along with estimates of price elasticities of demand.

Table 2.4.1.4.1.1

Estimates of Elasticity of Demand*
Reflecting Consequences of 25% Co-Payment,
GHIO Alexandria, Beheira, and Matrouh, 1981

	<u>Law 79</u>	<u>Law 32</u>	<u>ED*</u>
Average Prescription Rate/Year/Beneficiary	6.0	3.0	- 3.0
Average X-Ray/Year/1,000 Beneficiaries	150	100	- 1.7
Average Lab Visits/Year/1,000 Beneficiaries	750	400	- 2.7

Source: Raw data provided by Dr. Ramsis Riad, Deputy Director and Supervisor of Medical Services, GHIO, Alexandria. Calculations by the author.

* Elasticity of demand (ED) may be calculated ceteris paribus as the percentage change in quantity demanded relative to percentage change in price. All price percentage changes are assumed to be 25 percent, since Law 32 beneficiaries are required to pay a 25 percent co-payment while Law 79 beneficiaries do not. Elasticities are calculated as average "arc" elasticities. Elasticities exhibit negative signs because of the inverse relationship existing between price and quantity demanded which prevails in the "normal" case.

Note that these estimated elasticities are minimal estimates in all cases since co-payment limits are set at a maximum of L.E. 1.0. per transaction. Thus a 25.0 percent co-payment is effective only on transactions whose total costs are L.E. 1.0 or less. The co-payment percentage is less for transaction whose price exceeds L.E. 1.0. For example, given the upper limit per transaction co-payment of L.E. 1.0., the percentage co-payment required in the case of a transaction costing L.E. 10 is only 10.0 percent. Also note that all drugs are provided free to Law 32 beneficiaries while hospitalized thus further suggesting the minimal range of the drug demand elasticity coefficients presented above.

The data show that the elasticities of demand for these health services are highly price elastic, ranging from a low of approximately - 1.7 in the case of X-ray use to a high of approximately - 3.0 in the case of rate of prescription utilization. These elasticities are greater than unity in absolute value (and are therefore said to be elastic, in economics jargon); they are much higher than those found in empirical studies in the U.S.A. This is not surprising, in view of the fact that incomes are much higher in the U.S. than in Egypt.

An elasticity of -2.0 indicates that a price increase of 10 percent would result in a decrease in utilization of twice that percentage, i.e., 20 percent. The fact that these estimated elasticities are greater than unity (in absolute value) also suggests that the GHIO is pricing services in the range of the demand curve for medical services which would be consistent with (but not necessarily implying the fact of) profit maximization. Actually, total revenue would be maximized if copayments were set at levels at which price elasticity of demand were unity.

Observed rates of utilization in the case of noncopayment beneficiaries are probably on the high side, due to the inclusion of 33,000 pensioners along with the 500,000 beneficiaries covered under Law 79 and industrial accident programs. But given the relatively small percentage of pensioners (approximately .6 of one percent of the total number of noncopayment beneficiaries) the effect of pensioners cannot be of great significance as concerns these calculations.

Price elasticities of demand for drugs and laboratory visits are extremely high, -3.0 and -2.7, respectively. This suggests that a 10 increase in price would decrease utilization by 30 and 27 percent, respectively. Given the elasticity of supply, *ceteris paribus*, these data suggest that the incidence of a tax levied on drug prescription or laboratory visits in the private medical sector would fall mainly on providers and not on consumers. That is, given the elasticity of supply, and highly elastic demand, the effects of an excise tax levied at the source of supply will result largely in more than proportional declines in utilization and only modest increase in prices to consumers. By levying an excise tax on private providers, significant revenue could be generated by government which could be used to finance the expansion of the quantities and qualities of services to poor populations.

Discussions with GHIO officials and examinations of GHIO documents reveal hospital occupancy rates averaging approximately 70 percent overall. This suggests excess capacity in terms of efficiency. However, low hospital utilization rates, other things equal, are consistent with good management and cost control. Patients enter hospitals in the GHIO system only as the result of strict referral. However, in view of this low rate of hospital utilization, it is not difficult to see why government is not anxious to provide additional financing of GHIO hospital acquisition.

However, as the GHIO expands, its volume in its present locations hospital occupancy rates will undoubtedly rise, warranting GHIO acquisition of additional hospital space through leasing, purchase, or construction.

Clearly, the GHIO will need to acquire additional hospital space as it expands coverage regionally beyond the sites of its current operations.

2.4.1.4.2 GHIO Hospital Costs

Bed costs for GHIO hospitals are reported to be L.E. 3,000 annually, with 40 percent of these costs fixed, implying a total variable cost of L.E. 1800 per bed annually. Drug costs are estimated by GHIO to be 45 percent of annual total costs per bed, or L.E. 1350. Therefore drug costs constitute 75 percent of total variable costs per bed!

Taking account of a 70 percent occupancy rate yields 255 ($365 \times .7$) days of occupancy per bed. Alexandria GHIO hospitals report an average length of stay of 8 days. Dividing 255 by 8 yields 32 as the average number of patients per bed. Further dividing L.E. 3000 by 32 yields L.E. 93.75 as an estimate of the average cost per patient stay (i.e., per case admitted to the hospital) in a GHIO hospital or L.E. 11.72 (L.E. 93.75 divided by 8) as the average cost of a patient day. Subtracting fixed costs at 40 percent yields L.E. 7.03 as the average variable cost of a patient day or L.E. 56.25 as the average variable cost of a patient stay. Recalling that drug costs constitute 75 percent of variable costs yields L.E. 5.27 and 42.56 as estimates of drug costs per patient stay and patient day in Alexandria GHIO hospitals.

Drugs are given at no cost to patients in the case of hospitalization of both Law 79 and Law 32 beneficiaries. If the elasticities calculated above (which appear to be low) are assumed to apply to hospital drugs in general, a 25 percent copayment of drug costs would reduce costs per patient day in an GHIO hospital by L.E. 1.3 or would reduce costs per stay by L.E. 10.64. (Co-payment costs are assumed to be fully borne by the patient in the case of hospitalization, since physicians can essentially force the patients in hospitals to buy drugs, i.e., make copayments, whereas the patient can choose not to have prescriptions filled outside of the hospital). This would appear to impose a significant hardship on many patients.

However, in the pilot program incorporating dependents in the Alexandria area, drug copayment requirements are set at 35 percent. Ceteris paribus, a 35 percent copayment levied on the average would save the GHIO ($.35 \times$ L.E. 5.27) L.E. 1.8 per patient day or ($.35 \times 42.56$) L.E. 14.9 per patient stay, which of course are significant savings. However, savings would be effected by making patients bear these costs, which in many cases would constitute a severe hardship. This conclusion is supported by the fact that only five dependent hospital admissions have occurred during the six months that dependents have had access to GHIO Services. (Personnel communication to the author, April 1982 by Dr. Ramsis Riad, Deputy Director and Director of Medical Services, GHIO Alexandria).

There is a clear need to conduct studies of the financial capacity of families to bear the costs of illness (both in volume and timing) in the GHIO System (if not throughout Egypt generally). Higher subscription rates may be

preferable to larger co-payment requirements if families cannot acquire extra funds easily on short notice in the random event of illness.

2.4.1.4.3 Lack of Actuarial and Economic Analytical Foundations

One of the problems with the GHIO system is that it does not appear that scheduled copayment levels are based on actuarial criteria taking into account probable levels of risk, reflecting the incidence and prevalence of disease in covered populations. Copayment levels are also not established on the basis of economic relationships such as demand elasticities or on a determination of capacity to pay. The GHIO appears to be proceeding on a basis of trial and error. GHIO representatives are aware of this and have requested technical assistance in these areas.

Dependents of existing beneficiaries are likely to exhibit higher risks and ceteris paribus, consequent higher rates of utilization and cost generation. These rates are not easily predictable, given that the existing GHIO data base pertains solely to a different risk population (essentially male industrial workers). Existing data should be supplemented by field surveys of population risks and capacity to pay which could serve to establish copayment schedules at satisfactory levels in terms of probable utilization, costs, financial capacities, and revenues.

2.4.1.5 Costs per Beneficiary, Revenues, and solvency

Costs per beneficiary in the GHIO system for 1982 are estimated at L.E. 20.0. This compares to roughly L.E. 4.6 for the MOH. However, it is to be emphasized that the GHIO is predominantly a curative service organization. Very little illness or disease prevention or health promotion services are provided by the GHIO. Pre-employment and periodic health examinations to industrial accident beneficiaries appear to be the only such service offered. The GHIO has expressed an interest in promoting family planning and is only just beginning to think about other health promotional service programs, i.e., family health, immunizations, etc. Yet these activities are important to reducing costs of services, particularly in connection with contemplated massive expansion of coverage to include a substantial proportion of women and children as well as employed males.

Currently the GHIO is just breaking even. Actually deficits are being generated under Law 79 and 32 programs. These deficits are being covered by surpluses originating from the 1.0 percent wage contributions of the 5.0 million workers covered under the industrial accident fund and from a 1.0 percent wage contribution from other employee insurance systems (e.g., the Railway Workers Organization). Without the pooling of funds from all sources, the GHIO technically would be insolvent in connection with its Law 79 and 32 programs.

Given that the GHIO is just breaking even currently, and assuming that per unit costs remain constant, the GHIO system can continue to break even only if wage levels of newly covered workers equal those of workers already covered.

In fact, however, per unit costs have been rising rapidly in recent years. This means that in order to remain solvent general wages must increase as rapidly as costs of inputs to the GHIO, unless per unit GHIO costs can be lowered through better management and cost control. However, with the rapid expansion required to cover 5.0 million additional beneficiaries per year, it seems extremely unlikely that per unit costs will fall much, if at all, due to various factors discussed above. This is particularly true if space must be leased from MOH and others not under complete GHIO control.

2.4.1.6 Expanded Coverage of Pensioners and Agricultural Workers

Two special segments of the population of potential increased beneficiaries warrant specific analysis. These are pensioners and agricultural workers.

Currently only 55,000 pensioners are covered by the system. Pensioners pay only 1.0 percent of pensions (widows pay 2.0 percent) and all services are free. The pensioner beneficiaries are generally elderly (the general retirement age is 60 years) and thus as a population they are heavily affected with the chronic degenerative illnesses of the aged (heart, stroke, cancer, etc.). These illnesses are expensive to treat. In a sense, pensioners are like Medicare recipients in the U.S.

Currently, on the average a pensioner contributes roughly L.E. 4.0 to the GHIO annually. However, costs of providing services to this group average roughly L.E. 44 annually, yielding a net deficit per pensioner per annum of approximately L.E. 40.

Currently, these losses are being covered by surpluses originating in the system, principally from industrial accident funds. But growth in coverage of this population can easily pull the GHIO system into insolvency. The future growth in the numbers of pensioners who will become eligible for membership in the GHIO system is projected to reach 1.0 million by the end of 1982 and to increase by 4.0 percent net of the urban labor force annually for several years. Given an urban labor force of 5.0 million, net growth in the numbers of pensioners approximates 200,000 annually. Adding the 1.0 million pensioners currently eligible to become members of the GHIO system to the 2.0 million who will become eligible for membership in the system over the course of the next 10 years yields 3.0 million pensioners as potential beneficiaries of the system over a 10 year period.

Assuming that revenues originating from all beneficiaries of the GHIO keep pace with increases in per unit costs of services implies that the GHIO would just break even on servicing all existing beneficiaries (including 55,000 existing pensioners) and new nonpensioner beneficiaries newly covered by the system. However, even assuming that increased costs of service just equals increases in revenues per new pensioner beneficiary, a deficit of L.E. 40 would be incurred for each new pensioner beyond the existing 55,000. The number of such new pensioner beneficiaries would total 2.945 million (3.0 million - 55,000) in the year 1992. Given an annual loss of L.E. 40 per new pensioner beneficiary, the annual GHIO deficit would approximate L.E. 117.0 millions in the year 1992.

Some of this deficit may be covered by surpluses originating from contributions of 1.0 percent of wages to GHIO from the Industrial Accident Fund. However, it is believed that all industrial workers are currently covered and thus are already contributing the surpluses that are allowing the GHIO to just break even currently. Growth of the number of industrial workers in the future will not suffice to contribute revenues sufficient to cover much or any of the L.E. 117.0 million annual deficit projected to arise by the end of the coming decade.

It is clear, that as far as bringing eligible pensioners into the system in large numbers is concerned, either costs must decline, contribution rates from various beneficiaries must rise, government must subsidize the GHIO system on current account in the not so distant future, or the quality of services must decline.

The government policy of expanding coverage to agricultural workers (approximately 3.0 million) also poses some significant financial problems. In a nutshell, these problems involve determining appropriate bases and mechanisms for assessments of contributions to the GHIO system. The bulk of agricultural workers, estimated at 75.0 percent of the rural work force, do not earn wages. Developing an administrative mechanism for collecting such assessments in rural areas would be very difficult. Another issue is whether agricultural workers can afford to pay (prepay) the full costs of their utilization of health services.

