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National Health Accounts

Expenditure for Reproductive Health Services in Egypt and Sri Lanka

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Abstract

Using a national health accounts framework, comprehensive estimates of expenditures for reproductive health services and family planning in Egypt and Sri Lanka are derived. These cost estimates include the full costs of overheads and non-service delivery costs. Reproductive health service expenditures are defined as expenditures for family planning, prenatal and postnatal care, childbirth, infant care, and obstetric and gynecological services. In nominal terms, total expenditures were found to be $5.29 per capita in Egypt in 1994/95, and $3.10 in Sri Lanka in 1997. These expenditures are comparable, once standardized for differences in income levels, birth rates and women who are married, with expenditures in Sri Lanka modestly less in per capita terms ($4.94 versus $5.29). The relative contribution of public and private sources of funding was quite similar in both countries. Public sources (which includes donor assistance) accounted for two-thirds of funding in both. Item-wise, family planning and MCH services accounted for the smallest share of costs (less than 22%). The largest cost components were childbirth and general obstetric and gynecological care, which accounted for a quarter and a third of total expenditures each. General gynecological care in both countries is predominantly privately financed, indicating a need to rethink policies to fully take into account private sector contributions. The similarity in spending levels in the two countries contrasts with the difference in levels of utilization and access to services. Sri Lanka achieves almost universal access to key services with less expenditures. This suggests that efficiency improvements may offer more potential for expanding services than new resource mobilization.

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Acronyms

BTS	Budget Tracking System
CAPMAS	Central Agency for Public Mobilization and Statistics
CCO	Curative Care Organization
CDC	Cairo Demographic Center
CFS	Central Bank Consumer Finance Survey 1996/97
DDM	Data for Decision Making Project, Harvard School of Public Health
DOP	Department of Planning, Ministry of Health
EFPA	Egyptian Family Planning Association
ENHA	Egypt National Health Accounts
FHB	Family Health Bureau
FP	Family Planning
FPASL	Family Planning Association of Sri Lanka
FY	Fiscal Year
GDP	Gross Domestic Product
GNP	Gross National Product
GOE	Government of Egypt
HIO	Health Insurance Organization
ICPD-5	International Conference on Population and Development
IPS	Institute of Policy Studies
LE	Egyptian Pound
MCH	Maternal and Child Health
MOE	Ministry of Education
MOF	Ministry of Finance
MOH	Ministry of Health
MOOH	Medical Officer of Health unit
MOSA	Ministry of Social Affairs
NHA	National Health Accounts
EHHEUS [-95]	National Household Health Utilization and Expenditure Survey 1994-95
NCMC	National Child and Motherhood Council
NODCAR	National Drug Control and Regulation Agency
NPC	National Population Council
OECD	Organization for Economic Cooperation and Development
Rs.	Sri Lankan Rupees
RH	Reproductive Health
SLHHS	Sri Lanka Household Health Survey 1991
SLNHA	Sri Lanka National Health Accounts
SMIP	Student Medical Insurance Program
SIO	Social Insurance Organization
THIO	Teaching Hospitals and Institutes Organization
USAID	U.S. Agency for International Development
na	Not available/not applicable

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1. Introduction

The Cairo Population Conference (ICPD-5) and USAID's own Strategic Objectives set an ambitious agenda for Family Planning (FP) and Reproductive Health (RH) services to be expanded, quality improved and user needs better met. This requires substantial resource commitments and more efficient use of funds, but policymakers know little about sources, costs and patterns of existing resource flows of national expenditures on FP/RH services in different countries, and what options exist for mobilizing private resources and improving system efficiency. Without knowing what resources already are being used, and what their limitations are, it would be difficult to develop sustainable policies for expanding access to reproductive health services.[1] As it is, mobilizing international funding to support the post-Cairo agenda has had limited success. Given the constraints that do exist to increasing international funding, the priority must be to mobilize and effectively use national resources instead. This requires much better information on the funding situations in developing countries.

Zeitlin, Govindaraj and Chen (1994) attempted to review the available data on funding for reproductive health services in developing countries. They found data on international funding for population services did exist, but that information on domestic funding of reproductive health to be elusive, and certainly non-existent in an internationally comparable manner. They noted as problems the almost complete lack of information on private expenditures for reproductive health services, the lack of disaggregation of national government budgets in a manner permitting suitable analysis, and the lack of clear, unambiguous procedures for collecting data on these expenditures. With integrated FP/RH services, methodological difficulties and inconsistencies have prevented meaningful analysis of true economic costs and differences between countries and strategies (Janowitz and Bratt, 1992; Janowitz, 1993; Aitken and Reichenbach, 1994). Paucity of data prevents meaningful estimates of the resource requirements for FP/RH, both at national and global levels. Little is known about cross-country variations in unit costs of provision in public and private sectors, and factors explaining differences in efficiency, and thus the importance of technical inefficiencies in the delivery of services as an issue for policymakers.

Methodological issues have been of continuing concern, as they do not permit comparison between countries or even across studies of expenditure estimates. Differences and lack of clarity in defining what is being measured as well as differences in measuring costs plague the limited studies that have been done. Even where studies have been done with some rigor, they frequently omit private expenditures when they are not client payments for publicly subsidized services. This omission is of concern as one would expect that in most developing countries, where private expenditures form a significant element in the funding of all health services, that they should provide a substantial part of current and potential future funding.
This study attempts for the first time to measure the full costs of providing reproductive health services in two countries using a standardized methodology, which should be comparable with existing information frameworks being developed or existing in many developing

[1] For sake of brevity, the term *reproductive health* will be used in this report to refer to reproductive health and family planning. Where it does not refer to family planning, should be clear from the context.

countries. Specifically, the recent expansion of interest in developing national health accounts in many countries affords an opportunity to further expand this approach, as described in this report, by inclusion of reproductive health concerns into evolving health accounting frameworks. National health accounts attempt to measure in a consistent and internationally comparable all health expenditures in a given country. They can be, and increasingly are, extended by providing a classification of all expenditures by function of use. This offers a basis for producing consistent and comparable estimates of expenditures on reproductive health. This requires that functional classification systems be suitable adapted to include this area of concern, and that methods exist to deliver the supporting estimates.

This study specifically uses the national health accounting framework to develop estimates of reproductive health expenditures in two different countries. These countries differ in the types of data available, and also in the situation of their national health accounting systems. The study thus necessarily adapts the same approach to the specifics of the data sources in each country, thus demonstrating that the national health accounting framework approach can be extended to diverse settings with sensible modifications and flexibility. In doing so, the study attempts to answer how much is being spent on reproductive health in each country, and by whom and for what, and to do so with estimates that are fully comparable.

The first part of the report provides an overview of the health systems, situation and policy framework of each country. The second part then describes the approach and methods used. The final part concludes with the results and a discussion of their implications.

2. Country situations

Egypt and Sri Lanka were both classified as low-income developing economies by the World Bank in 1996, although by 2000 both have graduated to lower-middle income status. In terms of income and income distribution the two countries resemble each other. Egypt's income level in both nominal US dollars and also adjusted for purchasing power differences is slightly higher than Sri Lanka's (Table 2.1). In health and population terms the countries the two differ considerably, with sharply different rates of improvement over time (Table 2.2). It is these apparent similarities and differences that prompted this study, and the question as to whether these differences reflect differences in resource availability.

Table 2.1: General Indicators for Egypt and Sri Lanka, 1996

	EGYPT	SRI LANKA
Socioeconomic		
Population (millions)	59	18
Area ('000 km2)	1,001	66
GDP per capita (US$)	1,147	773
GDP per capita (PPP$)	2,873	2,328
Gini coefficient	32.0	30.1
Percent rural population	55	78
Rate of secondary school enrollment of girls	69	78
Rate of illiteracy of women	61	13
Population		
Total fertility rate	3.3	2.0
Crude birth rate	26	19
Crude death rate	8	6
Women of reproductive age (15–49 years)	25.1%	26.6%
Health status		
Life expectancy at birth in years (male)	64	71
Life expectancy at birth in years (female)	67	75
Infant mortality rate	53	15
Maternal mortality rate	170	30
Percent of married couples using contraception	45.5	56.9
Assisted births (% of total)	98.6	99.9
Antenatal coverage (% of mothers)	67.1	99.6
Births in medical institutions (% of total)	90.7	93.8

Sources: World Bank, *World Development Report 1995, 1996*; De Silva (1997); Egypt DHS 1995 report, Sri Lanka 1993 DHS report, IPS staff estimates.

Table 2.2: Health and demographic trends, Egypt and Sri Lanka 1980 – 1997

	EGYPT	SRI LANKA
Infant mortality rate		
1980	69	34
1997	53	15
% change (1980-97)	-23%	-56
Total fertility rate		
1980	5.3	3.6
1997	3.3	2.0
% change (1980-97)	-38%	-44%
Family planning program effort		
1982	62	40
1994	69	59
% change (1980-97)	11%	48%

Notes: Program effort scores as estimated by Ross and Maudlin, 1996
Sources: World Bank, *World Development Report 1995, 1996*; De Silva (1997); Egypt DHS 1995 report, Sri Lanka 1993 DHS report, IPS staff estimates.