Some analysts have suggested assessing agricultural cooperatives and contracts with millers and other processors as the basis for contributions of agricultural workers to the GHIO system. However, not all commodities are marketed through cooperatives or through contracts with processors. Thus a good portion of the value basis for assessment is not conveniently administratively assessable. To the extent that fixed taxes could be levied on transactions, the result would be taxes that are sharply regressive. The same would be true of taxes assessed on land holdings unless a provision were made for graduating the tax based on the value of land holdings. It also should be noted that in 1978 the existing land tax, national defense tax and national security tax constituted a total tax equal to 30 percent of the rental value of land. Given national objectives of attaining food self-sufficiency and the urgency of doing this in view of a prospective leveling off in rates of foreign exchange acquisition and the resultant diminishing capacity to import food from abroad, concern must be expressed for possible food production disincentives which could result from increasing taxes on agricultural production in general.

It is estimated that, roughly speaking, incomes of rural dwellers are one-half of the income of those living in urban areas. Thus a serious question exists as to whether or not it is fair or even possible for rural dwellers to pay the full costs of services made available to them. Unless it is possible to find an administratively appropriate and feasible way to assess agricultural workers for the full costs of their utilization of GHIO health services, it would appear that some transfer subsidy scheme must be developed and

implemented in order that the GHIO not incur deficits or drastically reduce quality of services as a result of expanding coverage to this population.

Prospects of the need for subsidy are even greater when one considers the cost implications of extending coverage to all workers and dependent populations. A sub-committee of the People's Assembly has estimated that the annual cost of providing GHIO coverage to the entire population at L.E. 600 million at the end of 10 years. However, given that costs per beneficiary are L.E. 20, even if annual per beneficiary costs remained constant, total annual costs of providing GHIO services to even the existing population of 42 million would total L.E. 840 million. Given this level of underestimation of costs, it would appear that complete population coverage could not be accomplished without serious deterioration in quality of services unless additional revenues are somehow made available to the GHIO in the near future.

2.4.2 Alternative Health Insurance and Service Schemes

As the Health Services System Report indicates, there are numerous suppliers of health services in addition to the MOH and the GHIO. Of particular interest to policy is the fact that these agencies currently are rendering care to populations similar and in some cases identical to those served by the GHIO. Some of them are operating strictly as employee health services insurance delivery organizations (e.g., the Railway Employee Organization). Others offer services on a fee for service basis (e.g., the private medical sector and the Cairo and Alexandria curative care organizations).

2.4.2.1 The Railway Employees Organization

The Railway Employee Organization (REO) has been operating for 32 years. At one time health services were provided to the telecommunications workers, but these workers voluntarily broke away from the REO and enrolled in the GHIO. The reason for doing so was that at that time, the GHIO was very generous with sick leave. Since workers received the basic wage while on sick leave, the GHIO was an attractive insurer. Since that time, however, bonuses and allowances have greatly increased and workers no longer desire to stay off the job and miss bonuses, overtime and extra allowances that are not forthcoming while on sick leave. Last year the telecommunication workers petitioned to rejoin the REO but the organization refused them membership on the grounds that they can maintain a high quality of care only with a limited enrollment.

Technically the REO is authorized under Law 79 as an exception to mandatory enrollment in the GHIO, due to its existence prior to the passage of Law 79 (1975). Still, the REO contributes 1.0 percent of wages to the GHIO in the interests of social solidarity and claims it is happy to do so. Medical administrators of the REO claim that the care offered by them is better than that offered by the Cairo GHIO and is cheaper. Note that care is provided by the firm and workers make no direct contributions from their wages. The REO currently covers 80,000 middle and upper middle class employees and their families, approximately 320,000 people (80,000 x 4). All services are free to both workers and dependents. The current budget is L.E. 2.25 millions,

suggesting an annual cost of slightly in excess of L.E. 7.0 per beneficiary. This budget is higher than last year's budget by L.E. 100,000, but last year more employees (81,000) were employed by the railway. Last year's costs per beneficiary would appear to have been roughly L.E. 6.64. This suggests that costs per beneficiary increased only on the order of 5.0 - 6.0 percent over the last year.

The RED operates three hospitals, by far the largest being the Railway Hospital in Cairo with 500 beds, the other hospitals being located in Alexandria and Tanta totaling together an additional 100 beds. Bed space is leased from the MOH at an average rate of 12 beds per month. In total, the RED employs 146 salaried physicians covering 11 medical specialties. Currently the Railway Hospital employs 112 physicians but only 47 nurses, and has requested 63 additional nurses from the MOH. The RED operates 17 outpatient clinics at various locations throughout the nation. The RED has its own pharmacies in its hospitals and clinics and is able to buy drugs at a 15.0 percent discount. All drugs are dispensed free and cost the RED only L.E. 192,000 out of total costs of L.E. 2.25 million or roughly 8.6 percent. This contrasts sharply with the 50.0 percent of total costs that drugs constitute in the GHIO.

Note that all physicians are salaried. Physicians receive L.E. 80 - 150 per month, depending upon specialty and experience, and work 6-hour shifts. They are allowed to maintain private practice during off hours. Last month the RED hospital in Cairo experimented with allowing physicians to use four beds for economic patients. The hospital netted L.E. 1000! The RED is making plans to increase the number of economic beds in the future.

The RED offers inoculations to children and family planning services (which administrators admit are seldom used) and elective surgery to all patients. However RED requires permission from supervisors as to the timing of surgery in the case of elective surgical requests from employees so as not to disrupt production unduly. All workers receive preemployment physical examinations, which are repeated every three years. Workers are pressured to undertake surgery when medical necessity is indicated, under the threat of losing their jobs. Glasses, dentures, and prosthetic devices are available free to beneficiaries when needed.

Each year, three to four cases are sent abroad for treatment and two or so cases are referred to university hospitals for sophisticated treatment. Generally, the RED system is regarded as a very high quality system.

2.4.2.2 Medical Syndicate Initiatives

2.4.2.2.1 Description of MS/MPCI

Virtually every physician in Egypt is a member of the Medical Syndicate. Technically, membership is regarded as tantamount to licensure. The Syndicate exercises a strong influence on national health policy. Members of the Syndicate sit on all of the major health advisory boards and councils,

including the National Health Council (The Health Board), which are standing bodies advisory to the Minister of Health. The head of the Syndicate is also a member of the People's Assembly.

The Health Profile of Egypt study revealed that at least 80.0 percent of the active physicians in urban areas devote late afternoon and evenings to private fee-for-service practice after fulfilling their government job obligations. There is evidence that the majority of government physicians posted to rural areas engage in private practice also. MOH physicians assigned to rural areas are permitted to make home visits or treat patients in their own homes for which they charge tax-free fees. The Health Profile of Egypt (HPOE) also states that the private health care system is used primarily by "upper and middle income Egyptians" (HPOE, Publication No. 15, March 1982, p. 9).

While adequate statistics are lacking, interviews with private physicians and persons having access to tax records indicate that private medical practice is lucrative and is becoming increasingly profitable over time. This is particularly the case for medical school professors and GPs and specialists who have been able to acquire and operate clinics. An indeterminate number of these clinics have 1-4 inpatient beds, something short of the five inpatient beds which would cause a clinic to be classified as a hospital and thus would make it subject, technically, to staffing, equipment, and other regulation by the MOH. (However, the MOH has drafted a new law that will require all private practices to become licensed and subject to regulations. See Section 2.1.4.1. item (i) of this report.)

Many of the urban based physicians and some rural physicians operate private clinic/hospitals. The HPOE states that "small proprietary hospitals under a variety of ownership arrangements account for less than 5.0 percent of hospital beds". Given rough estimates of total hospital beds at 82,000 currently, this suggests that the number of proprietary hospital beds is something less than (but presumably close to) 4100, most of which may be presumed to be located in Cairo and Alexandria.

It is becoming increasingly difficult to establish a full-fledged clinic based private practice. Reportedly only about 400-600 of the total of 18,000 physicians in residence in Egypt are exclusively in private practice. The difficulty of establishing a private practice reflects the effects of rent control which has resulted in the necessity of paying large sums of "key money" for living and commercial space. It is reported that a physician desiring to operate a clinic with a reception area, one examination room, one treatment room and one or more rooms for inpatient beds, must pay "key money" of L.E. 60,000 or more (some estimates range upward to LE 150,000), to be able to lease the required space. More money is needed for furnishings and equipment. Obviously, few new graduate physicians can raise this volume of funds.

The Medical Syndicate believes that the private medical sector can and should play an increasingly important role in shouldering the burden of providing health services to the population. This view is also shared by many

government officials. Accordingly, the Medical Syndicate (MS) has formed a "Medical Professions Corporation for Investment" in accordance with Law 43 for development in the medical professions field. The original capitalization was established at L.E. 10.0 million, with the MS contribution constituting L.E. 2.0 million. The remaining capital contributions were obtained from the National Bank of Egypt, the Al Mohandese Bank, the Egyptian Company for Drugs (public sector), the Alexandria and Memphis Companies for Drugs (both public sector), the Al Gomhuria Company for Medical Requisites (public sector), as well as individual contributions by physicians, dentists, and veterinarians. Members of the board of directors include many prominent persons, including politicians and government civil servants. The corporation will participate by more than 50.0 percent of the capital of the companies that it will establish. The president of the Medical Professions Corporation for Investment (MPCI) is the current president of the MS.

The objective of the MPCI is to augment the public sector in its efforts to expand the delivery of effective health services to the population. It believes that the MPCI can offer highest quality of services at reasonable costs to large segments of the population in the cities of Cairo and Alexandria and in the capitals of the various governorates. The implication is that doing so will relieve the MOH of the burden of servicing these populations.

The MPCI plan is to establish a chain of combined hospital/polyclinics in close proximity to university hospitals. Each of the units would be a company formed as a unit of the MPCI. The hospital/polyclinics would offer a range of primary and family health services, a range of specialty services, and a limited range of hospital inpatient services (minor/medium surgery and deliveries). Difficult outpatient cases and cases requiring sophisticated inpatient hospital treatment would be referred to the university teaching hospital nearby. The clinics would provide day and night emergency services. Pharmacies, laboratories and radiology services would be provided directly to the clinics through other medical supply companies formed as units of the MPCI.

Services proposed for the combined MPCI units are presented in Table 2.4.2.2.1.1 below.

Table 2.4.2.2.1.1 - Services Offered by MPCl Clinics

I. Basic Care for the Family at Nominal Costs in the Morning Shift: *

- A. Preventive care - vaccination against contagious diseases.
- B. Health improvement services:
 - 1. Family organization
 - 2. Motherhood and infancy care
 - 3. School age health care
 - 4. Health education
- C. Services by the general practitioners:
 - 1. Periodic medical examination
 - 2. Detecting cases at their early stage
 - 3. Treatment of patients
 - 4. Transferring cases requiring specialized care to suitable specialist and following up the case
 - 5. Dental care and treatment

II. Specialized Services in the Afternoon and Evening Shifts:

- A. Specialized clinics for all branches of medicine, run by specialists holders of doctorate or equivalent standard, from among the staff of the faculties of medicine or hospitals of faculties.
- B. Analysis laboratories and radiology clinics.

III. Continuous Day and Night Service:

- A. First aid
- B. Pharmacy

* This will be applied by issuing a medical care card to each citizen who will benefit from the services of the center, against nominal charges for various services with the exception of immunization and first aid which will be free of charge.

The MPCCI envisions the establishment of a chain of hospital/polyclinics as eventually being complemented by the development of a private health insurance system that would permit individuals to buy appropriate coverage. It is not clear whether such a system would be government sponsored, controlled, or remain strictly private. It also is not clear whether or not the MPCCI would be able or willing to form an insurance company that would establish rates, collect subscriptions, and reimburse medical service components of the MPCCI.

The MPCCI has requested assistance with the financing of 50.0 percent of initial start-up capital costs. MPCCI believes that roughly L.E. 4.0 million of investment funds would be required for buildings and equipment (land would be provided by the MS). Once established, each such combined unit could serve approximately 500,000 persons. The MPCCI would be willing to cover local currency costs of initial capital investment requirements. However, it is estimated that 50.0 percent of initial investment costs would require foreign currency financing of the acquisition of medical equipment and requisites, the latter, the MPCCI hopes would be provided by USAID in the form of a "donation for requirements of basic family health care."

Clearly the MPCCI project is in the conceptual stage, but is moving ahead rapidly. At this point, it is apparent much remains to be done in terms of generation of actual designs of the service units, specific equipment needs, medical and administrative protocols, medical requisites, fee schedules, medical records systems, and relationships with medical supply companies. The MPCCI proposal for financial assistance is currently under consideration by USAID.

2.4.2.2.2 An Appraisal of MPCCI

The formation of the MPCCI is an interesting development. It represents a significant effort to organize private group practice in Egypt. As such it has much to commend it in terms of potentially providing a reasonable package of quality health care services at reasonable costs. However, the initiative of the MPCCI raises some issues which warrant further study.

One such issue concerns the populations that would be served by the combined medical units. As the Health Profile of Egypt states, private practice predominantly serves upper and middle income groups. The MPCCI has targeted Alexandria and Cairo as well as the capitals of various governorates as the principal sites of service delivery. These are areas in which it may be presumed there exist concentrations of high income health care consumers. Clearly, the MPCCI service units would offer services on a fee for service basis. While services would be available to all, services would only be accessible to those who can afford to pay the prevailing fees. Regulation of fees if left strictly to the MS would likely result in greater standardization of fees rather than in "low" levels of fees. Given the objective to render high quality services and that the organization is profit oriented suggests that established levels of fees would exceed levels which all but the upper and upper middle classes could afford. The costs of "free" immunizations and first aid are quite low and could easily be absorbed into a fee schedule for

other services which would cover full costs of all (including free) services and yet yield "good" levels of profits.

A second issue concerns the MPCCI desire for health insurance. While health insurance regularizes the timing of financial obligations of health care consumers allowing them to budget more effectively and relieves them of the uncertainty of the possible necessity of making large payment in the event of severe illness, health insurance tends to make physician income virtually certain. Costs depend fundamentally on the quantities and particularly on the quality of services rendered. Given technology, the price of inputs and the quantity of care provided, costs will be higher the higher quality of services and the level of desired profits. Hence the introduction of health insurance is not likely to result in lower costs of health care delivery (but quality may be high).

In principle it would be possible for the MPCCI to offer medical services at rates lower than those prevailing in the private medical sector currently. Currently the structure of private medical fees reflect the high levels of "key money" required to acquire space with which to locate a private practice. The MPCCI by building clinics could rent space at monthly or annual rates which could be covered by service generated revenues, thus providing opportunities for young physicians to begin private practice. This would tend to increase the volume of private practice.

However, this would not necessarily result in a reduction in fees or of the overall cost of private medical services. Presumably, rental rates to physicians would reflect repayment schedules on loans granted with which to acquire space on the part of physicians who are located within combined units. Rental rates would be set at levels high enough to amortize implicit key money payments. If this is the case, the MPCCI would de facto internalize the key money in the form of higher profits which then could be used as investment funds for expanding the operation, or could be distributed to shareholders. If this is done, medical fees or overall costs of MPCCI type of operations would not be lower than those set by individual practitioners.

Expansion of the supply of private medical services as a result of MPCCI activities could bring about a decline in medical fees and prices, but only in the absence of excess demand. There is little reason to believe that there does not exist substantial excess demand for high quality services among high income earners in major cities. Indeed, the fact that the private medical sector and fees have been rising very rapidly suggests that demand is growing very rapidly and that excess demand tends to prevail in cities among high income groups.

2.4.2.3 Curative Care Organizations

Two additional hospital organizations, the Cairo and the Alexandria Curative Care Organization, exist as economic service authorities. These organizations are economic authorities and are monitored by and are subject to directives

issued by the Minister of Health. Services are provided on a fee-for-service basis. The organizations rent some facilities from the MDH and occasionally from the private sector. The MDH pays these groups for accident beds and free service beds where none exist or there exists a shortage of MDH beds.

Currently the Cairo and Alexandria Curative Care Organization hospitals number 12. Bed capacity is 3,000, collectively. These hospitals provided roughly 65,000 inpatient treatment visits in 1981 and approximately 860,000 outpatient visits in that year. Physicians are hired on a contract basis in the interests of maintaining control over quality of practice. Approximately 1.0 million clinic visits were provided by physicians on contract in 1981. Physicians also admit patients from these clinics to the hospital. The Organization operates with a set fee schedule and hospitals split 50/50 with physicians. The Chairman of the Board of the Organization stated that after splitting 50/50 with physicians, the Organization retained L.E. 2.0 million which was reinvested for upgrading quality of service and for expansion of facilities and equipment.

The Organization attempts to offer a high quality of care for a reasonable price. It feels that it is favorably competing with the private sector which it feels is charging excessive fees which are rising continuously.

Curative Care Hospitals offer a range of accommodation priced according to amenity, ranging from ward to suite accommodation. Forty percent of rooms are air conditioned. Drug supplies are contracted directly with pharmacists. A fee schedule or room rate schedule is not available. However, interviewers were told that the top rate for a suite was L.E. 18 per day. However, extra charges for nursing services, drugs, physician's fees, operating theater, etc. are added on top of this basic room (threshold) cost. Outpatient sessions (two are held daily) at a cost of 50 P per visit plus the cost of medications. The Organization contracts directly with firms and industries. Currently approximately 1.0 million industrial workers and dependents are covered with such contracts.

Thus far the Organization operates only in Cairo and Alexandria. It has tried to expand into other areas but has been resisted by the private medical sector. It feels that it should be allowed to compete with the private medical sector for servicing middle class populations. Curative Organization administrators are strong advocates of indemnity type health insurance which they feel would promote competition among providers and would result in improvements in the quality of medical service and lower costs. They feel that the bulk of medical services should be provided by nonpublic service units, and that the MDH should provide only accident and emergency curative services.

A point that warrants emphasis is that drug costs constitute only 29.5 percent of total operating expenses of the Cairo Curative Organization, as compared to the 50.0 percent that drug costs constitute of GHIO total costs. This suggests close cost control management and that ways to promote expansion of this component of the delivery system as compared to others should be explored.

There is no indication that the Curative Organization is providing or is interested in providing preventive or promotive services. It is clear that the Organization is profitable and is in direct competition with both the GHIO and the private medical sector. It has an advantage over both groups, due to continued receipt of government funding for new hospital capital investment and equipment through government sponsored foreign loans.

2.4.2.4 The General Organization of Educational Hospitals and Institutes

The General Organization of Educational Hospitals and institutes consists of eight hospitals, four of which were formerly MOH hospitals, affiliated with universities and eight specialized research and treatment institutes. However the Educational Hospitals remain under the jurisdiction of the Minister of Health as economic service authorities in the government budget. In 1981 the Minister of Education commissioned a study of universities, including their health services delivery activities, and thus data concerning educational hospitals and institutes are available for the year 1982. A list of specific institutions as well as data specific to each institution are presented in the Coverage and Utilization Sections of the Health Services Systems HSA Report. It is only necessary for the purposes at hand to briefly review the scope and magnitude of the service operations of these institutions since they represent an alternative source of supply of health services to those supplied by the MOH, GHIO and the private sector. Data pertain only to the year 1981.

Collectively these institutions provide 3,468 inpatient beds and employ 7,682 persons (of which 944, 1,993, and 2,329 are professional, specialized and technical, respectively). They provided 2,682,200 outpatient treatment visits in 1981, and treatment to 108,467 inpatients in that year.

Recurrent budget for Teaching Hospitals is tied to both numbers of beds and anticipated volumes of services, unlike the case of MOH hospitals which are allocated current budget on the basis of beds only. Currently, recurrent costs per bed are budgeted a L.E. 600 annually which compares to L.E. 1,300 in the case of the GHIO. Recurrent cost allocations per bed are anticipated to be increased to L.E. 700 for FY 83-84, although administrators asked for twice that amount. The MOF allows 20 P. per outpatient visit in the current year. This is expected to rise to 25 P. in the next fiscal year. These organizations are allowed to collect nominal fees for bottles (5 P. per visit), offer economic inpatient beds, and charge fees to private patients in special afternoon sessions with income being distributed to provide staff incentives and to purchase equipment and drugs not available in the hospitals.

These hospitals offer the whole range of primary medical care, secondary and tertiary care services. Because they are known to be of high quality, having access to medical faculty and sophisticated equipment, the bulk of their patients are self-referrals (walk-ins). The fact that no strict referral mechanism exists reduces the efficiency of operations by prohibiting their specializing in primary, secondary and tertiary care services. Some people travel 100-200 km to refer themselves to these institutions. These patients have to be admitted since they are usually very ill and cannot be sent back.

They must be held for longer periods of occupancy, since adequate follow-up is not possible.

These hospitals presumably suffer shortages of nurses, funds, and opportunities to specialize. There is interest on the part of administrators of these hospitals in the establishment of a health insurance scheme coupled with a strict referral mechanism and greater flexibility in paying staff. These would provide adequate funding and flexibility needed for recruitment, retention, and appropriate utilization of specialized staff for tertiary care.

2.4.2.5 University, Other Ministry, and Voluntary Health Services Delivery Units

There are eight University hospitals complexes which, in principle, provide tertiary health care services. Collectively, these complexes comprised 10,586 inpatient beds in 1981, and provided 3.46 million outpatient visits and 293,200 inpatient visits in that year. However, 95.0 percent of patients were reported to be self-referred. Administrators estimate that up to 60.0 percent of patients treated come from rural areas, many of whom travel long distances.

The Ministry of Interior purportedly administers 25 prison hospitals comprising 1591 beds and an unknown number of clinics. Data pertaining to visits were unavailable. This Ministry also purportedly operates police hospitals but information on numbers of institutions, beds, visits, etc. were not available for purposes of this study. The Ministry of Defense operates an unknown number of military hospitals and clinics. The Ministry of Agriculture has one hospital under construction, but has not been able to obtain funds for its completion. Agricultural workers have organized several voluntary fee for service clinics, but numbers and patient volumes are unknown. The Ministry of Social Affairs (MOSA) provides organizational and some financial support to private voluntary health delivery organizations at community levels. While the exact number of health delivery organizations is unknown, the MOSA estimates that as many as 2.0 million outpatient visits are provided through the efforts of these organizations at local levels. In general, the methods of service delivery involve contracting for the services of government physicians after working hours and collecting fees for services rendered. (See HSA Report on Egyptian Voluntary Associations and the Health Sector, also included as an Annex to the HSA report on Private and Public Health Services Delivery Systems in Egypt.)

3.0 Interrelatedness of Health Policies, Strategies, and Implementation Issues and AID Assistance

3.1 AID Health Sector Priorities

AID priorities in health include family planning assistance, nutrition assistance, health planning, development of water supplies, environmental and communicable disease control, and development of rural and urban health delivery systems targeted at the poorest of the poor. The overall priority is to assist in developing host country governments' capacities to use existing and newly acquired resources more efficiently in order to develop socially and economically and in distributing the benefits of growth broadly throughout host country populations.

Emphasis is placed on assisting governments to raise living standards of poor majorities up to, and beyond if possible, access to resources at levels fulfilling "basic needs." Increasing emphasis is being placed on assisting host country governments to rely on private sector initiatives and thus relieve pressures on increasingly burdened governmental resources and budgets. However, in doing so AID emphasizes the necessity of avoiding assistance interventions which would result in reallocations of resources away from the poorest segments of populations, which would increase inequity. In a nutshell, AID seeks ways to enable private sector initiatives to assume increasing responsibility for growth and development in the interests of increasing overall economic efficiency and efficiency in the use of resources, but seeks ways which at the same time promote equity in the distribution of the benefits of growth.

AID and host country priorities and objectives in development assistance in general, and in health sector assistance in particular, are essentially in harmony. Naturally there are legitimate differences of opinion, particularly in the cases of specific sectors of national economies at particular stages in the development process, or in cases of individual projects. However these differences are almost always resolved to mutual satisfaction through collaborative study, discussion, and efforts in designing specific projects.

The Phase I HSA effort represents a collaborative study effort with the objective of gathering facts and carrying out analyses which will provide objective data and information on which to base Phase II discussions and subsequent dialogues between USAID/Cairo and the GOE concerning health sector assistance for the next five years.

Since the objective of Phase I HSA activity is to provide a basis for subsequent discussion, it is important that the health sector problems and issues be clearly identified. It is also important that both the U.S. and Egyptian experts engaged in focused discussion of the various policy options that exist with respect to key issues. Policy changes can be identified which, if implemented would remove or greatly diminish obstacles of inefficiency and inequity in future health sector development.

It should be recognized that there is a rather special feature of the nature of U.S. assistance to Egypt in general stemming from political initiatives undertaken at the highest levels in both governments; thus U.S. assistance to Egypt in agreed amounts essentially represents an irrevocable commitment. In addition, there is now a commitment to the philosophy of sectoral allocations of assistance to Egypt which represents a departure from conventional AID assistance practice.

The specific volume of assistance forthcoming to any particular sector depends on many factors, foremost being the sense of urgency and priority attached to individual sectors by the GOE. However, in addition to the sense of urgency and priority attached by the GOE, due consideration must also be given to existing constraints of policy on achieving enhanced efficiency and equity, and to the individual sector's absorptive capacity over time.

In light of the various considerations discussed immediately above, this section of this report will be presented with a focus on policy issues, with emphasis on how each poses problems of constraint on enhancing efficiency and equity with respect to future health sector development. In many cases, but not in all, policy options ranging from higher to lesser degrees of severity (in terms of their degree of departure from existing policies) will be posed and briefly elaborated for consideration by U.S. experts and Egyptian counterparts during Phase II deliberations.

It is recognized that ultimately policy and sectoral development strategy remain entirely the prerogative of host country authorities. The author believes that by drawing attention to existing issues and options for subsequent discussion by senior U.S. and Egyptian health experts who will participate in Phase II, Egyptian and U.S. officials will later reach agreement concerning the volume and timing of U.S. assistance that will best serve the health sector development needs of the Egyptian people.

3.2 Health Priority Policy Issues

Health does not receive high priority in social and economic development planning and budgeting. In general, it appears that high level decision-makers regard health services as a consumption and thus a nonproductive activity.

Investment in health services, preventive or curative, is not seen as investment in human capital, or as a measure maintaining or improving the productivity of the population. Some exception to this is made in the case of male industrial workers, in whose case attention is given to insuring access to physical examinations and curative health services. However, increasing the delivery of health services to the general population, particularly to women and children, appeals neither to decision-makers who attach high priority to industrialization nor to those decision-makers concerned with the burdens placed on social overhead sectors as the result of population growth. Some Egyptian decision-makers have expressed concern that any reduction of death rates resulting from increased delivery of health services to dependent

segments of the population may result in even more rapid population growth than is the case currently, thus increasing already intolerable burdens on government budgets already strained to maximum capacity. While in some sense this may seem to be a harsh judgment, it is not an uncommon view of development economists.