HEALTH SYSTEMS

EGYPT

Egypt's health care system is highly pluralistic, with several public health programs and considerable private sector provision. A notable feature of the system is the comparatively large number of medical graduates working in all sectors. In 1995, approximately 25% of financing came from general revenue sources, 20% from social insurance financing, and 55% from private, mostly out-of-pocket household spending. Total health care spending was estimated to be equivalent to 3.7 % of GDP in 1994/95 (Rannan-Eliya and associates, 1998).[2]

Ministry of Health and Population

The major provider of care is the Ministry of Health and Population (MOHP), which runs a nationwide system of health services, ranging from outpatient clinics to large urban-based hospitals, and providing a mix of inpatient and outpatient care. Most services are funded on a decentralized basis, with most service facilities run by Egypt's 27 governorates, which are the major sub-national governmental authorities in Egypt. The governorates are funded through a decentralized health budget provided by the Ministry of Finance. MOH services are subsidized, and provided largely free to all citizens.

Service delivery structure

Health facilities are organized along different lines, which are geographic (rural and urban), structural (rural health units, rural hospitals, urban health centers, etc.), administrative (health

[2] Estimates are for GOE Fiscal Year, July 1, 1994 to June 30, 1995.

offices), functional (maternal and child health centers), or programmatic (immunization, family planning, etc.). The distribution of facilities and beds by category are given in Table 2.3. There is no formal referral system in MOH.

Table 2.3: Distribution of MOHP Beds and Institutions in MOHP, Egypt 1995

Category	Number of institutions	Number of beds	Percentage of beds
General and district hospitals	214	32,591	64%
Endemic disease hospitals	8	81	0%
Fever hospitals	86	7,323	14%
Maternal and Child Hospitals	4	390	1%
Urban health centers	167	0	--
MCH centers	244	334	1%
Health offices	354	0	-
Rural hospitals	161	4,021	8%
Rural health centers	416	5,976	12%
Rural health units	2,209	0	0%
TOTAL	**3,863**	**50,716**	**100%**

General and district hospitals

These are the highest-level MOHP facilities, and typically have 200-500 beds. Administered by the governorates, they provide both outpatient and inpatient services in urban and rural areas. They offer a range of basic specialties including general medicine, surgery, obstetrics and gynecology and pediatrics.

Endemic disease hospitals

These provide inpatient services and treatment of endemic diseases.

Fever hospitals

These provide both inpatient and outpatient services, and treat infectious diseases. They typically have 100-150 beds.

Maternal and child health hospitals

There are only four of these with average of 100 beds each. They provide antenatal care, labor and delivery, postnatal and early childhood care services.

Urban health centers (UHC)

These provide only outpatient services. They are mandated to provide integrated HO, MCH and outpatient services at the general practitioner level.

Maternal and child health centers (MCH)

These exist in urban areas, and provide antenatal care, labor and delivery, postnatal and early childhood care services. A few have a small number of beds. There are plans to improve their services by providing delivery rooms.

Health offices (HO)

Located in urban areas, these are mandated to provide birth and death registration, food inspection and control, and other preventive services.

Rural hospitals (RH)

These are small hospitals, which mainly provide outpatient care of a basic nature, including surgery and radiology. They typically have 30-60 beds, but their occupancy rate is very low (<5%).

Rural health centers (RHC) and Rural health units (RHU)

Located in rural areas, these provide outpatient services, even though a few have beds. They provide essentially basic medical care. RHCs are generally larger more sophisticated facilities and are staffed by medical officers.

MOH also operates a number of centers, which provide specialized public health services, such as bilharzia control, malaria control, etc. These include several family planning offices that focus on family planning provision.

In addition to its own facilities, MOH operates two programs to fund the medical expenses of patients whose needs cannot be met by available MOH services. One program will finance the receipt of additional care either from MOH facilities or from other public or private medical providers. The second program will fund the expenses of patients who need to travel outside the country to receive treatment. These program benefits, which are not provided to all patients, but only to a few thousand who are selected on the basis of application, cost approximately one tenth of the total MOH budget.

Staffing

Egypt has a large medical manpower base. MOH employed approximately 39,900 doctors in 1995, who account for half the working doctors in the country. 40 per cent of its doctors are assigned to work in PHC and preventive health services. MOH employed 65,000 nurses in 1995, giving a physician/nurse ratio of 1.6.

Health Insurance Organization (HIO)

The second major public financier and provider of care is the Health Insurance Organization (HIO). This is a compulsory social insurance agency, which levies mandatory payroll contributions on all formal sector workers and their employers, and public pensioners. HIO

was established in 1964 with the intention of eventually covering the whole population. However, as with similar programs in other low-income to lower-middle income countries, universal coverage has remained elusive, and coverage has remained restricted to the small urban, formal sector. From 1965 to 1995, the number of beneficiaries increased from 140,000 to 5,851,549 (9.7% of the national population). HIO is divided into eight regional branches.

Premiums range from two to five per cent of assessed salaries. Widows are covered under a separate program, but do not make premium payments. Small co-payments are required of some workers, but these are quite small in relation to benefits provided. Coverage applies only to the enrolled worker, and does not extend to dependents. Although, HIO operates as an insurance agency, in practice its annual expenditures are greater than its income from premiums. Consequently, it receives ad hoc subsidies from the Egyptian government in order for it to pay unpaid creditors, and occasionally for capital expenditures. HIO can thus be regarded as a funding mechanism combining features of both social insurance as well as general revenue financing. During the 1994/95 fiscal year, HIO expenditures in its main workers and pensioner and widows programs amounted to LE 635 millions, but total revenues from premium payments were only LE 408 millions. The deficit was not funded in that year, but was carried forwarded to the future accounting periods, when it would typically be paid off by general revenue contributions.

A separate HIO program introduced in 1993, known as the Student Medical Insurance Program (SMIP), provides insurance coverage to over 7 million students. SMIP is financed by a mix of individual premiums paid by enrolled students (LE 4 per child), a special earmarked cigarette tax of 10 piastres per packet, and a contribution from general revenues of LE 4 per child. Only registered students are eligible to enroll. Children who are not going to school, typically those from the poorest families, are not eligible. SMIP combines elements of social insurance and general revenue financing, but it can be characterized as general revenue funded program with a modest insurance element. During the 1994/95 fiscal year, SMIP's funding was derived 76% from general revenue contributions by GOE, and only 14% from premiums by students. Taking both SMIP and the general programs together, HIO in 1994/95 was more than 50% funded from government revenues other than the mandatory payroll taxes levied in the form of premiums.

Service delivery structure

HIO has traditionally run its own service delivery system. These consisted of 31 hospitals with over 6,000 beds in 1995. In addition, it also operates a large number of outpatient clinic services for its beneficiaries, in the form of General Practitioner and Specialist clinics. A referral system does operate between GP and specialist clinics, but this is not strictly enforced. Other than a small family planning project, HIO does not involve itself in the provision of public health services that do not have personal service component.

Other public sector providers

Public funding in the form of general revenues is also used to finance several other public providers of health services. The Health Ministry runs a small number of specialized national teaching hospitals, which provide largely free care. The Education Ministry through its budget

supports twenty university hospitals, with over 15,000 beds. These provide a higher quality of care than MOH facilities, and receive a higher level of government subsidies per unit of service. All university hospitals offer specialized obstetric and gynecological medical services. The university hospitals are linked to the universities, but they are open to all patients. They charge user fees from patients, although they remain largely subsidized. Finally, other ministries, including Transport and the Armed Forces, run their own facilities for staff and their dependents, and in some cases these facilities are also available for use by the general public.

Private sector providers

While public provision dominates inpatient care services, Egyptians make considerable use of private ambulatory services. These are provided mostly in private clinics, but include pharmacies and non-governmental clinic services. Private clinics are staffed for the most part by government doctors, who are allowed to work privately in their off-duty hours. Approximately, 11% of these doctors are full-time private sector practitioners. There an estimated 35 – 50,000 such clinics, located in all areas of Egypt, although the numbers are greater in urban lower Egypt (Berman et al., 1997). There is a small private hospital sector, which is concentrated in the Cairo-Giza metropolitan area.

Egyptian doctors are not legally permitted to dispense drugs, and this is restriction is generally adhered to. Households make substantial use of pharmacies for obtaining drugs, and in some cases treatment advice. Out-of-pocket spending supplemented by a very small amount of private insurance primarily funds these private services. Many Egyptians also utilize the services of other non-qualified or traditional health providers. In particular, traditional birth attendants are used to assist in approximately half of all births.

SRI LANKA

The health system in Sri Lanka consists of public and private health care services. Public services are the responsibility of the central Ministry of Health and eight Provincial Councils. Major municipalities provide services of a limited nature. The government funds approximately half of national health expenditures, and government services use an equivalent amount. There is very little public funding of private provision, or private funding of public services. Public funding is concentrated on the provision of hospital services, specifically inpatient care, while private funding is mostly for outpatient services and purchases of medicines in the private sector. There is only a limited amount of private insurance funding. Private health care services largely consist of ambulatory services provided by full-time private practitioners, government medical staff working privately and pharmacies. There is a small, but growing, private hospital sector. The tea plantation have historically run their own facilities for their employees, but in the late 1990s a decision was made to integrate these into the MOH system.

Ministry of Health

The health ministry is responsible for almost all public service provision. It runs an extensive network of facilities throughout the island, which are officially organized into a multi-tiered referral system of facilities ranging from maternity homes and dispensaries upwards to teaching hospitals and other national hospitals. The referral system in practice is not enforced. From the 1850s to the 1980s, administration was centralized in the ministry of health. Following the Thirteenth Amendment to the Sri Lankan constitution, which was forced on Sri Lanka by Indian military pressure in 1987 (Hsiao et al, 2000), responsibility for lower-level health services was devolved to eight Provincial Councils, each of which established its own Provincial Health Ministry. The Provincial Councils are responsible for management of provincial health facilities and programs, while the central ministry is responsible for management of national facilities, medical education, formulation of health policy and bulk purchase of drugs and medical supplies.