3.2.1 Implications for Efficiency and Equity

Under-investment in health services reduces the productive capacity of the population generally and otherwise contributes to wastage of resources in the long-run. The large volume of enteric disease, particularly common among children but also common among adults, leads to wastage of food consumed, contributing to growing needs for food production and importation. Large amounts of time spent in traveling, seeking out sources of health care, and waiting in lines, in addition to time lost through illness, represent forgone production potential representing significant opportunity costs to the entire economy, and a reduction in the quality of life generally. Uncertainty as to life expectancy and morbidity dampens incentives to restrict family size, to save, and to invest, and also dampens incentives to undertake entrepreneurial initiatives, all of which tend to decrease long-run growth in GNP per capita.

Low levels of resource allocation to the health sector result in some segments of the population's not having access to health services sufficient in quantity and quality to meet their basic health care needs. The small level of health services resources generally accessible to the urban and rural poor constitutes a gross inequity that is not off-set by food subsidy programs, and would not be so offset even if such programs were more specifically targeted to disadvantaged groups than has recently been the case.

The fiscal apparatus of the GOE is not well suited to affect income transfers of the sort required to enable the poor to purchase needed health services from the private sector when "free" government provided services are lacking in availability, accessibility, and quality. Perception of inequity in accessibility to basic necessities leads to disillusionment with society and with life in general, as well as to disillusionment with political institutions and processes.

3.2.2 Implications of Current Health Priority Policy Issues for USAID Assistance

Given the low priority attached to health services generally, it would appear that in the future the GOE would be unlikely allocate funds on recurrent account that would be necessary to sustain large capital investment projects that were initiated with USAID assistance. In light of low priority attached to health generally, USAID assistance, rationally, would be confined to projects that would require low future budget allocations on recurrent account, allocations of a magnitude which it would be within the ability and interests of the GOE to provide. Minimal level health sector assistance would appear to be appropriate, directed towards illness prevention and promotive

health activities, with a primary focus on family planning, upgrading existing stocks of health facilities, equipment and manpower, all with selective targeting of assistance toward those urban and rural populations which are most disadvantaged currently or who are likely to be among the most disadvantaged in the future. In this connection, existing USAID family planning and urban and rural health services delivery projects (without the present large construction and vehicle acquisition components) would be possible prototypes for appropriate USAID assistance to Egypt's health sector.

As an alternative, a rather straightforward transfer of commodities could be provided to those health services delivery providers (public and private and MOH or other ministries) who are deeply engaged in serving disadvantaged population groups. The commodities might consist, for example, of replacement parts for vehicles and equipment (as applicable) and of consignments of specifically needed medical requisites such as disposable syringes, nonlocally produced pharmaceuticals, etc.

3.2.3 Policy Options Available and Further Implications for USAID Assistance

A firm commitment on the part of top level GOE leadership to an increased priority attached to health would call for further in-depth appraisal of specific ways for USAID to make a more substantive allocation of assistance to the health sector. Such an appraisal would involve additional attention to some of the fundamental problems and issues addressed below in this report and in the other reports of Phase I of the 1982 Health Sector Assessment.

3.3 Health Planning, Operating and Budgeting Issues and Policy Options

Health planning in Egypt consists essentially of budget development. Moreover, discretion over budget development centers narrowly on the development of investment budget (Title III, capital investment projects). Other budget components either are tied inflexibly to the investment budget by formula (Title II, running costs) or are developed by agencies largely beyond the purview of the health sector (Titles I and IV, wages and salaries and transfers, respectively). While in principle planning is decentralized, it appears to be a "top-down" rather than a "bottom-up" process. Decentralization has thus far consisted of transferring authority and responsibility to lower government levels, but the Central level with little exception has retained dominant control over resources. Additional problems concern the scarcity of trained planners and budget analysts and of supporting materials for planning and budget development activities at all levels of government. This rigidity applies to operations as well as to planning and budgeting procedures and processes.

3.3.1 Implications for Efficiency and Equity

The implications of health planning, operations and budgeting issues are broad and pervasive with respect to consideration of efficiency and equity. In general, planning processes which are not flexible do not permit selectivity in terms of targeting high risk populations and programs, and they restrict

opportunities to choose programs which are most efficacious and cost-effective from among program alternatives. Planning and budget rigidities also keep programs and facilities from being staffed, supported and supplied at levels commensurate with expected and actual levels of utilization. The result is that varying types and degrees of inefficiencies and inequities exist throughout the MOH health services delivery system.

The main health sector objective of the MOH has been to provide equitable coverage of areas and populations with health facilities. The data reveal that the MOH has been extraordinarily successful in meeting that objective. For example, health facility to population ratios are greatest in the lower income and lower "quality of life" tiers of governorates, less so in the next higher tier of governorates, and lowest in comparatively high income and high "quality of life" ranked governorates containing major urban centers offering many alternatives to government sector health services delivery. On this score the MOH is to be highly commended.

However, staffing patterns and running costs do not appear to be variable according to the sizes of population covered or to levels of utilization. Facilities coverage is relatively efficiently allocated spatially but does not appear to be efficiently allocated from a systems utilization point of view. Health facilities appear to offer the same mix of services in rather fixed proportions, largely due to staffing ratio considerations, rather than in proportions reflecting the variable needs of different populations at risk. Integrated packages of services are offered, which do not reflect targeting of disease and illness problems or selectivity of programs designed to best serve the needs of populations at risk and using technologies that present the highest probability of effective intervention.

The USAID-supported Strengthening Rural Health Delivery Project, as originally designed, could have been a very important innovation in these respects. The project targets children as the primary population at risk and selects enteric illness as the primary disease category given attention. However, it appears to have failed to utilize a variety of appropriate medical service delivery and management support modalities needed to determine their varying degrees of medical and managerial effectiveness, administrative feasibility, and cost effectiveness in field settings. Although the project has been effective in reducing infant mortality, it has failed to test alternative incentive supervision, and management support systems. However, since MOH officials resisted the agreed-upon efforts to test different health system management interventions, it would appear that the MOH is unwilling to experiment with alternative ways of overcoming some key health services delivery problems which they themselves had identified and selected during project design. MOH lack of interest in experimenting with new patterns and types of service delivery modalities within the existing government health services delivery system is a serious issue in connection with the types of support USAID can provide in the future.

The Strengthening Rural Health Delivery project at present exists as a "special" donor project. An issue exists as to whether existing planning and

budgeting procedures can easily accommodate replication of this model broadly throughout the rural health delivery system. A related issue concerns whether local communities, districts, and governorates could plan, adapt, and initiate other innovative health delivery services from those levels and receive an appropriate degree of budgeting, planning, and administrative accommodation.

3.3.2 Implications of Current Planning and Budgeting Issues for USAID Assistance

Given what in general appear to be rather rigid planning and budgetary processes and procedures, it would not appear to be useful to assist in widespread development of the mainstream of the health care delivery system. However, this is not to say that there would not be merit in attempting pilot projects in urban and rural areas or in selectively initiating other related projects in the future with the full understanding and cooperation of government in doing so.

3.3.3 Planning, Operational and Budgeting Policy Options Available

Assuming that the GOE is willing to experiment with loosening-up its planning, operational and budgetary processes, USAID could provide assistance in doing so. USAID could assist in implementing a pilot project involving development of flexible GOE health planning, operational and budgetary processes, perhaps introduced at governorate levels. This should be a collaborative effort involving the Ministries of Health, Planning, Finance, and Local Government (for decentralization). Such an activity would involve training of health planners, health administrators and budget officers, linked with development of management information systems and budgeting, operational and planning guidelines, policies and procedures that would incorporate community participation in these areas. Focus would be on institutionalizing planning, operational and budgeting processes at village, governorate and central levels that would permit the planning and implementation of health program interventions targeted at selected populations at high risk, using appropriate medical, administrative, organizational, training and management technologies. Budgetary and administrative requirements would be developed which would allow budgets and operational policies and procedures to reflect actual resource needs in terms of manpower, medical requisites, equipment, etc.

3.4 Educational Policy Issues

Medical education issues are discussed in greater detail in the HSA reports on Health Manpower and on Training. The issues that are presented here are rather broad and are related to other major policy issues discussed below in this same section.

The major issue addressed here relates to current policies concerning the numbers of physicians trained recent years and numbers contemplated to be trained in the future. Some attention in Sections 3.4.1-3.4.3 below is also paid to nurse training issues.

The basic issue with regard to physician training is that in the recent past 5,000 or so graduates have been produced annually and the current plan is to increase physician training outputs to 7,000 or so annually.

Only 400-600 physicians are exclusively in private practice in Egypt. Approximately 10,000 Egyptian physicians are practicing abroad, and an estimated 18,000 physicians are in government service in Egypt. (See the Phase I HSA Health Manpower Report by Dr. Doris Storms). The review of health plans presented in Section 2.1.4 of the present report documented the established MOH policy of deliberately expanding the government health services and public elements (GHIO and Curative Care Organizations) with the objective of creating jobs for the increasing numbers of graduate physicians (1960). Later (1975), the MOH/GOE explicitly adopted the policy of training physicians for export.

3.4.1 Implications of Educational Policies for Efficiency and Equity

The training of large numbers of physicians in Egypt, given existing training capacities, has resulted in the production of physicians who are of low quality. Accelerated production of physicians with inadequate expansion of the base of training resources will lead to further declines in the quality of physician graduates and consequently to further declines in the quality of medical practice. Low quality of physicians, who are the most important cadre of health services providers in Egypt, implies a low quality of health services delivery in all parts of the system--government, public, and private.

Given that government employee including physician earnings levels are rising, the low quality of care provided is accompanied by increasing costs of supplying physician services. This implies decreases in ratios of benefits to costs in the health services delivery system. Thus decline in the quality of care supplied by the health services delivery system is reflected in economic terms directly as a diminution in the efficiency in the use of health resources.

The fact that physicians are trained entirely at public expense in Egypt means that increases in the numbers of physicians trained add to the public outlay on health services. Other things equal, expansion of physician training further lowers quality of care delivered. Since increased training output leads both to increased public expenditure and to diminutions in the quality of services delivered, ratios of benefits to costs further decline, resulting in increasing inefficiency in the use of public resources as a consequence of policies of expanding physician training. This implies increasing wastage of scarce resources which have valuable alternative uses if devoted to the production of other goods and services elsewhere in the economy.

A further inefficiency consequence of the government policy to absorb large numbers of physicians into the government and public system is that this policy represents a drain on current budgets. Excessive wage and salary disbursements are required to pay for an excessive number of physicians who

are in government services. This impinges on the availability of funds for running cost expenditures needed to support health program activities. Low levels of running cost allocations further detract from the quality of health services delivered. This results in lower ratios of benefits relative to costs, further lowering the efficiency of health resource utilization in the government health services delivery system. Poorly trained physicians tend to overprescribe drugs, thereby also contributing to further waste in the health services delivery system.

Note that a gross inequity exists with respect to physicians vis a vis other civil servants. Physicians who are trained completely at public expense (as are other civil servants) are also allowed to practice private sector medicine and thus supplement their income beyond government salaries while other civil servants do not have the opportunity to do this, by law and as a practical matter.

Physicians are allowed to seek specialty training with selection based on educational performance while in medical school. Physicians who are allowed to contract to deliver health services abroad, and who can earn income on the order of ten times domestic salaries, are also screened, with "the best of the brightest" being selected for service abroad.

Those who are not selected for specialty training or service abroad are assigned to the government and public health sectors. Generally, medical graduates whose scores in medical school are the lowest, or who fail to enter specialty training programs, are assigned to posts in rural areas. Thus the massive expansion of government rural health delivery facilities and staff has been accomplished by staffing this component with the lowest quality of physicians available to the system. Recognizing this, one must conclude that inequities in the accessibility to health services on the part of rural dwellers have not been ameliorated as much as is suggested by observing improvements in ratios of physicians to rural populations.

The policy of production of physicians for export is generally defended on the grounds that physicians working abroad remit substantial sums of foreign exchange. However, there is considerable evidence that worker remittances from abroad represent only a small fraction of foreign exchange earnings. In 1981, the GOE has required that all persons working abroad deposit 25.0 percent of foreign exchange earnings with the Central Bank. While this policy is a step in the right direction, it is very difficult to administer, since government is not always aware of actual earnings of Egyptian citizens working abroad and thus foreign exchange is inefficiently collected.

In the case of physicians working abroad two considerations warrant attention. First, one of the principal employers of Egyptian physicians (Kuwait) requires them to take a three to four month remedial training course prior to practicing abroad. This attests to the perception of the low quality of Egyptian medical graduates. Second, Gulf State countries have purportedly indicated their increasing reluctance to accept Egyptian physicians who have graduated after the year 1971. Moreover, Gulf States are

developing their own medical training capacities and thus opportunities for Egyptian physicians to work there will diminish. This implies that even maintaining, nevertheless increasing, rates of physician training eventually will place an increasing burden on government to absorb additional physicians into the government system, where young physicians are already in excess supply and of low quality.