Service delivery structure

The central MOH has overall responsibility for national health policy. It manages and operates teaching and specialized hospitals, recruits and allocates public sector doctors and other key staff, and operates key vertical programs for disease control (including malaria, filariasis, tuberculosis, rabies, STD/AIDS, etc.). It also runs several specialized units, which provide technical support to both central and provincial health services, such as the National Blood Transfusion Service, Health Education Unit, Family Health Bureau, Medical Supplies Division, etc. The central ministry also administers several national research and training institutes, such as the Medical Research Institute (MRI) and the National Institute of Health Sciences (NIHS). Central units such as the Family Health Bureau administer national programs, such as the country's family planning program, the Expanded Program in Immunization (EPI) and public sector antenatal/postnatal care services.

Provincial Health Services

The provincial health ministries are responsible for the operation of health services in their respective areas, including secondary and primary level facilities, and implementing community health programs with guidance from central units. These include the key family planning and MCH services. Provincial health facilities extend from the lowest level central dispensaries and maternity homes to Provincial Hospitals.

In recent years, several provincial facilities have been transferred to central MOH control by being officially reclassified through administrative procedures as national hospitals or teaching hospitals, all of which come under the center's constitutional purview. In many cases, the justification for this has been minimal, although provinces have been in general happy to transfer facilities to the center as this removes them of a financial obligation. Such moves have typically been supported by the staff of the facilities concerned.

Other than national health policy, which the constitution assigns to the central government, provincial councils have considerable discretion in setting health policy within their jurisdictions. However, in common with other areas of activity, provincial councils have only ever exercised a small part of their powers, which allow them to set different policies within

their areas. This reflects both lack of interest in policy at the level of provincial legislators, and the lack of technical capacity to develop independent provincial policies.

Public sector health facilities are organized into several categories, according to the level of sophistication of medical services offered and general size. The Sri Lankan hospital system has developed over many decades by gradual expansion of existing facilities, so the distinctions between official categories are often blurred. All hospitals have outpatient clinics, where hundreds of patients may be treated daily. The distribution of facilities and beds by category are given in Table 2.4.

Table 2.4: Distribution of MOH Beds and Institutions, Sri Lanka 1997

Category	Number of institutions	Number of beds	Percentage of beds
Teaching hospitals	15	13,815	26%
Provincial hospitals	5	4,281	8%
Base hospitals	31	8,375	16%
District hospitals	149	13,162	25%
Peripheral units	104	4,745	9%
Rural hospitals	133	3,481	7%
Maternity homes and central dispensaries	67	672	1%
Other hospitals	17	4,432	8%
Central dispensaries	387	0	0%
MOOH units	238	0	0%
TOTAL	908	52,963	100%

Source: MOH Annual Health Bulletin 1997.

Teaching hospitals

These are the highest-level referral facilities, where medical students are trained. Legally, they are automatically the responsibility of the central government. They typically have over 1,000 beds, and provide both inpatient and outpatient services. They offer the largest range of specialty services, such as cardiothoracic surgery and neurology, and generally have well-equipped accident and emergency services and intensive care units. In practice, at least 50% of their activities will involve provision of basic medical services, since as with all hospitals there is no restriction on access to their outpatient departments. There are some single specialty teaching hospitals, including two maternity hospitals and the Eye Hospital.

Provincial hospitals

Located in the major urban centers of provinces, these typically have 600-1,000 beds. The provincial health ministries administer them. They are referral facilities, and offer several specialties, such as general medicine, surgery, obstetrics and gynecology, pediatrics, dental services, etc.

Base hospitals

Situated in large towns, they typically range in size from 200 to 600 beds. They function as the first line referral facilities, although official district hospitals are supposed officially to perform this function. The range of specialties offered varies considerably, with many providing only basic specialties, such as medicine, surgery and obstetrics/gynecology. Base hospitals are equipped with laboratory facilities.

District hospitals

Wide variation exists in this category. Bed sizes are typically 50-200. They differ from base hospitals in that they are generally run by non-specialist medical officers and AMPs, but are officially considered the lowest level referral facilities, although in practice most patients use them as the first point of contact for care.

Peripheral Units

These are small hospitals with typically 20-80 beds. Generally run by a medical officer in-charge, they have a maternity ward and central dispensary, and offer only basic medical care.

Rural hospitals

These provide inpatient and outpatient care, but lack a maternity ward. Usually administered by a RMP/AMP, they generally have 20-40 beds.

Central dispensaries and maternity homes

These provide limited inpatient and outpatient care, and are staffed by one RMP/AMP only and one or two nurses. While they provided the backbone of the government health system in the 1930s, they are now grossly under-utilized, with bed occupancy rates typically less than 10%.

Maternity homes

Maternity homes are run by midwives, and offer inpatient maternity care. Utilization is very low, with bed occupancy rates less than 15%. However, few of these facilities remain, and they are generally used also by Medical Officers of Health to conduct maternal and child health clinics.

Central dispensaries

The smallest outpatient units are run by single RMP/AMPs. They provide treatments minor illnesses and injuries only, such as dressing of minor wounds, and may also host special clinics such as those for family planning.

The bulk of patient services are provided at middle and higher level facilities; occupancy rates at maternity homes and central dispensaries are very low, and falling (Table 2.5).

Table 2.5: Relative share of utilization by MOH facilities, Sri Lanka 1997

Facility type	Share of beds (%)	Share of admissions (%)	Bed occupancy rate (%)	Share of outpatient visits (%)
Teaching hospitals	26%	28	93	11
Provincial hospitals	8%	9	102	3
Base hospitals	16%	19	82	14
District hospitals	25%	25	50	28
Peripheral units	9%	11	59	14
Rural hospitals	7%	5	41	11
Maternity homes and central dispensaries	1%	0	4	14
Total number	**1,071**	**3,453,554**	**74**	**39,503,090**

Source: MOH Annual Health Bulletin 1997.

Medical officer of Health units (MOOH)

Family Health Bureau (FHB) of MOH is responsible for planning, coordination and evaluation of MCH and family planning services. It conducts training and coordinates donor inputs and distribution of key inputs. Work is actually carried out by MOH staff, mostly in the MOOH and MCH units. MOOH units are outpatient facilities, headed by a medical officer, and consisting of a team of nurses, midwives and other staff. Specialist staff from MOH hospitals will typically visit to provide specialist clinic services at regular intervals. MOOH staff and community midwives are responsible for visiting pregnant mothers and providing post-natal follow-up of all mothers in the community. MOH is responsible for the bulk of contraceptive services in the country, particularly in the case of clinical methods, such as tubectomies and vasectomies. A social marketing campaign distributes condoms and oral contraceptive pills through the retail sector and NGOs.

Private sector

Private health care services are largely ambulatory. Approximately, 500-800 full-time private general practitioners provide outpatient care from private clinics on a fee-for-service basis. The major portion, however, is delivered by government doctors in their private practice, who work from home, clinics or private hospitals.[3] There are approximately 10,000 traditional practitioners, mostly ayurvedic doctors, and less than100 homeopathic practitioners, but they see vastly fewer patients in total than the western qualified doctors. Traditional birth attendants are not found in Sri Lanka any longer, with virtually all births occurring under the supervision of doctors or trained midwives.

Many private GPs dispense their own medicines, but a large number of private pharmacies also exist and account for a significant share of out-of-pocket spending. According to IMS, a

[3] There are no data on the proportion of the private sector caseload cared for by government doctors in their private practice, although it may be in the range of 50-70%. Reliable estimates will be available in mid-2000 with the completion of the IPS HPP Sri Lanka Private Clinic Survey.

private pharmaceutical market research firm, the percentage of private GPs who dispense is gradually declining over time, as this is not so profitable for the doctors concerned. There approximately 100 private hospitals in the country, mostly concentrated in the more urbanized and prosperous Western Province.

HEALTH SITUATION

EGYPT

Health status

Egypt has seen considerable reductions in mortality rates in recent decades, and associated improvements in general health conditions. Mortality levels were high prior to the Second World War, and dropped substantially after that. The crude death rate dropped from 30 to 17 per thousand from the 1940s to 1960. Most of this reduction was due to a sharp decline in early childhood deaths. Continued improvements have occurred since then, and the 1990s saw an improved rate of reduction in mortality indicators. This has been driven by the success of efforts to reduce EPI diseases and diarrhea mortality through use of ORS. These reductions however hide continuing two-fold disparities between population subgroups, with rural and Upper Egypt having much worse indicators than the rest of the country. Maternal mortality rates continue to be high, with some estimates placing this as high as 170-200 per 100,000 live births. Table 2.6 summarizes health and demographic trends.

Table 2.6: Long-term trends in health and demographic indicators, Egypt 1960 - 1995

Indicator	1940s	1960	1980	1990	1995
Birth rate		42	39	31	28
Death rate	30	13	9	7	
Infant mortality rate	200	120	69	62	~60
Maternal mortality rate				180	170
Life expectancy at birth (years)					
Female		57	64	66.4	
Male		54	61	62.9	
Illiteracy rate		61	53	49	
Total fertility rate		5.6	5.3	4.1	3.6
Total population (millions)	18	26.0	42.1	55.6	58.9
GNP per capita (1995 S$)		337	620	972	1009

Source: World Bank World Development Indicators, DHS reports, Berman et al. (1997).

Population

Fertility in Egypt has declined steadily from over 5 births per woman in the early 1980s to 3.6 births at the time of the EDHS-95. Differentials in fertility are marked, with urban fertility rates being 3 compared with 4.2 in rural areas. Parallel with mortality differentials, fertility is higher in Upper Egypt than in Lower Egypt. Part of the cause for declining fertility has been increasing age at marriage, the median of which has increased 2 years in the past two decades to 20.2 for young women. Family planning knowledge is almost universal in Egypt, with television and radio messages having significant impact. Family planning has broad social support. However, there is a significant number of women who continue to have unmet need for contraception. Contraceptive use is higher in urban areas than rural.

Maternity care

Levels of maternity care are low, despite the wide availability of free government services. This reflects low quality of MOHP services, as well as a relatively low level of demand for such services. The percentage of mothers receiving regular antenatal care is only 28%. About 43% of mothers who gave birth in the early 1990s received two doses of tetanus toxoid according to DHS data. The majority of women give birth at home without the assistance of trained medical personnel, and only one third of deliveries took place in a health facility (EDHS-95).

SRI LANKA

Health status

Sri Lanka is a country of both low mortality and low fertility rates. Variations in health status between different subgroups of the population are not great, with minimal differences between urban and rural populations. The only significant disparities are in the population of plantation estate workers, where mortality rates are generally double those of the rest of the population, although they have been declining rapidly in recent years. Even poor rural households with little formal education have mortality and fertility levels, which are comparable to higher-middle income developing countries. By 1997, despite an income level of only US$800 per capita, Sri Lanka had reduced its infant mortality rate to 15, its child mortality rate to 18, its total fertility rate to below replacement level at 2.0, and raised its life expectancy to 75 and 71 years at birth for women and men respectively (Table 2.7).

These low mortality outcomes are the result of rapid and continuous improvements over half a century (Meegama, 1986). During the early part of the twentieth century there was some decline in the average mortality rate, but this fluctuated greatly from year to year. After a rise during the Second World War, the IMR dropped rapidly during 1946 to 1953, falling from 141 to 71 per 1000 live births. This was as much the consequence of improved public medical and malaria control activities, as it was of improved food supplies following the end

of war. Afterwards the IMR continued to drop, before beginning to plateau in the mid-1970s. The decline was marked by a reduction within the island of inter-district and interethnic disparities in mortality. The only exception was stagnation in the health status of the plantation sector population until the late 1970s, when these disparities also started to diminish.

There has been some academic debate about whether Sri Lanka's achievements were merely the consequence of a very rapid initial decline, and how good its subsequent performance was (Aturupane, Glewwe, and Isenman, 1994). However, from the late 1970s onwards, the rate of decline in IMR has accelerated. This is itself exceptional, as for much of this period Sri Lanka experienced almost continual internal conflict and declining numbers of physicians. The acceleration in the reduction of the IMR can also be contrasted with the experience with the other developing economy, which liberalized its economy at this time - China.

Table 2.7 Long-term trends in health and social indicators, Sri Lanka 1930 - 1997

Indicator	1940s	1960	1980	1990	1995
Birth rate	39	40	28	21	19
Death rate	25	13	6	6	6
Infant mortality rate	175	82	34	19	17
Maternal mortality rate	21	6	2	1	<1
Life expectancy at birth (years)					
Female	39	55	70	74	75
Male	41	56	66	69	71
Illiteracy rate		31	15	11	8
Total fertility rate		5.3	3.6	3.1	2.0
Total population (millions)	5.3	9.8	14.9	16.9	18.1
Population growth rate (%)	1.4	2.8	1.8	1.0	1.4
GDP per capita (1990 US$)	180	278	450	595	711

Source: Official statistics and IPS estimates for 1997.

Population

Sri Lanka has experience rapid and sustained fertility decline since the 1960s, with only a brief slowing of tempo in the late 1970s and early 1980s. Fertility reached replacement level in the early 1990s, and is probably below 2.0 currently (Hsiao et al., 2000). Population growth is no longer a key policy problem, and population ageing is increasingly in importance in the policy agenda. Fertility decline has been driven by various factors, including high female education, declining child mortality and the expansion of the formal economy. A high and rising mean age at marriage has also played a significant part, with it being the highest in developing Asia at 25.5 years for females in 1993. Family planning knowledge is almost universal as in Egypt. Contraceptive prevalence is high at 66% of married women in 1993, but in contrast to Egypt, the levels are slightly higher in rural areas than in urban.

Maternity care

Use of prenatal services is almost universal in Sri Lanka, with 99.6% of mothers in SLDHS-93 having received some prenatal care. Delivery rarely takes place at home, with 95% of births taking place in medical institutions. This reflects a conscious policy of MOH which in the 1970s concluded that antenatal screening had reached its limits in reducing maternal mortality rates, since the bulk of maternal deaths were then occurring in low risk mothers. About 65% of mothers giving birth in the previous year reported receiving at least two tetanus toxoid immunizations according to SLDHS-93.

Population Policies

Detailed overviews of the national population policies of each country are provided in the annexes.

3. Methodology of study

STRATEGY

The primary objectives of this study were to: (i) develop a low-cost and reproducible methodology to obtain consistent and comparable estimates of the resource flows from all sources into reproductive health services (RH) in any country, and (ii) to obtain such estimates for the two countries. A reproducible method should be one that uses clearly defined and unambiguous definitions and procedures. Feasibility and appropriateness for international comparisons requires that data requirements be consistent with those data readily available in a wide range of countries, and also lending themselves to unbiased estimations.

Recent years have seen an increasing number of countries establishing national health accounting systems to monitor national health expenditures. National health accounts (NHA) are potentially the best platform for estimations of spending on specific functions for the following reasons:

1. NHA provides a framework, which includes both public and private spending flows, thus going beyond the public sector and donor focus of many studies.
2. NHA provides a basis for combining the different sources of data that are inevitable when analyzing both public and private expenditures, and doing so in a manner, which uses available information to reduce biases in comparisons of public and private spending, by providing a set of statistical constraints to estimations.
3. NHA practice is evolving to include functional breakdowns as one of the standard dimensions of a country's health account. This is of direct relevance to obtaining internationally comparable estimates of RH expenditures, as either RH services can be included as a specific function in their own right, or the functions that are estimated can be mapped readily to RH spending as defined by analysts in the field of RH.
4. Great efforts are being made internationally to standardize definitions and classifications in NHA work. These efforts and discussions involve WHO, World Bank, UN Statistical Office, Eurostat, OECD and other, and this offers an opportunity to include RH concerns in the standard statistical systems of many countries in the future.

The second reason requires some emphasis. A particular problem in comparing public and private expenditures in a country is that public expenditure data are derived typically from budgetary records, while private expenditure, which in developing countries comprises mostly household spending, must be estimated from sample surveys. The most important surveys are those of household expenditures, but other surveys of providers and producers may also be used. In most instances, these surveys are subject to significant non-sampling biases, which in the case of household surveys are due mostly to recall lapses by respondents. These biases can occur in both directions, and can thus bias the estimates of private spending upwards or downwards relative to the actual levels of public spending. NHA can deal with this problem by requiring the reconciliation of different sources of information in a consistent manner.
To extend NHA work to the analysis of such a specific activity as RH services necessitates two tasks:

1. That the functional classification of national health expenditures be operationally defined in a way that facilitates standardized measurement of RH expenditures.
2. That the data procedures be developed to deal with the complex reality of funding arrangements for RH services in most countries.

DEFINING REPRODUCTIVE HEALTH SERVICES

In order to make comparable estimates, the contents of what constitutes reproductive health services must be defined, and in a way that can be operationalized for measurement. The definition used in this study is based on the functional classification developed for Sri Lanka's NHA. The SLNHA Functional Classification system was developed to categorize all health spending by function as described below. It has the advantages that it is based on an existing functional classification system – the OECD System of Health Accounts classification system, which has been modified to fit the policy concerns and data availability of Sri Lanka.

The package of RH services is defined as consisting of:

- **Family planning services:** All programs, goods and services intended to assist women control their fertility, and all counseling, health education and information in support of the same.
- **Maternal health services:** All special programs designed to provide antenatal and postnatal care to mothers, including provision of dietary supplements for malnourished pregnant and lactating mothers, such as iron and vitamins.
- **Childbirth services:** Services to provide medical care for women delivering and giving birth.
- **Infant care:** All services intended to promote and improve the health and development of infants (defined as children aged less than 1 year), including well-baby health care, growth monitoring and growth promotion, and provision of dietary supplements such as micronutrients.
- **Other personal reproductive health services for women:** All other clinical services for women, which intend to enable women to safely exercise their reproductive health functions, to be operationalized as the equivalent of all obstetric and gynecological services.

For the purpose of this study, services intended to treat sexually transmitted diseases are not included in the above definition. They are RH-relevant services, but data limitations would have prevented any accurate estimate being made. This exclusion includes HIV/AIDS services. However, it should be noted that both Egypt and Sri Lanka have relatively low HIV/AIDS prevalence, and the costs of existing HIV/AIDS programs in each country are comparatively minor.

The rest of this section provides a detailed description of how each country estimate was prepared, and the data sources that were used. In each case, the country's NHA is used as the overall basis for estimating RH expenditures. The NHA measures the totality of health-related expenditures in a country. What needs to be done is to identify the various elements of total spending that are RH-related, and then to estimate their size. In the case of Egypt, the main task was to estimate for each expenditure item identified in the NHA the amounts that would be

for RH services. In the Sri Lankan study, the NHA did not already exist, and the essential task was how to structure its compilation so as to yield direct estimates of most elements in the RH package. Since the starting points and available data sources differ in the two countries the process followed in each was not identical, and so are described separately.