Brief mention should be made of the nursing situation. Current numbers of working nurses appear to be low by comparison with numbers of working physicians. However there is a big discrepancy between numbers of nurses trained and the numbers working. The working life expectancy of a nurse is roughly five years, a period too short to recover the investment of public funds required in their training. Moreover, in recent cases, newly constructed nurse training facilities are not even close to being filled to capacity. There appears to be so little demand for nursing training that training facilities are inefficiently utilized. (See the Phase I HSA Manpower Report, by Dr. Doris Storms).

The principal problem in nursing appears to be that the profession lacks status and acceptance on the part of the consumer, with some exceptions existing in the case of greater acceptance of nursing services on the part of women than men. Egyptian nursing tradition evolved from an original cadre of slave women who catered to the needs (broadly) of soldiers. Nurses were viewed traditionally as on a level with prostitutes. Even with the modern specific focus on delivery of health services, nurses continue to have low status because of the necessity of their attending to male as well as female anatomy in the performance of their professional duties.

3.4.2 Implications of Educational Policy Issues for USAID Assistance

Given that the number of physicians being graduated and employed in the government sector appears to be excessive, it appears that USAID assistance to increase numbers of medical graduates would not be required or appropriate. Current USAID efforts to assist in the redesign of medical curricula (Suez Canal University) would possibly have some potential for upgrading the quality of medical education in Egypt, but only if the medical education establishment, consisting of the already existing medical schools, has a strong interest in and is strongly committed to these curriculum changes. The impression of the author is that this is not the case. (See HSA reports on USAID/Cairo Health Projects and on Health Manpower Training for further discussions of the Suez Canal University project.)

In view of the low status accorded nurses and the existing unused nursing training capacity, it would also appear of little value for USAID to provide assistance toward expanding capacities of nurse training institutions. Even efforts to upgrade the curricula of existing nurse training schools would not appear to be cost effective in view of the short working life expectancies of nurses and the low status of the profession currently.

3.4.3 Health Manpower Training Policy Options Available and Further Implications for USAID Assistance

The most severe policy option available to the GOE would be to decrease the rate of physician training, coupled with a well-conceived and implemented plan to upgrade the quality of medical education. This would help upgrade the quality of care throughout the system. Also in the long run it would slow down the rate of absorption of physicians into the government and public system, thereby providing a basis for increasing government physicians' salaries and allowances and provision for increased running costs, contributing to raising the quality of care.

Opposition to such a drastic policy shift (other than objections that there "really" is need for many more physicians and that current medical graduates are actually competent) would take several forms. Concern would be expressed that there is need to produce physicians for export in the interests of acquiring needed foreign exchange. The possibility would be raised that some physicians might be unemployed if government absorption of physician graduates slowed down more rapidly than the rate of educational outputs. Some would object to reduction in rates of training offered by medical schools on the philosophical basis that any comparatively bright person ought to have the opportunity to become a doctor. Counter-arguments are considered in reverse order immediately below.

Philosophically and practically, it is more important that comparatively bright people have opportunities to develop their full potential, rather than receive degrees, medical or otherwise. An issue of highest importance concerns the basic competency of individuals rather than the issuance of degrees. Therefore, the real issue becomes that of providing opportunities for comparatively bright people to become good at their chosen professions. Under current conditions, it appears to this author and to other members of the HSA team that there do not exist opportunities for individuals to become good doctors, given prevailing rates and conditions of training in Egypt, which result in poor quality medical education and consequent poor medical practice. It is a gross injustice to society to produce low quality professionals, medical or otherwise.

It is unlikely that most medical schools would object to planned reductions in the rates of physician education if they were supported in their efforts to upgrade the quality of physician education. However, medical schools should be asked to prepare a detailed plan and implementation schedule with respect to phased upgrading of medical education. USAID could assist in this by supporting collaborative relationships with U.S. medical schools, as in the case of the existing joint program between Suez University and the Boston University Medical School.

There is no reason for the GOE to reduce its absorption of physicians into the government and public health delivery system at rates in excess of reductions in the rate of medical school outputs, if means can be found of bringing the skills of some graduates up to minimally acceptable levels for their medical

roles and of keeping others from endangering the public. Thus the spectre of possible physician unemployment would appear to be a false issue in spite of possible contentions to the contrary.

The future exportability of Egyptian physicians does not appear very bright for reasons noted in the immediately preceding section. The 25.0 percent foreign exchange Central Bank deposit requirement is a rather ineffective means of capturing maximum potential foreign exchange from workers remitting from abroad. The GOE might wish to consider emulating the procedure currently employed by the Republic of South Korea, i.e.,

- a. All contracts for services rendered abroad must have government sanction, under penalty of revocation of citizenship and confiscation of domestic property.
- b. Export licenses must be issued in connection with all contracts involving rendering personal services abroad.
- c. Agreements are reached between the exporting country and the country receiving the personal services whereby personnel working abroad receive only a fraction of payment in foreign currency, in an amount necessary to defray ordinary costs of living in the foreign country of residence. All other amounts of foreign exchange are paid to the Central Bank, which in turn establishes domestic currency deposit balances in the name of the person working abroad.

The point is that the GOE could capture a greater share of foreign exchange generated from Egyptian physicians working abroad than is the case currently, even if no additional physician services were exported. Regardless of what other policy changes the GOE might consider with respect to training, policies increasing the efficiency of acquisition of foreign exchange from exported workers, along the lines indicated above, should be seriously considered.

A set of less severe policies would include bonding physicians in government service for comparatively long periods prior to allowing physicians to take leave abroad or to engage in private practice and requiring periodic relicensure based on effective competency certification. The idea here is to build in a progression of opportunity to advance in earnings that is ascending in terms of length of government service and demonstrated competency.

The least severe policy option, and one which is in fact minimally essential, is to require, for all physicians (those currently in service and those newly graduated):

licensure

initial upgrading of skills to acceptable levels of competency

continuing education,

periodic recertification based on competency
examinations

Competency-based licensures and recertification based on competency examination require the existence of skill upgrading and continuing education training programs and examination procedures. If the GOE were willing to see the wisdom of adopting these programs, USAID assistance could be made available to support efforts to develop and implement them. Other similar programs, including the upgrading of competency, status, and skills of nursing personnel, also would merit USAID support.

3.5 Policy Issues Concerning Public Sector Relationships with Private Medical Health Services Delivery Activities

To say that there is a private medical sector in Egypt is misleading. Differentiation between public and private sectors implies a degree of separation and independence which simply does not exist in Egypt today. The simple fact is that nearly all of so-called "private sector" medical practice is performed by physicians who are employed full-time by government, in principal from 8:00 a.m. until 2:00 p.m. After fulfilling their duties with respect to government services, physicians are free to make home visits and to see patients in their own houses or in "private" clinics. There is some speculation that some private patients are in fact seen on the premises of government facilities after (and even perhaps illegally during) government working hours.

Interrelationships between "public sector" and "private sector" activities extend even to the use of both public and private facilities. Strictly government (MOH) and public health services organizations hospitals (GHIO, Curative Care Organizations, Railway Employees Association, etc.) maintain "economic beds" for which patients pay threshold fees for beds and pay for all additional auxiliary services. Conversely, economic and service authorities like GHIO, Cairo and Alexandria Curative Organizations, and Railway Employees Hospitals are required to make beds available to the MOH to accommodate nonpaying public patients when needed.

Thus private sector and public sector supply are largely one and the same in terms of the professionals involved and often in terms of places at which services are rendered.

The distinction between public and private medical "sectors" is in fact a distinction of health services delivery activities which are differentiated, for the most part, on the basis of the time of day services are rendered, whether or not patients pay fees for services, and to some extent, on the site at which services are rendered and received. Analytically speaking, private and public (including government) medical services may best be viewed as greatly overlapping parallel activities, not as separate and independent service sectors.

The primary and most definitive discriminating factor differentiating between public and private sector health services delivery activities, is the way in which consumers pay for services. Note that "free lunches" do not exist: consumers ultimately pay for services, one way or another. In the case of strict MOH health services delivery activity, patients pay through collectively contributing taxes which are then distributed from government general revenue funds. This is also true in the case of services rendered by university hospitals, whose revenues are provided under the educational sector budget. Economic and service authorities (excluding the GHIO, but including Curative Care Organizations) receive capital and operating funds from government health sector allocations and from fees charged for services. The GHIO is an economic authority that since 1979 has received no capital funds from government. However, the GHIO receives the bulk of operating revenues from government-sponsored social security contributions made by both employers and employees, based by law on wage earnings. Pure private health services delivery activities are paid for by patients on a fee-for-service basis. To the author's knowledge there is no private health insurance in Egypt

There is no question that the Egyptian health services delivery system is very complicated in terms of relationships between public and private health services delivery activities. As a consequence, policy issues of significance abound in this area. Major issues as they relate to efficiency and equity are discussed individually immediately below.

3.5.1 Implications of Policies concerning public and Private Sector Interrelationships for Efficiency

Principle efficiency issues arise in connection with incentives. A very major issue is whether or not Egypt (or any country) can successfully operate a public system in which professionals are allowed to practice fee-for-service activity while in government service. Economic incentives exist which motivate individuals to work harder and to perform better, the higher the rate of earnings forthcoming for extra effort. Government jobs are tenured and salaries are fixed and are unrelated to job performances, being based essentially only on education and years of service. Existing "incentive bonuses" are viewed as wages. Given that wages and salaries are low and that management and supervision are sorely lacking, there is no incentive for physicians to perform well or at high levels while engaged in government service activities.

Medical politicians and administrators give great lip-service to medical ethics as a regulating force compelling high standards of performance, but experience all over the world suggests that, if anything, the majority of physicians are in general as materialistic (with only rare exceptions) as any group in any society. Physicians are "neither devils nor saints." They are just people, perhaps most aptly described as homo economicus medicus. Physicians respond to economic incentives at least as much as any other worker in society, professional or otherwise. If this were not the case why would government feel obligated to sanction private practice activities as a means for government physicians to augment their earnings?

However, in the current parallel mixed public/private health services activity system, physicians have great incentives to deliberately slack-off in their government work, maintain poor health delivery environments in government health units, and provide minimal services there to the very poor. Physicians also have great incentives to follow-up with a better standard of service delivered to those who can afford to pay fees when the same physician sees them later in the day in homes and in private clinics. Even nurses, orderlies, sweepers, and other health paraprofessionals and aids are known to receive a split fee upon recommending, on the site of government service, that patients see the physician on a private basis later in the day. Indeed, attendants are eager to become workers on the staff of medical units in order to learn (usually imperfectly) skills, such as how to give injections, which they in turn can apply on a fee-for-service basis in the community after working hours.

Low pay coupled with lack of discipline, supervision and management, plus the attractive opportunity to practice good medicine on a fee-for-services basis is dangerously becoming close to reducing the public system to a "front", which in large measure serves as a referral mechanism for private medical services activities while offering only minimal services to the poor, who cannot afford to pay for private care.

This conclusion may not have been evident until recent years, since incentive problems were not so serious when incomes throughout the population care were lower. However, as real incomes have risen over time, the market for what are perceived as "high" quality health services has grown by leaps and bounds. Household survey studies in Egypt show that the demand for health care is highly income elastic (i.e., the percentage increase in health services utilization exceed percentage increases in income). Compare the CAPMAS Household Survey data, 1975, with the HPOE results obtained in 1978). Since real income is continuing to grow rapidly, private sector medical activity is growing even more rapidly, increasingly dampening incentives for health professionals to perform well in government services activities.

Indeed, the growth of private sector health service delivery activities is "gutting" the capacity of the government to manage and supervise its own system. Currently approximately 350 medical officers manage the government health services delivery system at central, governorate and district levels. Few physicians seek careers in management and administration, largely due to better income opportunities provided by a combination of ordinary government clinical services supplemented by income earned from private health services delivery activities. It can be projected that within five-ten years only 70 or so senior medical officers will remain in the government health management system.

The efficiency consequences of the dampening of incentives of government health professionals that results from growth of private health services delivery activities are terribly important. Potentially the efficiency of the government system could be totally undermined by the distractions presented by private health services delivery activities. Physicians in government service

earn good salaries by comparison with other civil servants and the rest of the working population. Thus the issue is not simply low government salaries. Rather, the issue concerns government salaries that are low (but certain) in comparison with private practice earnings which are rising rapidly. The policy of allowing physicians to divide their loyalty, duty and commitment between government service and private practice as an incentive for government service is having serious perverse effects on the efficient delivery of government health services. Thus the policy of allowing government physicians to engage in private practice should be thoroughly reappraised.

3.5.2 Policy Implications of Public and Private Health Services Interrelationships for Equity

The equity implications of the relationship between the government system and private health services delivery activities appear to be straight-forward and clear-cut. Private health services delivery activities are targeted at the upper and upper-middle class income segments of the general population, leaving it to the government and public systems to provide services to the remainder of the population. Private health services delivery activities are aimed at curative primary and secondary health care activities (which are most profitable), leaving it to government to provide preventive and promotive services which are not profitable to deliver on a fee-for-services basis. The private sector will only provide a small volume of tertiary care services due to the high investment costs required to deliver this level of services, and the limited number of high income earners who can afford to pay the private costs of providing tertiary care.

The author of this report requested the construction of Summary Table 3.5.2.1, which is presented below, comparing the distribution of government and public health services delivery points with that of private sector clinics and hospitals. (This table, prepared by Dr. Petra Reyes, a member of the team which prepared the HSA report on the Public and Private Sector Health Services Delivery Systems, also appears as Table 6.9 in the Coverage and Utilization annex to that report.) Table 3.5.2.1 shows a preponderant concentration of primary/secondary care private clinics (relative to population) in the highest income and quality of life tier of governorates, while government medical units of a similar nature (relative to population) are predominantly concentrated in the lowest tier of governorates ranked by income and quality of life factors. Also note that all private tertiary care facilities are located in Cairo and Alexandria, while government facilities are distributed more widely nationally.

Some have observed that rapid growth of private clinics has occurred in rural areas and mark this as seeming evidence of private sector initiative to serve poor rural populations. In response to this the author makes the following observations. First, one would expect to see growth in private practice

SUMMARY TABLE 3.5.2.1

Ratios Indicating Government and Private Sector Health Facilities Coverage
By Levels of Care (As Defined by GOE) By Governorate 1980 - 1981#

Governorate (P.Q.L.I. Groupings)	Primary Care Facilities			Secondary Care Facilities			Tertiary Care Facilities		
	No. Per 100,000 Population			No. Per 100,000 Population			No. Per 100,000 Population		
	Govt + Public	Private Sector*	Total	Govt + Public	Private Sector*	Total	Govt + Public	Private Sector*	Total
Port Said	12.9	35.1	48.1	4.9	4.9	9.8	-	-	-
Suez	17.1	46.1	67.7	5.6	5.1	10.5	-	-	-
Alexandria	5.9	79.3	81.2	4.6	2.8	7.5	.19	.12	.32
Cairo	3.9	95.9	99.9	2.5	5.7	8.1	.40	.36	.76
Ismailia	14.8	37.5	52.3	3.8	.5	4.2	.25	-	.25
Damietta	17.6	31.4	48.9	3.9	.6	4.5	-	-	-
Dakahlia	13.1	19.8	32.9	11.8	1.3	3.1	.03	-	-
Subtotal	(8.1)	(66.9)	(75.1)	(2.9)	(3.7)	(6.6)	(.23)	(.18)	(.41)
Sharqiya	13.2	13.8	26.9	2.2	1.9	4.1	.03	-	.03
Kaloubiya	12.4	8.2	21.0	2.8	.8	3.7	.05	-	.05
Kafr El Sheikh	13.5	6.3	19.9	1.3	.3	1.4	-	-	-
Gharbiya	12.6	15.9	28.5	2.6	.4	2.9	.08	-	.08
Menoufia	13.9	7.9	21.8	2.0	.7	2.6	.11	-	.11
Beheira	14.1	14.5	28.6	1.9	.3	2.2	.11	-	.11
Giza	8.0	36.9	44.9	1.5	3.9	5.4	.26	-	.26
Subtotal	(12.4)	(16.0)	(28.4)	(2.0)	(1.3)	(3.3)	(.10)	-	(.10)
Beni Suef	17.0	8.1	25.1	3.8	.7	3.7	-	-	-
Fayoum	13.6	31.2	44.9	1.8	.8	2.5	-	-	-
Minia	13.1	6.5	19.6	2.7	.2	2.8	-	-	-
Assiut	13.3	7.9	21.3	3.1	.6	3.7	.05	-	.05
Sohag	13.2	4.7	17.9	2.5	.7	3.2	.05	-	.05
Quena	13.8	5.3	19.0	1.6	.5	2.1	.05	-	.05
Aswan	19.4	14.6	34.1	2.4	1.6	3.9	.15	-	.15
Subtotal	(14.6)	(9.9)	(15.8)	(2.5)	(.5)	(3.0)	(.04)	-	(.04)
Frontier	49.7	16.8	66.5	8.7	1.7	10.3	-	-	-
TOTAL	(11.87)	(30.1)	(41.9)	(2.5)	(1.8)	(4.3)	(.12)	(.18)	(.12)

Summarizes Tables 888 34A, 888 35C, 888 36A. Enumerations of Government and Public Sector Facilities from Dept. of Statistics, MOH (1980 Data). Private Sector Enumerations from Director General of Non-Governmental Health Institutions, MOH (1981 Data).

clinics in rural areas paralleling government's success in expanding health facilities and staff in rural areas, since private clinics virtually are staffed entirely by government health service professionals. Thus growth in numbers of private clinics in rural areas is a favorable consequence (externality) of government initiatives and is not the result of "private sector" initiatives. Second, even though private clinics exist in comparatively poor rural areas, it is not clear that most clients are poor persons, or that private fees are low relative to the incomes of even those poor rural dwellers whom they serve. More information is needed on this subject before one can resolve the issue concerning the virtue of private clinics in generally serving the poor, urban-based or otherwise. However, information needs notwithstanding, distributional evidence of the sort cited in the paragraph immediately above clearly demonstrates a preference on the part of private health delivery activities for concentration on high income segments of the population. In rural areas, much more cash is available now partly because some families have members working overseas; families with cash certainly account for the majority of those using such private services.

3.5.3 Implications of Private and Public Health Services Policy Interrelationships and Implications for USAID Assistance

Clearly the future evolution of Egypt's health services delivery system must assign a major role to private health services delivery activities. This is a direct consequence of government's limited capacity to support the expansion of the quantity and a needed increase in the quality of government "free" health services. However, it is imperative to regulate standards of performance and fees and earnings of physicians in their private practice health services delivery activities. This is so because all elements of the government public system (including the GHIO, Curative Care Organizations, etc.) use the same stock of physicians. The higher private practice earning rates, the less incentive physicians have to perform government service delivery activities well. Unless government can afford to raise salaries at rates equal to rates of growth of earnings in private practice activities, incentive to physicians in government service activities will be further undermined. This is also true of the GHIO, which it will be recalled is already experiencing difficulty in attracting adequate numbers of physicians. As an alternative, government can restrict government physicians from engaging in private practice while in government service or retard rates of growth in earnings from private practice through the development and enforcement of appropriate tax measures.

Many policy options are open to the GOE. The most severe would involve: reducing the educational output of physicians, imposing strict bonding, requiring longer terms of government service, and raising government physicians' salaries but forbidding physicians to engage in private practice while in government service. While in government service, physicians would be licensed and would receive upgrading training and continuing education. After perhaps eight to ten years of government service, physicians would be allowed to leave government service. If certified, upon leaving government service

physicians could engage in private practice, or serve in foreign countries for a time, after which, upon recertification, they would be licensed to engage in private practice in Egypt. The result of these policies would be an increase in the quality of government medical services that would ultimately be passed through to the private sector. Longer terms of government service would result in government receiving an adequate rate of return on public investment in paying the full costs of medical education of physicians. Physicians eventually would be allowed to work abroad or in the private sector and thus would have the opportunity to earn an adequate rate of return (with revenues consisting of government salary first and private practice or foreign service earnings later) on individual investment in medical education (consisting entirely of forgone income opportunity costs while undertaking initial medical training). Training fewer physicians would free-up funds (previously spent on medical education) with which to increase physician salaries while in government service and to increase running costs, which also would serve to increase quality of government health services. Better trained and higher quality physicians would be working with greater efficiency, because they would no longer be permitted to engage in private practice, and thus the number of physicians needed in the government service would be proportionately reduced, thereby providing more funds with which to raise salaries and increase running expense allowances. Given that public services would be of good quality and free at the point of service, it would be very competitive with private medical service delivery activities. GHIO services could be expanded, but not to cover the whole population. GHIO could be expanded to limits that financing through social security schemes would permit with no loss of quality of care delivered. Hence the GHIO would also compete favorably with the private medical sector.

A second set of policy options would involve licensing physicians, requiring continuing education and competency-based relicensure and certification of all physicians, and regulating the practice performance of private health services delivery activities. Management and supervision of government sector physicians would have to be increased. Licensure examination and other regulatory boards would have to be established and staffed with specially trained professionals. Data and information files on performance standards, fee structures, and other aspects of medical practice would have to be developed, maintained and continuously updated and monitored.

The GOE currently has drafted laws proposing the regulation of the various aspects of operating private clinics (See Section 2.1.6, item 'j', of this report). An issue pertinent to this laudable objective concerns how effective regulation will be in view of shortages of administrative staff at central and local government levels. In a nutshell, it is questionable whether or not the MOH can gather together and retain a staff sufficient in number and competency to effectively regulate private health services delivery activities.

Regardless of which set of options is taken by the GOE, USAID could assist in helping establish policies, policy standards, procedures, development of data systems and certification examinations, and training of managers and staff personnel. In order to attract and retain health management and health and

nonhealth professionals, however, the MOH would have to develop new schemes of service, training, and compensation schedules. Also the GOE should consider ways to upgrade the status and competency of nurses and establish parallel training and programs for this cadre as well. USAID could also help in doing this in the case of nurses as in the case of physicians.

3.6 Policy Issues Concerning Family Planning, Nutrition and Environmental Health, and Their Implications for Equity and for USAID Assistance

3.6.1 Policy Issues Concerning Family Planning, Nutrition and Environmental Health

The issues here may be stated briefly, as follows:

- a. Family planning until recently has lacked the backing and commitment of political leaders.
- b. Health professionals generally lack training in family planning.
- c. Health professionals lack training in nutrition surveillance and monitoring.
- d. Food distribution programs appear to lack precise targeting to populations at greatest risk, largely due to imprecise data concerning income levels and other circumstances of need.
- e. The GHIO offers little or no preventive or promotive health services, including family planning, at present.
- f. It appears that service and maintenance personnel in areas of water and sewerage supply are not well-trained to maintain systems.
- g. Salaries of water and sewerage service maintenance personnel are too low to provide adequate incentives to elicit levels of service performance that are required.
- h. The GOE has no policy requiring assessment of the health implications of new water and sewerage programs; hence, such assessments are not made.
- i. There does not appear to be a well-defined and comprehensive nutrition strategy and policy in Egypt.
- j. Water, sewerage and other environmental control activities lack coordination across ministries and vertically among ascending and descending levels of government.

3.6.2 Implications for Efficiency and Equity

Efficiency and equity implications are broad and pervasive in areas involving policy formulation and policy coordination, and need not be elaborated here.

3.6.3 Implications of Family Planning, Nutrition and Environmental Health Policy Issues for USAID Assistance

The absence of nutrition policy is not so crucial, given that studies have shown that in general nutritional status is rather high in Egypt as compared to other nations, perhaps due to general food subsidy programs. However, family planning and environmental health areas are vital, and ways should be explored to make it possible for USAID to make effective additional investments in these areas.

Family planning appears to have excellent prospects for moving ahead, if political commitment and leadership are sustained. It is important to link family planning with the delivery of primary and preventive health activities (which in principle are combined in the Egyptian context). In this connection, the time appears ripe to assist the GHIO in incorporating family planning activities in their program of services. Also, it would appear promising to assist the MOH in its general family planning activities and to introduce population education into school health programs. The matter of family planning education in connection with school health programs remains to be explored with MOH officials.

The area of environmental health presents some difficulties, particularly as these concern water and sewerage program assistance. While the MOH has broad responsibilities in the area of environmental control, it suffers from shortages of trained staff to exercise them effectively. In the absence of measures to increase incentive structures, assistance in training, capital investment, replacement parts and equipment would not have a great impact in the long-run. If personnel lack incentives, upon completing training they are likely to be absorbed into the private "open door" sector or to emigrate abroad. In the absence of training, other things equal, benefits of capital investments are not likely to be obtained or maintained. Also note that USAID is already providing substantial assistance in this area. In spite of these reservations, it is the feeling of the author that possibly more can be done in this area, particularly at local levels. However, government must be sensitive to the need to raise prices for services gradually in the interests of raising sufficient revenues with which to maintain systems.

3.7 Policy Issues Concerning Health Sector Financing, and Their Implications for Equity and for USAID Assistance

3.7.1 Policy Issues Concerning Health Sector Financing

Finance issues have already been made fairly clear in other sections of this report (see Sections 1.2.10, 2.4.1 and 2.4.2). Financial Policy issues are involved with interrelationships between the government/public sector and private health services delivery activities (see Section 3.5 immediately above).