Throughout this study, costs or expenditures for reproductive health services are defined to consist of all expenditures associated with the delivery of those services. This includes all non-service delivery costs and a proportionate share of the costs of any supporting infrastructure including capital investment. So for example, when hospital staff deliver family planning services as part of their routine work, the family planning cost includes not only the additional commodities involves, but also a proportionate share of the staff costs and the overheads of the hospital. For the sake of simplicity, capital is not depreciated for most of the estimations, and only current expenditures on capital investment are considered.

METHODOLOGY FOR EGYPT STUDY

DATA SOURCES

National health accounts

The central element in both countries is a comprehensive national health account. In the case of Egypt, NHA had previously been compiled in two separate rounds, as described in Rannan-Eliya et al. (1998) and DOP (1995). The first round covered the 1989-93 period, and the second round covered the 1994/95 fiscal year.[4] The accounts were developed by a team based at the Department of Planning, MOH working in collaboration with Harvard University.

Egypt's NHA (ENHA) provide the most accurate available estimates of total health care spending in Egypt. ENHA is organized to show the structure and the flow of funds between financing agents and health care providers within the Egyptian health care system. Expenditures are presented in a matrix format, which ensures internal consistency, as all funds provided by funding agents must balance with the funds received by providers. As it was initially designed, ENHA does not attempt to provide a description of the functional use of health expenditures. It is not designed to and does not indicate expenditures in a specific area such as RH.

The NHA database which supports estimation of the ENHA includes multiple data sources, including the MOF audited accounts of government agencies and departments, and survey data from autonomous government health care providers, private insurance companies, employers and pharmaceutical companies. In the case of government sector organizations, the NHA typically includes only audited expenditures, while private expenditures are based on estimates derived from reconciling information from a combination of household and provider surveys and other secondary data. The 1994/95 ENHA database provides the following relevant data:

[4] The fiscal year of the Government of Egypt runs from July 1 to June 30.

1. MOF audited expenditure figures for all governorate health departments
2. MOF audited expenditure figures for MOH, HIO and teaching hospitals and several specialized health agencies

It should be noted that while the MOF data provides accurate figures for total actual government expenditures by specific agencies, detailed information on their use is not publicly available, and probably does not exist in any meaningful sense.

According to the ENHA, total national health expenditures in Egypt in 1994/95 were the equivalent of 3.7% of GDP. Tables 3.1 and 3.2 provide an overview of the flow of funds within Egypt's health care system as estimated in the ENHA. Table 3.1 shows the flow of funds from the ultimate sources of financing to financing intermediaries or final providers, when the funds do not pass through intermediaries. Table 3.2 shows the flow of funds from financing intermediaries to actual providers of health care services. As can be observed, ENHA identifies the following providers of health care in Egypt:

1. MOH facilities and services
2. Teaching hospitals
3. University hospitals
4. Other national health agencies
5. Other public medical providers (including Defense Ministry hospitals)
6. Health Insurance Organization
7. Private hospitals
8. Private clinics
9. Pharmacies
10. Traditional providers
11. Others

Budget tracking system

While budgetary data provide accurate figures for total spending by government agencies, they do not usually indicate how those funds were spent. Egypt is not unusual in this respect. In the Egyptian government's official accounting system, all expenditures are classified and recorded under four categories only: Chapter 1 (personnel salaries and benefits), Chapter 2 (non-salary recurrent expenditures, including drugs, supplies, utilities, etc.), Chapter 3 (capital purchases and investments), and Chapter 4 (debt repayments and other investment transfers). This system does not permit analysis of expenditures by end-use. To overcome this problem, the MOH with USAID-support began to develop in the 1990s a separate Budget Tracking System (BTS).

The BTS is a management information system designed to allow tracking of all health ministry expenditures at the governorate level according to function of use and type of facility (Cressman and Latif, 1995). BTS categorizes all governorate expenditures according to function. Five categories of function are used:

1. Curative health care

2. Preventive health care – defined as care intended to prevent people from having a condition they do not already have
3. Primary health care – defined as services to monitor pregnant women before or shortly after childbirth (prenatal, delivery, postnatal), and funds spent on treatment of children aged five years or less.
4. Family planning
5. Administrative

BTS identifies the following facility types to which it allocates expenditures:

1. Single-function units
    1. Administrative units
    2. Curative units - mostly hospitals, but also including dispensaries, blood banks, etc.
    3. Preventive units
    4. Primary/MCH units
    5. Family planning units

2. Multifunction units, which are units that expend significant resources in more than one medical function
    1. Rural health units
    2. Health group
    3. District or rural hospital
    4. Urban health center

The BTS was developed by carrying out detailed studies of actual expenditure patterns in a large number of representative facilities initially in three governorates: Alexandria, Beni Suef and Port Said, and later five others: Aswan, Dakhalia, Suez, North Sinai, South Sinai. The first sets of estimates were carried out in 1992/93 in the first three governorates. Data collection was then repeated in all governorates for fiscal year 1994/95 expenditures. Based on the observed variation in spending patterns between individual facilities of the same type, estimating procedures have been defined which allow annual estimation of spending breakdowns at the governorate level, based on returns from a statistically representative number of facilities.

Facility costing studies

Budgetary records and the BTS only allow estimation of expenditures by types of unit and programs. More detailed functional classifications in NHA and estimations of RH spending require further disaggregation of expenditures at the level of individual facilities. Salah and associates have carried out a number of detailed costing studies in a large sample of MOH facilities (Salah, Walsh and Nandakumar, 1997a, 1997b, 1997c). These studies are an accurate and reliable source of data on the allocation of expenditures in sampled facilities between capital and recurrent uses, between individual departments, and between inpatient and outpatient use. These studies have been carried out in the same three governorates as the pilot phase of the BTS (Alexandria, Beni Suef and Suez), but were considered representative of the distribution of costs within MOH facilities in other governorates.

Household survey data

The source of household data used in this analysis is the Egypt Household Health Utilization and Expenditure Survey carried out during 1994-95 (EHHEUS 95). This was a national survey designed by Harvard University and Cairo Demographic Center (CDC) in collaboration with the Ministry of Health to accurately measure utilization of health services during 1994-95. The survey took a self-weighting stratified sample of 21 governorates. Five governorates (Matrouh, Red Sea, North Sinai, South Sinai, New Valley) were not included in the sample on grounds of cost, but these account for only 1.2% of Egypt's total population. The survey covered 10,664 households, of which 9,931 were successfully interviewed giving a response rate of 93.1%. Of the 55,824 individuals living in the interviewed households, 50,984 were actually interviewed, giving a response rate of 94.7%. The overall response rate was thus 88.2%. The survey was conducted in two national rounds in order to control for seasonal variations. The first round was held during November 1994 to February 1995, and the second round was during July 1995 to August 1995. All adult members of the sampled households were administered the survey instrument separately, and children were interviewed using adult proxies. The survey instrument used different schedules for adults and children, and for inpatient and outpatient utilization.

Respondents were asked about utilization of ambulatory care services in the past two weeks, and inpatient services in the previous 12 months. The survey instrument differentiated between different types of public facilities (MOH urban hospitals, MOH rural hospitals, MOH MCH centers, MOH urban health centers, MOH rural health units), as well as between public and private providers.

Questions about outpatient utilization of health care providers were contingent on individuals reporting an illness episode during the previous two weeks, and for each illness episode respondents were allowed to name up to six different providers, in the order in which they were used. For each of these different provider episodes, respondents were asked about the associated expenditures. In the case of inpatient use, respondents were asked about any inpatient episodes during the previous 12 months, and they were allowed to list up to 4 successive episodes each, with details requested on the name and type of inpatient provider, associated expenses and length of stay. For each admission, the respondent was asked whether it was for the purpose of delivery.

ANALYSIS

In an earlier analysis, Rannan-Eliya et al. (1998) utilized the data sources described above to carry out a distributional analysis of health spending in Egypt. That study of the equity of health care financing estimated the distribution of all public and private expenditures for health across the population. It also implicitly carries out a limited disaggregation of expenditures by function in that it distinguishes between inpatient and outpatient spending. While this provides useful information on health services in general, it does not provide specific information on RH expenditures. This study adapts the methodology described in the earlier equity study to obtain estimates of RH spending, as well as updating the data sources used. In essence the EHHEUS is used to as the basis to distribute all health expenditures in the ENHA across population subgroups, having made adjustments to the ENHA to separate out RH-relevant expenditures. By linking expenditures to specific demographic subgroups and to

the data on reasons for treatment given in the EHHEUS, it is then possible to derive estimates of RH-specific expenditures.

The NHA provides the overall framework and constraints within which allocations are determined. This implies the following principles:

1. All expenditures calculated must sum to the corresponding totals in the rows and columns of the NHA matrices.
2. The total of public subsidy expenditures and private expenditures must equal total national health expenditures as given in the NHA.
3. All expenditures must be distributed; if no information is available to do so, then expenditures should be distributed conservatively, i.e., equally across all individuals who are identified beneficiaries.

To ensure complete compatibility with the NHA estimates, the following procedure was employed, treating public subsidy expenditures separately to private expenditures. In doing so, the study explicitly ignores external assistance from foreign donors as a separate source of financing in the health care system. Estimated foreign donor support is aggregated with the relevant public funding for each type of organization. The following section describes in detail how the each item of expenditure was treated in the analysis.