Principal issues may be summarized as follows:

- a. The government system is overly staffed with physicians and woefully under-funded on running cost account. Physicians are of low quality which, coupled with low personnel incentives and low running cost allocations, has resulted in an extremely low quality of health services within the government system.
- b. The policy of increasing the rate of physician training output, coupled with absorption of virtually all graduates into the government system, will require larger government outlays on wages and salaries and will impinge more on funds available to support running costs of government facilities and programs, leading to further declines in the quality of services delivered.
- c. By contrast, private health services delivery activities are virtually unregulated and unconstrained except by the capacity of individuals to pay for services rendered, which is rapidly rising due to growth in per capita income.
- d. Given that the quality of services offered by the government system is low, the quality of care offered by a virtually unconstrained private health services delivery system of clinics and hospitals appears to be much higher. However, it is not clear whether or not the quality of services offered privately is actually "acceptable", because activities are virtually unmonitored, uncontrolled and unregulated. Note that Islamic values preclude blame for death being assigned to physicians. Death is a manifestation of God's will. There are no data on medical malpractice in Egypt.
- e. The GHIO receives funding under a social security wage-based assessment scheme and by law is less restricted than the government health services in terms of incentives offered to health professionals, employed on salary or on contract, and in provision of running cost support. As a consequence of its unique circumstances, by comparison with the strictly government health services delivery system, GHIO health services appear to be of high quality, but the GHIO provides curative services only.
- f. Other health services delivery organizations, including prison and military hospitals and Railway Employees Organization hospitals and clinics, receive the bulk of their government funding under other sectoral allocations (Interior, Education, Defense) or from patient fees. Generally speaking, revenues available to this group of delivery organizations are at least as great per health services delivery unit as those available to strictly MOH government service delivery units. Services delivered are probably of higher quality to patients because these nongovernmental units concentrate on offering strictly curative services and provide little or no outreach services, while government offers some levels of

- preventive and outreach services in addition to services that are strictly curative.
- g. Health in general, and the MOH in particular, receives a rather low priority in terms of allocations of funds from treasury. Yet the MOH is constitutionally charged with responsibility for improving the health status of the nation.
 - h. The MOH is not optimistic that it will be given adequate funds from general revenue sources with which to carry out its mandate. At the same time, the MOH is required to cooperate in helping to meet general social and economic development goals of providing virtually unrestricted entry into educational institutions and to provide employment to graduates, hence the large output of physicians and the absorption of physicians into the government health service.
 - i. The MOH, in attempting to meet its mandate of improving the health status of the population and in facing the reality of insufficient general revenue funds with which to do so, has seized upon the strategy of placing heavy reliance on the GHIO and the private health services delivery system to supply curative health services to the bulk (if not all) of the population.
 - j. This developing MOH and GOE strategy constitutes a de facto change, moving from a policy of supplying health services "free" (as stated in the National Charter of 1962) to a policy of providing a reasonable quality of services at reasonable prices to patients, with prices being paid in the form of deductions from wages, in the case of GHIO, or as set fees in the case of private practice health services.
 - k. The principal advantage of increasing reliance on expansion of coverage by the GHIO is that more funds are brought to bear on health services delivery in general than would otherwise be the case. Encouraging the expansion of the private sector will channel high income earner outlays on health toward the private sector, reducing utilization of the government system. GHIO revenues derived from wage assessments represent, in a sense, a diversion of funds directly toward health services delivery financing, instead of flowing to general revenue funds where they would likely be allocated to sectors other than health. It also is believed that overall the quality of health services will be enhanced as a result of expansion of GHIO and private health services delivery coverage.
 - l. The MOH will attempt to regulate the mixed public/private system through the powers vested in the newly proposed High Council on Medical Insurance, chaired by the Minister of Health.

Several problems posed by this strategy remain to be resolved. The private sector tends to "skim the cream", serving predominantly upper and upper-middle income groups, leaving the lower middle and lower income classes to be served by the GHIO or the MOH. Both the private sector and the GHIO provide only curative services, leaving to the MOH the provision of essentially all preventive services. In principle the GHIO could provide both curative and preventive services to middle and lower income populations. However, the GHIO currently is just breaking even, is covering predominately a low-risk class of the population (urban workers), and is just beginning to experiment in expanding coverage to high-risk groups and consequently to high utilizers of health services (i.e., worker dependents and pensioners). The GHIO is now breaking even by virtue of surpluses generated from industrial accident funds. However, even expansion to cover the number of pensioners that will be eligible for coverage by the system in the next decade - by 1992 - would force the GHIO to incur large annual operating deficits (conservatively estimated at L.E. 117.0 millions.) or to seriously reduce the quality of services delivered.

The public sector system operated by the MOH is woefully underfunded on current account. Government has no surplus of funds in the national budget with which to greatly increase allocations to the public health services delivery system at levels that are needed. Similarly, there is no indication that funds are readily available to provide subsidies that eventually will be required by the GHIO in order to expand its coverage without deterioration in quality of services.

Turning the high income segment of the medical market place over to the private sector tends to isolate the MOH from potential access to needed revenues which could be used to expand medical services to the poor. This suggests that if government adopts the policy of turning the high income segment of the population over to the private for-profit medical sector, some thought should be given to levying additional taxes on private providers in order to generate revenues with which to assist government in providing services to the poor.

It also seems clear that as the GHIO begins to expand coverage and take over MOH clinics and hospitals, it will be able to maintain management control and thereby maintain existing levels of efficiency and cost control. As expansion occurs, per unit costs are likely to rise significantly. As the private sector expands, unless fees are strictly regulated or taxed, the level of earnings from private practice will rise, resulting in an increase in the rates of remuneration physicians will require as levels of remuneration for GHIO service, causing the GHIO cost structure to rise over time. This is particularly likely to be the case as the GHIO, the private sector, and other public health delivery organizations compete for a comparatively small number of "high quality" physicians now believed to be primarily associated with Egypt's medical schools.

The conclusion appears inescapable that government's objective of relying on the private sector and the GHIO to provide reasonable quality curative health services to the entire population, leaving the MOH to concentrate on provision

of preventive services is likely to fail, unless the private sector is rather strictly regulated, the GHIO is heavily subsidized, or some combination of these events is effected.

Unless the High Council on Medical Insurance is supported by a sizable and competent staff of highly trained health system planners, policy analysts, and data analysts, and decision makers heed their suggestions, it is doubtful that the GOE will be able to regulate the complex system that will evolve over time.

3.7.2 Implications of Current Health Sector Financial Policies for Efficiency and Equity

It is not clear that either the GHIO or the private medical "sector" is achieving maximum technological and allocative efficiency. Private medicine is practiced on a part-time basis and at scales of production that would suggest failure to exploit available economies of scale. Brief examination of the operations of the Cairo and Alexandria Curative Care Organizations suggest that high quality of services spanning a broad spectrum of primary, secondary, and tertiary care services are being offered at reasonable prices to middle class consumers. Strict triage is employed and costs are reasonable, presumably in large measure due to good management and effective exploitation of potential economies of scale. The GHIO drug costs are correspondingly shockingly high as a percentage of costs (50 percent), which suggests that cost control measures are not as effective as would be expected from talking with GHIO management or with others who praise this system.

It seems highly improbable that a division of labor in the provision of curative services delivery between the private sector and the GHIO, on the one hand, coupled with the provision of preventive services by the MOH on the other, could be allocatively efficient. How could the MOH actually provide preventive services if (as appears likely) it turns over its outreach infrastructure to the GHIO? Indeed what would seem likely to occur is that the MOH would serve as a kind of directorate of the whole system, issuing laws and edicts requiring preventive measures to be provided in private practice activities and by the GHIO. But the MOH would then have the task of enforcing its directives over systems that it no longer directly manages.

Since it is difficult to capture fees from all but a small portion of preventive measures and practices, compliance with MOH directives on the part of the private sector would be minimal at best. The GHIO would have an incentive to provide preventive services in the interests of holding down costs, but only if revenues are held to low levels. However, since this is likely to be the case, prospects of delivery of preventive services on the part of the GHIO would appear favorable. However, cost and revenue assessment circumstances suggest that the real capacity of the GHIO to expand coverage rapidly or very far is in fact rather limited. Also, the provision of preventive services essentially would be a new area of activity to the GHIO.

Given the private sectors' proclivity to serve comparatively high income segments of the population (20 percent) and the limited ability of the GHIO to

acquire adequate revenues¹ to cover its comparatively high projected patient costs (L.E. 20.0 per beneficiary currently) for a very large proportion of the population (perhaps 60% at best), it would appear that at least 20 percent of the population (including the poor) would not be covered by either the private or the GHIO system. Thus the equity issue of overwhelming importance is that the GOE scheme would result in no care being made available to those in greatest need, those living in urban and rural areas below the poverty line.

3.7.3 Implications of Current Health Sector Financial Policies for USAID Assistance

The conclusion which emerges is seems clear, if the poor are to have access to effective health services: either part of the government curative health services delivery system must be reformed, to insure that a reasonable level of health services is available to the poor, or the poor, constituting a medically indigent class of health care consumers, must be given access to reasonable care provided by the nongovernmental health services delivery components of the health services delivery system. USAID could assist the government in selecting the best policy from those available and then assist in the GOE implementation of the policy selected.

3.7.4 Financial Policy Options Available and Further Implications for USAID Assistance

One broad policy option for the GOE to consider is to effect a more balanced approach to the projected development of the health services delivery system than the approach consisting of primary reliance on private practice and GHIO expansion. This would imply allowing the private sector, GHIO, and other segments to expand, including the Curative Care Organizations, non-GHIO employee security organizations, and the service elements of educational hospitals and institutes, as well as the service components of university hospitals.

Promoting balanced expansion of non-government health service components would permit the rate of expansion of the government health services delivery system to slow down in the interests of improving the quality of care provided. Government health services could be targeted at low income urban and rural populations. The latter would imply posting fewer physicians to government service, but would require raising salaries in government service, reassigning government physicians to non-government health services delivery service components, restricting government physicians from private practice, bonding physicians in government service for longer periods of time, and terminating accrued pension benefits when physicians are released from government service either to the private sector or abroad.

The GHIO would be allowed to expand population coverage only to the extent that increased subscription assessments would permit revenues to cover costs of service, perhaps to eventually cover 50-60 percent of the total population. This would obviate the necessity of providing massive subsidies from general revenues to the GHIO in the future. Without need to subsidize

the GHIO from general revenues, allowing the GHIO to expand its coverage somewhat would relieve pressures on the government system and allow that system to upgrade services with existing resources and to concentrate on providing better services to the poor.

Another broad policy option, following the existing government policy direction, would be for government to phase out of providing curative health services altogether, at least below tertiary care levels, and to allow the GHIO, Curative Care Organizations and private clinic/hospital health services delivery components to expand. Government would then be required to regulate all elements of the system and subsidize the GHIO as needed from general revenue funds. However this would ultimately require that government primary and secondary curative care systems virtually be handed over to other health services delivery components, principally to the GHIO. Moreover, provision would have to be made to provide access to care of behalf of the 20-30 percent of the population which is medically indigent, which would not be covered by nongovernmental delivery components.

One way government could attempt to insure accessibility to health services on the part of the poor would be to establish sliding fee schedules, with the requirement that private physicians serve all income segments of the population, including the poor, up to a maximum of say 20.0 percent of the total number of patients treated by each physician. Government also could establish a national health insurance system that would reimburse health care consumers regressively, i.e., pay a higher fraction of costs the lower the patient's level of income and wealth. These nontax transfer mechanisms may be more difficult to monitor, enforce and administer than levying additional taxes on private providers sufficient to subsidize the public system. Thus levying additional taxes on private providers may be the most feasible way to insure equity in accessibility to health services on the part of all segments of the population.

Several taxes which may be considered come to mind. One is an annual lump-sum licensure tax, graduated by scale of private practice, e.g. L.E. 50.0 or L.E. 100.0 annually, depending on whether physicians are in part-time or full-time practice. (Note that the suggested rates of annual tax are arbitrary and illustrative only. More classifications could be added if administratively feasible.) Also note that licensure and relicensure might be made conditional on fulfilling continuing education training, in the interests of upgrading private practice.

A second tax mechanism to be considered would involve levying a stamp tax at the source of transactions. Every physician would be required to purchase serialized stamps, each of which would bear the physician's license number. Each private patient would carry a medical record card and would pay a fee (say 10 P) at each visit to a private provider. Upon payment of the fee, the physician would enter a fresh stamp into the patient's medical record book, and affix a stamp to any prescriptions written. No pharmacist would be allowed to dispense other than over-the-counter drugs without a physician's prescription with a stamp affixed. The pharmacist would maintain a record of the license number, date, cost and drugs dispensed.

Such a stamp tax system would provide a basis for pharmaceutical audit, a way of monitoring physicians' prescribing patterns, and a reasonably accurate record of visits to individual private physicians (given the high expectations of patients and reliance of physicians on drug utilization in Egypt). A good record of numbers of patient visits to each physician would assist in the collection of accurate levels of income taxes, which are already levied but are currently not collected effectively. The physician would be responsible for turning over the stamp fees to the government quarterly. Pharmaceutical audits would help to enforce compliance. Patients would be exempt from paying stamp taxes if treated by government physicians; the stamp would still be affixed, but would be counter-stamped by an authorized and responsible official of the government medical unit in which the physician is employed.

Another way to provide accessibility to medical services to the poor is to formally and officially define and identify a class of medically indigent. Medical record passbooks could be issued to the medically indigent, once they were accurately identified. The medically indigent would then seek care in private clinics and hospitals, GHIO, etc., which in turn would be required to provide services to them, with reimbursement provided by government at set fees and rates.

The medically indigent program could be managed through a decentralized administrative process, with the provision of central government grants-in-aid to governorates. Governorates could be granted tax authority to raise revenues with which to supplement centrally provided grants-in-aid. All funds would be pooled and would be allocated among the various health services delivery components according to numbers and types of services provided to indigent populations. The resulting system would be similar to that of the U.S. system in that it would incorporate a Medicaid type program for the medically indigent.

A third broad financial policy option would be to encourage the development of competing private health insurance plans, with premiums of the medically indigent being subsidized from State funds. Insurance plans could be established of an indemnity sort, that would allow patients to pocket the difference between indemnity payments and actual costs of service in order to encourage efficient selection of cost-effective providers. Implicit copayments would be required in cases where consumers selected highest cost (and presumably high quality) providers who charged fees and rates in excess of established indemnity rates.