Public expenditures

All national totals for particular program subsidies were derived from the relevant cells of the 1994/95 NHA matrix (Table 3.2). Examples include the total expenditure of MOH Headquarters and of the various governorates, or the expenditures of each regional branch of HIO. For the most part this process only identifies a set of general expenditure totals, all of which contain some RH-related expenditures. For example, the expenditures of MOH are used to provide a variety of RH services, some through specialized facilities such as Family Planning Offices, and others as part of general services delivered by facilities, such as hospitals. In the case of family planning services, information collected in the regular USAID-sponsored studies of the cost of family planning in Egypt was used to identify specific items of expenditure that would be relevant. However, in most cases these were only expenditures at the national level, and did not include costs borne by the governorates themselves.

In the case of MOH services, an analysis of the data collected by BTS was then used to distribute governorate expenditures by level of facility and by type of function. The BTS data gives estimates of the distribution of expenditures in six governorates in 1994/95 to facility type and function. It was assumed that the expenditure patterns in Alexandra were representative of urban governorates respectively, except for Suez and Port Said, where the actual data were used. For rural governorates, an average of the distributions in Beni-Suef, Dakhalia and Aswan were used, except in the three governorates themselves, where the actual numbers were used. Table 3.3 gives an example of the distribution of expenditures reported by BTS for one governorate, Aswan. The percentage allocations of expenditures to facility and function derived from these numbers were used to assign the actual expenditures by MOH governorates reported in the ENHA to specific facility types and functions.

Table 3.1: Financing flows in health system, Egypt FY 1994/95 - Sources to financing intermediaries (LE millions)

	Sources						
	MOF/NIB	**SIO**	**Donors**	**Firms**	**Syndicates**	**Households**	**TOTAL**
Transferred to intermediaries							
MOH	1,337		142				**1,479**
THIO	97						**97**
MOE	517						**517**
MOSA	6						**6**
Other ministries	190						**190**
HIO	434	448	12			39	**933**
Firm schemes				364			**364**
Syndicate schemes					26		**26**
Private insurers				17			**17**
Subtotal	2,581	448	154	381	26	39	**3,629**
Not transferred to intermediaries							
MOF/NIB	46						**31**
SIO		0					**0**
Donors			61				**61**
Firms				0			**0**
Syndicates					0		**0**
Households						3,780	**3,780**
Subtotal	46	0	61	0	0	3,780	**3,887**
TOTAL	**2,627**	**448**	**215**	**381**	**26**	**3,819**	**7,516**

Source: Egypt National Health Accounts (Rannan-Eliya et al., 1998)

Table 3.2: Financing flows in health system, Egypt FY 1994/95 - Financing intermediaries to providers (LE millions)

	Public financing							Donors	Private financing				
	MOH	THIO	MOF	MOE	MOSA	Others	HIO	Foreign Donors	Firms	Syndicates	Private insurers	House-holds	TOTAL
MOH facilities	1,305						17					80	1,402
Teaching hosps	14	97					3	2	2			1	118
Univ. hosps.	30			517			30	26	1		1	2	606
NPC			20					5				2	27
NCMC			1									1	2
NODCAR			5										5
Vacsera			5										5
Other public	4					190	6						200
HIO	1						530					49	580
CCOs	11		15				28	3	221			49	330
Private hosps.	42						71		23	20	5	120	281
Private Clinics									57	5	5	670	737
Pharmacies	17						237		60	1	5	2,396	2,716
NGOs	3				6		6	25				70	110
Traditional												8	8
Others												332	332
Foreign providers	52						5						57
Administration of private insurance											1		1
TOTAL	1,479	97	46	517	6	190	933	61	364	26	17	3,780	7,516

Source: Egypt National Health Accounts (Rannan-Eliya et al., 1998)

Table 3.3 Distribution of expenditures by facility type and function in Aswan from BTS

BTS Cost Department	Facility type	Function	Amount (LE)
RECURRENT EXPENDITURES			
Curative Dept	Urban Hospitals	Family Planning	11,050
		Primary/MCH	-
		Preventive	-
		Curative	8,863,882
		Administrative	1,586,357
Ambulance	Ambulance	Curative	302,636
Separate Blood Bank	Separate Blood Bank	Curative	243,055
Quarantine	Quarantine	Preventive	-
Preventive Dept	Fever Hospitals	Curative + Admin	1,555,842
	Others	Others	217,610
Basic Health Care Department	Rural Health Units	Family Planning	240,194
		Primary/MCH	633,958
		Preventive	626,100
		Curative	1,806,225
		Administrative	1,244,710
	Health Groups	Family Planning	-
		Primary/MCH	-
		Preventive	-
		Curative	-
		Administrative	-
	Rural/District Hospitals	Family Planning	90,393
		Primary/MCH	263,723
		Preventive	279,844
		Curative	1,245,329
		Administrative	444,827
	Urban Health Centers	Family Planning	25,022
		Primary/MCH	57,815
		Preventive	63,239
		Curative	348,134
		Administrative	83,837
	Health Offices	Family Planning	-
		Primary/MCH	-
		Preventive	475,868
		Curative	-
		Administrative	-
	MCH Units	Family Planning	-
		Primary/MCH	686,266
		Preventive	24,664
		Curative	-
		Administrative	-
Service Dept	Service Depts	Administrative	9,141,953
Subtotal for recurrent			**21,420,578**
CAPITAL EXPENDITURES			
Family Planning			102,483
Primary/MCH			328,276
Preventive			311,217
Curative			2,196,731
Administrative			485,083
Subtotal for capital			**3,423,790**

For the purposes of estimating RH expenditures, it should be noted that only the primary/MCH and family planning expenditures are wholly RH-related. Curative expenditures contain some proportion of RH-expenditures, since they include routine medical care given to women for gynecological and obstetric causes.

The facility costing studies were then used to disaggregate curative expenditures by hospital facilities into inpatient and outpatient expenditures. Having done this, we are left with a distribution of expenditures in each governorate indicating what proportion of that governorate's health budget was spent in which type of facility, and for all facilities a further disaggregation indicating what proportions can be assigned to certain functions. In the case of hospitals this includes a disaggregation into outpatient and inpatient costs. For all facilities, administrative costs identified at the facility level by BTS were distributed as an overhead proportionately across all other functions based on their share of non-administrative expenditures.

For most other public sector providers, such detailed costing information was not available, and expenditures were allocated to types of service, assuming that their expenditure allocations were similar to those observed in similar MOH urban facilities, and taking into account separate family planning expenditures reported in the Family Planning Cost studies. In the case of programs for which governorate disaggregations were not available, e.g., Defense Ministry hospitals, the numbers derived were national totals.

This procedure produces national or governorate-level estimates of the amount of expenditures for specific functional elements of spending by each agency, linked to specific facility types in the case of personal service expenditures: (1) Public health services/administration; (2) Inpatient clinical services; (3) Outpatient clinical services; (4) Family planning; (5) MCH/Primary care; (6) Preventative services. Each element of spending so identified is associated with one single provider, one source of funding and one function. For example, five elements of expenditure are recognized for urban hospitals run by governorates: family planning, primary/MCH, preventative, inpatient clinical services and outpatient clinical services. For MOH spending through governorates, a total of 20 distinct service items are estimated for each governorate. Table 3.4 summarizes the specific expenditure items that were separately identified for major agencies. Each dot marks a separate expenditure item.

Distribution of public expenditures to population

Utilization data from the EHHEUS was then used to assign these global amounts at the governorate or national level across individuals in the EHHEUS data set according to their reported levels of utilization of services at the relevant facility type, assuming that each unit of service utilized within a governorate cost the same amount for that governorate. The general approach was as follows.

Let X refer to the agency making the expenditure (e.g.., MOH, HIO, University hospitals, etc). The units of service used are outpatient visits, admissions and inpatient bed-days. If u_{XGHIn} is the number of units of service I, provided by facility type H belonging to agency X, used by the nth individual in a particular governorate G, then the average public subsidy per unit of service consumed, c_{XGHI} , is calculated as:

$$c_{XGHI} = C_{XGHI} / \Sigma_n (u_{XGHIn})$$

From this, the average subsidy received by each individual in the survey was obtained by multiplying the average subsidy per unit of service by the total number of units of service utilized by that individual. This is equivalent to:

$$u_{XGHI} [C_{XGHI} / \Sigma_n (u_{XGHIn})]$$

Note that in doing this we are allocating the actual national expenditure by an agency not across the whole national or governorate population, but over the individuals in the survey data set. This procedure thus produces an estimate of subsidies received per individual, which is greater than the corresponding real level in the same ratio that the national population is greater than the number of respondents in the survey. This ratio, or sampling fraction, is 1049 at the national level, although it varies around this number in each governorate. If the estimated subsidy per individual is then divided by these ratios, it yields a direct estimate of the per capita subsidies received in reality by any individual or any group of individuals. On the other hand, simply summing the subsidies received by any group of individuals in the data set yields a direct estimate of the total subsidies received by that section of the national population, which that group is representative of.

This is possible, because the survey sample was selected to be a self-weighting representative sample of the whole Egyptian population.[5] For example, if the total subsidies received by all the females in the sample are summed, it yields a total, which is an estimate of the total subsidies received by the whole female population of Egypt. Similarly, if the average subsidy received by all females in the sample is divided by 1049, this yields a direct estimate of the per capita subsidy for females in the national population.[6]

This general procedure was repeated for all the distinct service expenditure items identified as explained above for all public programs and agencies. As we were intending to estimate RH expenditures specifically, some modifications were made for certain expenditures. Family planning expenditures by facilities were distributed only to married women aged 15-49 years who reported utilization of those facilities. For example, family planning expenditures by urban hospitals in Beni-Suef were only allocated to such women reporting visits to urban hospitals in that governorate. It would have been better to allocate such expenditures only to women who made family planning visits, but EHHEUS did not collect information on family planning status. MCH functional expenditures were similarly distributed equally across all users who were aged either less than 1 year old, or were married women aged 15-49 years.

Public goods and collective services

Some expenditures by government agencies are not for personal services. Examples include administrative services, regulatory agencies, information and education campaigns, etc. These were allocated equally across either the national population or the governorate population, when dealing with governorate level expenditures. In the case of RH expenditures of this nature, the

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[5] Although the sample in the survey was a self-weighting sample representative at both national and regional levels, the resulting sampling fractions at the governorate level were not the same. For this reason, when preparing tabulations, the appropriate governorate-specific sampling weights were used.

[6] The estimates are not strictly representative since 1% of the population living in the Frontier governorates was excluded. If the distribution of expenditures or utilization differ significantly in these omitted governorates from that of the remaining population, then this would lead to a misestimation. However, it should be emphasized that even in the most extreme scenario, such a bias in the results is likely to be insignificant and less than 1%.

expenditures were distributed equally across all women aged 15-49 years old, since the EHHEUS data set did not allow identification of family planning users.

Private expenditures

The totals for private expenditures are derived from ENHA, and distributed according to information available from the EHHEUS. EHHEUS recorded out-of-pocket spending on medical goods and services by individuals, associated with treatment visits. However, the average level of expenditure reported was considerably higher than was consistent with other information about private spending. The ENHA estimate of household expenditures incorporates information not only from EHHEUS but from other sources too, and so is considered more accurate than the figure reported in EHHEUS. Nevertheless, while over-reporting in the EHHEUS was significant, the survey is believed to have collected accurate data on the distribution of spending across households and by provider type.

To complicate matters further, comparison of the hospital admission rate reported in EHHEUS with other official MOH statistics indicates that inpatient admissions were underreported by 35-40%. A second comparison of the reported admission rate for delivery with that calculated using EDHS-95 data for the percentage of births taking place in public sector institutions indicates an under-reporting of 40%. This under-reporting in the case of inpatient admissions is not surprising, since inpatient admissions were reported using a one year recall period in EHHEUS, in comparison with outpatient treatment episodes which were reported using a two week recall period.

To ensure consistency between the NHA estimates and EHHEUS data, three different adjustments were made to the EHHEUS data. All drug expenditures reported by individuals were scaled downwards by 36%, and all other non-drug expenditures by individuals were scaled downwards by 19%. The evidence indicates that expenditures on drugs were over-reported in EHHEUS to a greater degree than other non-drug expenditures. The third adjustment was to scale up inpatient expenditures by households by 25% to take into account likely underreporting, with a corresponding proportionate adjustment in outpatient spending to ensure that consistency with ENHA was maintained. A final adjustment was also made to take account of the fact that EHHEUS only sampled 99% of the population, since it did not survey the Frontier governorates.

The process of adjustment only indicates the overall level of household expenditures. EHHEUS did not capture specific data on family planning purchases, even though it did collect data on total expenditures for routinely purchased products. To extricate the expenditures by households on purchasing contraceptives, an indirect estimation was made of such spending. This was based on the user payments reported in the USAID FP Cost studies, plus an estimate of payments for IUDs and pills calculated using the price and utilization data in EDHS. The total amount estimated was then subtracted from the total level of household spending, and categorized separately as household payments for family planning.

These adjustments produce a data set, in which per capita expenditures on health are consistent with the NHA estimates, and adjusted for over-reporting of outpatient expenditures and under-reporting of inpatient expenditures. Since the survey sample itself is representative of the whole national population, the average per capita expenditure of any group of individuals in the data set is also a direct estimate of the average per capita expenditure of that section of the national

population which that group is representative of. This feature of the data set lends itself to rapid estimation of the per capita expenditures of any population group.

Other private expenditures on health in Egypt are very small, consisting mainly of spending on private health insurance, spending by syndicates, which are professional associations, and some employer spending on health services for private sector employees. It is estimated that these other expenditures account for less than 10% of total national private health expenditures. As data are not available to examine the distribution of such expenditures, it is assumed that these expenditures are distributed equally across the whole population. Since most of these expenditures will be associated with higher income and formal sector employment, this assumption would have the effect of marginally understating any bias in expenditures towards the upper income groups.

Estimation of RH-related outpatient and inpatient clinical service expenditures

Another set of modifications is required for outpatient and inpatient clinical services, which were not separately identified as family planning, or MCH services. These services form the largest single element of expenditures by MOH and by other providers, as well as by households. According to our definition, outpatient and inpatient services involve RH expenditures when they are services of an obstetric or gynecological nature provided to women, or are services provided for the care of infants aged less than 1 year, even if they are provided by general medical and surgical clinical providers.

To estimate these RH expenditures the following five-step procedure was adopted.

1. For inpatient service expenditures, all expenditures that were associated with admissions for childbirth were separated out to distinguish them from other inpatient expenditures, assuming that the average cost per delivery was the same as that for all admissions. For example, the EHHEUS sample reported that 12% of all admissions to MOH hospitals were for delivery, so 12% of all MOH inpatient expenditures were separated out as childbirth expenditures, associated with the women who reported the admissions. The estimate of 12% is similar to the figure of 13% reported by Hassan et al. (1997a, b, c) in their costing studies of three general hospitals.
2. At the end of the analysis, a set of separate adjustments was made to the final results. An assumption was made that 5% of all remaining inpatient expenditures after the exclusion of childbirth expenditures were for obstetric and gynecological cases. This is an arbitrary ratio, but was the estimate deemed most consistent with other data, which suggests a ratio of 3-8%. Hassan et al. reported that 15-20% of total inpatient expenditures in higher-level general hospitals are obstetric and gynecological treatment costs (i.e., including deliveries). A second assumption was made that 6% of all general outpatient costs, after exclusion of family planning and MCH costs separately identified, were for obstetric and gynecological cases. This was based on a reported figure of 8.45% of outpatient costs at MOH general hospitals from Hassan et al., with some downward adjustment to take account of the fact that general hospitals have specialist obstetric and gynecological facilities, unlike lower level hospitals.
3. EHHEUS did not distinguish in the collection of data for outpatient expenditures payments to traditional birth attendants for attending births at home. No data were in fact available on the average cost of these services. To fill this gap, an estimate of the average payment was made by analyzing the average out-of-pocket payment for childbirth in MOH facilities. This was LE 65.

It was then assumed that the cost of a TBA would be less than the cost of admission in a MOH hospital, since otherwise more mothers would choose to deliver in hospital, and an arbitrary average price for TBA-assisted delivery was set of LE 30. The annual number of births attended by TBAs was then estimated using EDHS-95 data, and the final cost arrived at by multiplying the average estimated price by the estimated number of such deliveries. The total estimated was LE 23 millions, which was also approximately the same as total payments to traditional providers for outpatient services reported in EHHEUS. This number was then subtracted from the total for household spending for general outpatient services, and reassigned to household payments for childbirth.

4. All inpatient and outpatient service expenditures by each major provider and by households were re-categorized as infant care if the user in EHHEUS reported to be less than 1 year old.

The procedure described above creates data matrix containing information on the distribution of all health expenditures in Egypt in 1994/95. These expenditures are assigned using available information on utilization of services to specific individuals in a nationally representative sample of 50,000 Egyptians, and in a way that allows analysis of the quantities of national spending on specific items, and their distribution.

This is best illustrated by a hypothetical example. Assume that the actual population of Egypt is 50 millions, and that the sample size is 50,000, and that 50% of the both the population and the sample are female, and 50% are male. The sampling fraction, **F**, is then 0.001. Let us assume that MOH expenditures for the provision of outpatient services in rural health clinics were LE 100 millions in 1994/95. Then let us say that ten individuals in the survey sample reported utilization of outpatient services at rural health clinics: six female and four male. In the data matrix, there will be a variable or vector indicating the amount of rural health clinic outpatient service expenditures assigned to an individual. Let us call this variable **RHUOP**. In the data matrix, this variable will have the value zero for all but ten individual observations. For those ten observations, it will have the value of LE 10 millions (LE 100 millions ÷ 10 reported users), and six of those observations will be female, and four male. The sum of all the elements in the vector **RHUOP** will be LE 100 millions – the exact total estimated from the ENHA, while 60% of this sum, or LE 60 millions, will be assigned to females, and 40% to males. The latter distribution is the distribution implied by the distributional information contained in EHHEUS data and the assumptions we have made in the allocation procedure. If we then divide the value of **RHUOP** by the value of **F**, we obtain a new variable, **XRHUOP**. The values of the elements in this variable will be 1/1000 of the corresponding values in **RHUOP**, i.e., ten observations will have the value LE 10,000, and the rest will have the value zero. The mean value of all the elements in this new vector, **XRHUOP**, will be LE 2.0, while the mean value for those elements associated with female observations will be LE 2.4. These are in fact the correct estimates of the actual spending per capita for the whole population and for the female population respectively in Egypt.

Using a computer statistical software package, it is then relatively straightforward to produce tabulations giving per capita estimates (for the whole population or any subpopulation) and total spending levels for any item of expenditure separately identified in the analysis. In this analysis, we have used Stata 6.0. The resulting data matrix produced for the analysis is 80 MB in size, and contains values for more than 100 different expenditure variables. These variables can then be tabulated according to any descriptive variables present in the EHHEUS data set, such as age, gender, income, etc., in order to obtain profiles of spending across the population. It was the original intention to conduct a detailed distributional analysis of RH expenditures using this data matrix in this fashion. However, for most of the RH expenditure items, e.g., family planning, the

EHHEUS data set did not contain actual information on utilization, and so any distributions present in the final data matrix are largely driven by our methodological assumptions. For this reason, detailed distributional results are not given.