It should be noted however, that there are many different types of health insurance and none guarantee access to care. Health insurance could be of an indemnity type (i.e., one which provides a specified payment for each procedure), of a cost reimbursement type (provides for payment of some fraction of costs of utilization, constituting zero co-payment if payment is 100% of costs), or of a prepayment subscription type. Any of these types of health security financial mechanisms could serve to underwrite the coverage of the full costs of delivering services (plus targeted profits in the case of private sector health services delivery activities), depending on established

premiums, possible co-payment and/or subscription rates. Thus the introduction of health insurance does not imply wide accessibility to medical services to consumers, because premium subscription costs could be so high that only the upper and upper middle classes could afford insurance coverage.

Health insurance would, however, reduce uncertainty with respect to the timing of financial obligations on the part of health care consumers. Payment of premiums or subscriptions regularizes the timing of the financial obligations of consumers (completely so in the case of prepayment in the absence of co-payment requirements). Health insurance also pools risks so that, given large population coverage, premium or subscription costs in principle can be lower than would be the case of high-utilizing individuals who are not covered in an insured population.

It is important, however, to point out that there is some disadvantage to encouraging the development of competing private health insurance schemes. One problem is that the existence of many small insurance organizations reduces the potential for risk pooling. Second, encouraging competing financial insurance schemes may tend to result in escalation of physician fees and other health service prices, as has been the experience in many western countries. Third, financial health insurance schemes fail to reimburse providers for preventive and promotive health measures and thus place predominant emphasis on payment, hence on provision of curative services only. Fourth, in the absence of appropriate deductible and copayment provisions, health insurance tends to encourage over-utilization, particularly of secondary and tertiary health services. Fifth, it may be observed that the current system already consists of many overlapping and competing service delivery components, and thus little is to be gained by introducing financial schemes that accentuate competition, particularly when these are only a few high quality providers available.

The current system does not lack variety or competition. Principal problems of the current system are fundamental in nature and concern issues of equity, accessibility, quality of service, organization, management and supervision, and more appropriate incentives structures. In the opinion of the author, these factors would not be addressed very effectively by the introduction of private health insurance schemes.

Other financial options could be proposed. It is clear that various financial policy options should be studied in depth and in connection with fundamental problems.

Regardless of which general policy framework is selected, it will be necessary to strengthen MOH management and administration, data collection, and data and policy analysis capabilities. Also, it will be necessary to provide assistance in training, supply, commodities, etc., in efforts to upgrade and help expand various components of the health services delivery system.

In the event government redresses current health sector financial policy issues, the following specific types of AID assistance could be considered:

- a. Assistance in policy analysis and development.
- b. Strengthening the management, data analysis, cost control, copayment setting, risk assessment and actuarial bases for GHIO operations.
- c. Assist the GOE to establish an independent Secretariat to the newly-created High Council on Medical Insurance. This would involve establishing a cadre of policy analysts and planners who would assist the MOH general directorates in monitoring the system, coordinating data collection and analysis, and preparing position papers on conditions and circumstances of government, public and private sector medical practice, schemes of service, fees and costs, copayment rates, subscription and assessment rates, etc. Assistance could be provided to train personnel, develop organizational structure, develop job descriptions, and establish communication and monitoring linkages to the various directorates in the MOH and to other ministries.
- d. Assist in developing programs of skill upgrading and continuing education of health professionals, with primary focus on, but not restricted to, physicians and nurses.
- e. Assistance in the design and development of a coordinated health information system which would continuously collect data from government (all levels), public and private sources.
- f. Commodity transfers of supplies, materials, and other items needed to assist in upgrading the health services delivery system.
- g. Assistance in integrating preventive and promotive health services, including family planning services, with the regular curative services already being provided by the GHIO.

4.0 Some Recommended Options for USAID Assistance

4.1 Introduction

The analysis of Egypt's health sector policies and problems has been presented rather critically. In this connection it should be noted that there are many excellent features of Egypt's health sector and its development, particularly as concerns the goals that have been achieved in expanding health infrastructure into rural areas, development of the hospital system generally, and attempts to train adequate numbers of health professionals to staff health facilities. In most respects, Egypt's health service delivery system has achieved or exceeded targets of coverage and staffing established by WHO, yet the system has enormous problems, most of which, hopefully, have been identified in this report and in others prepared in connection with the Phase I Health Sector Assessment.

It also should be noted that the U.S. and other so-called developed nations have had many health sector problems in the past, and many problems persist at present. However, progress has been made in resolving U.S. health delivery problems and those of other western nations through facing up to problems that existed, identifying the most important constraints on existing systems, and attempting to remove them.

The specific policies and programs that exist in the U.S. and in other western countries would not be appropriate for Egypt or for any other nonwestern nation, generally. However, the approach of tackling the most important constraints on health systems first, with later efforts directed toward problems of less importance after successfully removing or reducing the significance of major constraints on the system, makes sense in any context, western or otherwise.

In this final section of the HSA Health Policy Report, the author attempts to present correlated lists of issues, GOE policy options available for consideration, types of USAID assistance that would be useful in light of policy initiatives taken by the GOE, and rough indications of the probable timing and levels of funding that would be required to assist the GOE in solving existing problems.

Obviously, the categorical designations of issues presented here reflect a "systems point of view," rather than an isolated orientation to selected problems. A systems perspective is more consistent with broad sectoral assistance than an independent problems approach.

In Section 3.0 above, the author has tried to view problems within the context of system component interactions (dynamics). This approach was undertaken in the interest of sorting out problems which have a more pervasive and general impact on health system activities and development potential from those problems which are more isolated and independent in nature. Those problems that are largely independent have a less

constraining influence on the capacity of the health system to develop in the future and thus rank as being of comparatively less importance. These latter problems represent weaknesses in the current system which could be overcome rather easily in comparison with the major problems constituting constraints on overall system development. However, it should be noted that there is little virtue in patching-up weaknesses, if major constraints receive little or no attention.

Naturally any classification scheme is rather arbitrary and necessarily will reflect the biases of the person(s) developing it. The author's biases are both cultural and intellectual and readers will undoubtedly disagree with certain and possibly all designations. Thus the issue classification scheme presented in Table 4.2.1 below (although discussed with various persons in the course of its development) reflects mainly the views of the author of this report. The scheme and its contents are suggestive and of course in no way binding on Egyptian counterparts, Phase II U.S. and Egyptian experts, or on U.S. and GOE officials. The scheme serves to summarize the conclusions reached in this report, which initial reviewers have considered to be supported by other HSA Phase I reports and findings and by their own knowledge of the Egyptian health sector. It also may serve as a useful illustration of how one might proceed in connection with substantive discussions concerning identifying Egypt's major health system delivery policy issues and problems and utilizing U.S. assistance to maximum advantage toward resolving them.

TABLE 4.2.1

ISSUES, POLICY OPTIONS, TYPES OF USAID ASSISTANCE, TIMING AND DURATION OF FUNDING, AND FUNDING LEVELS

<u>Issue</u>	<u>GOE Policy Options</u>	<u>Type of USAID Assistance</u>	<u>Timing and Duration</u>	<u>Funding Levels</u>
I. Major Health System Constraints				
1. Low health priority in GOE budgets.	A. No change in priority given to health.	A. Commodity transfers only.	A. Initiate as soon as need is determined and complete as soon as possible. Duration: medium term only.	A. Minimal.
	B. Elevate priority given to health and address other major health system policy issues and problems.	B. Broadest range of assistance needed to rationalize the system.	B. Initiate commodity transfers, technical assistance and other programs. Medium and long-run duration.	B. As needed.
2. Rigid health planning and budgeting procedures and processes.	A. No change in existing procedures and processes.	A. Selected programs designed to upgrade components of the system.	A. As programs are identified and designed of short duration.	A. Minimal to moderate.
	B. Initiate changes toward greater planning and budgeting flexibility.	B. Multiple programs: 1. Programs to improve planning and budgeting procedures at national and local government levels. 2. Broad range of programs potentially suitable for system-wide replication.	B. Immediate and medium range programs with long term implications would be designed as soon as possible.	B. Moderate to substantial.
3. Personnel incentives, management, and supervision.	A. No change in current incentives, management and supervision.	A. Training programs to upgrade skill levels of existing physicians and nurses, elevate status of nurses, and increase length of nurses' working life expectancy.	A. Initiate as soon as need is determined and complete as soon as possible, for medium term duration.	A. Minimal to moderate.
	B. GOE initiates policies to increase personnel incentives and improve management and administration of system, including licensure, relicensure, and competency-based certification programs.	B. All of the above plus programs to assist in developing and implementing licensure, relicensure and competency based recertification programs. Also programs designed to develop schemes of service to encourage careers in medical administration and management.	B. Initiate as soon as programs are designed and approved and initiate medium to long-range programs.	B. Moderate to substantial.

4. Low quality of training and service.	A. No change in rates of physician training or other efforts to upgrade medical education.	A. No programs for training new health professionals beyond already funded programs.	A. Length of existing funded Suez University project.	A. As approved
	B. GDE policies initiated to restrict growth in medical enrollments and to upgrade medical education.	B. Programs to upgrade medical education and to support training of new health personnel.	B. Build on Suez University program, make appropriate modifications, and develop similar programs on behalf of nurses and other health personnel as soon as possible. Programs would be medium to long term.	Substantial.
	C. Adopt policies of bonding physicians in government service for longer periods, & prohibiting private practice and emigration abroad until government receives a positive return on cost of education, plus continuing education and competency based certification.	C. Assistance in developing continuing education skill-building and competency-based certification programs.		C. Moderate.
	D. Adoption of continuing education and competency-based certification policies.	D. Assistance in developing continuing education and competency-based certification programs.	D. Initiate design of medium term continuing education and competency based certification programs as soon as possible.	D. Minimal.
5: Relationships with private sector.	A. No change.	A. No program initiatives.	A. Zero.	A. No funding.
	B. Initiation of policies to restrict private practice on part of government physicians and otherwise to regulate private practice activities (including increasing the efficiency of foreign exchange acquisition).	B. Programs to support development of regulatory agencies, staff of High Council on Medical Insurance.	B. Design technical assistance program as soon as possible.	B. As much as needed to development in this area.
6. Health sector financing arrangements and assuring access to services on the part of the poor.	A. No policy in this area is not a GDE option, as it is inconsistent with predominant goal of equity.	A. -	A. -	A. -
	B. Policies to rationalize educational policies and government relationships with private sector, 3.B & 5.B above, and to encourage GHIO, private sector, and other public sector health service delivery units to grow in balanced fashion, while targeting government delivery system toward rural and urban poor populations.	B. If in conjunction with policy options 3.B and 5.B above, then 3.B & 5.B assistance, plus selective support of government health services delivery system expansion targeted at poor rural and urban populations, programs of technical assistance (actuarial sciences and economics) to GHIO and the High Institute of Public Health.	B. As soon as 6.B is designed and selective programs and projects can be designed, with medium to long-range impact.	B. Substantial.

C. ODE adopts policies of sliding fee schedules, lump-sum, licensure or user taxes and/or establishes programs for identifying and serving medically indigent classes.	C. Programs to assist establishment of fee schedules, new tax programs, and medical indigent programs, possibly administered at local government levels.	C. Initiate medium term programs as soon as possible.	C. Moderate.
D. Policy to promote growth in competing private health insurance schemes.	D. The technical assistance to develop private insurance schemes.	D. As soon as policy is formulated, initiate start-up short-run program only.	D. Minimal.

7. Family planning and other illness prevention and health promotion activities.	A. No new policy.	A. Continue existing programs.	A. As programmed.	A. Existing levels.
	B. Initiate policy to incorporate family planning and other preventive services to GHIO service activities and to introduce family planning into school health programs.	B. Technical assistance and general program assistance to GHIO and to MOH, training of additional health professionals, and supply and resupply of contraceptives to GHIO.	B. As soon as policies are formulated and project designs can be completed. Projects would be of medium to long-term duration.	B. Substantial increases above existing levels of support.

<u>Issue</u>	<u>ODE Policy Options</u>	<u>Type of USAID Assistance</u>	<u>Timing and Duration</u>	<u>Funding Levels</u>
II. Improvements in Other Sectors Related to Health.				
1. Nutrition strategy and policy.	A. ODE development of a comprehensive unified nutrition strategy and policy.	A. Technical assistance for policy development and continued food commodity transfers in this area, training of health professionals in nutrition surveillance and monitoring, and development of programs to assist more precise targeting to populations in greatest need.	A. As soon as policy is formulated. Projects would necessarily be of medium term duration only.	A. Moderate.
2. Environmental health.	A. No changes in levels of salary; no assessment of health implications of new water and sewerage projects; no gradual changes in rates charged for services.	A. No programs to be newly initiated.	A. Length of current projects.	A. Existing levels.
	B. ODE policy initiatives to increase personnel incentives, gradually raise charges for services, and adopt and implement policy of assessing health implications of new water and sewerage projects.	B. New programs of training of maintenance personnel, providing replacement parts, and otherwise upgrading systems; technical assistance in developing appropriate pricing and retail distribution procedures; management development.	B. As soon as policies are formulated and in place and programs are designed. Program support would be of medium to long term duration.	B. Substantial.

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