Table 3.5 gives the ENHA matrix again, but this time showing expenditure flows from funding sources to functions, as recomputed by this analysis. The table identifies several RH expenditure items, and several others, which contain RH-related spending mixed with non-RH-related spending.

Table 3.4: Expenditure items by function for major agencies, separately identified in analysis for Egypt

Ministry/Agency	Subprogram	1	2	3	4	5	6	Notes on estimation
MOH Headquarters	Systems Development Project (SDP)				●			
	SDP - Donor-funded support costs				●			Depreciation costs ignored in keeping with ENHA
	SDP - Donor-supplied contraceptives				●			Ignored, as captured by BTS in supplies
	MOH Family Planning Department				●			
	Contraceptive manufacturing subsidy				●			
	Subsidy to EFPA				●			
	National patient treatment programs		●	●				Allocated 1/3 to Cairo residents, and 2/3 to other governorate residents, with expenditures being split 55:45 between males and females to reflect official statistics.
	All other programs	●						Inc. national patient treatment programs
MOH Govenorates	Urban hospitals		●	●	●	●	●	
	UHCs			●	●	●	●	
	Rural hospitals		●	●	●	●	●	
	RHCs			●	●	●	●	
	MCH centers					●	●	
State Information Service	Information campaign in support of FP				●			
National Population Council					●			
Teaching/University hospitals			●	●	●			FP cost based on FP Costs Study.
HIO			●	●	●			FP cost based on FP Costs Study.

Key to functions: (1) Public health services/administration; (2) Inpatient clinical services; (3) Outpatient clinical services; (4) Family planning; (5) MCH/Primary care; (6) Preventative services.

Table 3.5: Summary of national health expenditures in Egypt

EGYPT NATIONAL HEALTH ACCOUNTS 1994/95: SHOWING EXPENDITURES BY SOURCE AND SELECTED FUNCTIONS (SUMMARY IN LE MILLIONS)

Category	Subcategory	Item	MOH HQ	MOH Governorates	National agencies	Universities/ Other Ministries	HIO/SHIP	Others not specified	Households	TOTAL	Percentage
Personal medical services											
	Outpatient service	Family planning		17		3	0		41	**61**	**1%**
		MCH		80		-	-		-	**80**	**1%**
		Infant care		20		6	155		84	**264**	**4%**
		Others n.e.c.	33	334		299	467	183	3,326	**4,642**	**62%**
	Inpatient services	Delivery		48		79	15		88	**230**	**3%**
		Infant care		4		5	-		0	**9**	**0%**
		Others n.e.c.	98	315		488	256	250	241	**1,649**	**22%**
Collective services											
	Collective services	Family planning	10		56				-	**65**	**1%**
		MCH			3					**3**	**0%**
		CSM subsidy	13						-	**13**	**0%**
		Others n.e.c.		69	10				-	**79**	**1%**
	Others n.e.c.		173	197				50	-	**421**	**6%**
TOTAL			327	1,084	68	881	894	483	3,779	**7,516**	**100%**

SUMMARY OF NATIONAL HEALTH EXPENDITURES BY SOURCE (1994/95)

	MOH	National Agencies	Other GOE	HIO	Households	Others not specified	TOTAL
National health expenditures (LE Million)	**1,412**	**68**	**881**	**894**	**3,779**	**483**	**7,516**
National health expenditures (% of GDP)	**0.7%**	**0.0%**	**0.4%**	**0.4%**	**1.8%**	**0.2%**	**3.7%**
Per capita health expenditures (US$)	**$7.06**	**$0.34**	**$4.40**	**$4.47**	**$18.90**	**$2.41**	**$37.58**
Percentage of total by source	**19%**	**1%**	**12%**	**12%**	**50%**	**6%**	**100%**

METHODOLOGY FOR SRI LANKA STUDY

DATA AND ANALYSIS

National Health Accounts

In early 1998, Sri Lanka did not possess an official NHA system. Some NHA estimates had been compiled previously by independent researchers (Rannan-Eliya and de Mel, 1996), but a full system of official accounts did not exist. During the latter part of 1998, MOH decided to develop NHA for the country, and this process is currently nearing completion, with the official release of the first Sri Lanka NHA (SLNHA) estimates expected in July 2000.[7] SLNHA development is the responsibility of the Health Expenditure Survey Committee (HESC) of the MOH, which was convened by its Department of Planning. HESC consists of representatives of relevant government agencies, including various departments of MOH, Central Bank of Sri Lanka, Finance Ministry, National Planning Department, Ministry of Provincial Council Affairs, Finance Commission and Department of Census and Statistics. The Institute of Policy Studies is also a member, and was given primary responsibility for the bulk of the technical work. Some private sector representatives have also been appointed from time to time to ensure input from the pharmaceutical industry, and private sector providers.

At the inception of the design process, MOH decided that SLNHA should be fully compatible with international standards in developed countries, and that it should include a full functional classification of all expenditures. This necessitated that SLNHA should be fully compliant with the standards being developed by OECD, and recently published (OECD, 2000) for implementation on a pilot-basis by OECD countries as the OECD System of Health Accounts (OECD SHA). The functional classification system proposed in OECD SHA was developed for use in OECD countries, and therefore has certain deficiencies when applied in most developing country settings. In particular it ignores the existence of non-qualified medical providers, and does not provide a detailed breakdown of preventive and public health expenditures, which are the item of most interest in developing countries. For these reasons, the OECD SHA functional classification system was revised to take into account the specifics of the Sri Lankan situation, and the needs of MOH decision-makers.

Defining Reproductive Health Expenditures in SLNHA

Many activities of interest of relevance to the RH agenda are included in what OECD SHA defines as expenditures on preventive and public health activities. The definitions dealing with this area of spending are particularly deficient from the perspective of developing country concerns. They do not correspond easily to actual programmatic activities, and are difficult to operationalize. They would certainly not be suitable for developing cross-country estimates of RH spending.

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[7] The results provided for Sri Lanka are based on the SLNHA results to be published in 2000. Since this is a work in progress, there are expected to be minor differences in the numbers given in this report and the final SLNHA numbers.

For SLNHA, a special working group was entrusted with revising this subset of OECD SHA definitions for use in SLNHA. The group brought together representatives of MOH, IPS, Unicef and UNFPA, in order to ensure interagency consensus on the definitions decided upon.[8] The definitions that this process developed have been adopted for use in SLNHA (Institute of Policy Studies, 2000), and they form the basis of the definition of RH expenditures used in this study. The SLNHA definitions for the functional classification of preventive and public health services expenditures are given in Exhibit 3.1.

Exhibit 3.1: SLNHA definitions of preventive and public health service expenditures

F6: PREVENTIVE AND PUBLIC HEALTH SERVICES

This category includes expenditures on services specifically intended to enhance the health status of the population or specific population subgroups, as distinct from the personal medical services, which repair health dysfunction. Many of these expenditures on these services may be provided in an integrated fashion by general medical institutions as part of their normal activities. These expenditures are not accounted for here, although SLNHA does provide disaggregations of the relevant expenditures, where feasible. Typical examples are vaccination services, campaigns and special reproductive health programmes.

Note that many of these items may be grouped to form categories relevant to other classifications. In particular, these can be identified or defined:

1. *Safe motherhood services, as defined by some authorities, consists of maternal health (F6.1.1)*
2. *Maternal and child health, also termed family health, consists of maternal health, well-baby, infant and child care, and family planning services (F6.1.1 – F6.1.4).*
3. *Reproductive health services consist of maternal health and family planning health services (F6.1.1, F6.1.3 - 4).*
4. *Childbirth services are accounted for separately under personal curative services (F1).*

F6.1: Family Health and Reproductive Health Services

This covers a wide range of services, which comprise significant elements in what is also known as reproductive health care, maternal and child health services, and family health.

F6.1.1: Maternal health
Maternal health services include all special programmes designed to provide antenatal and postnatal care to mothers, including provision of dietary supplements for malnourished pregnant and lactating mothers, such as micronutrients as iron and vitamins (Thriposhaya).

F6.1.2: Infant and childcare
This covers special services intended to promote and improve the health and development of infants and pre-school children. It includes well-baby health care, growth monitoring and growth promotion of infants and pre school children, and provision of dietary supplements such as Thriposhaya and micronutrients.

F6.1.3: Family planning services

[8] The working group consisted of Dr. Kusum Wickremasuriya (Consultant, UNFPA/Colombo, and former Director, Family Health Bureau, MOH), Dr. Sybil Wijesinghe (Consultant, Family Health Bureau), Dr. Hiranthi Wijemanne (Programme Officer, UNICEF/Colombo), and Varuni Sumathiratne (Health Policy Programme, IPS).

This consists of programmes specifically intended to provide delivery of family planning methods and counseling, and health education in support of such services.

F6.1.5: Other reproductive health services
This consists of other categories of reproductive health services not classified above and intended to enable both women and men to safely exercise their reproductive health functions. They include services dealing with sub-fertility, sexual behaviour, adolescent health, treatment and prevention of reproductive tract infections and conditions, including cancers of the reproductive system, menopausal problems, and services genetic counseling and prevention of specific congenital abnormalities. Programmes dealing primarily with sexually-transmitted diseases are excluded, and are classified elsewhere.

F6.2: School health services

This consists of special programmes and services intended to promote and maintain the health of children at school. These services are generally delivered within school premises.

F6.3: Prevention and management of communicable disease

This category includes: compulsory reporting/notification of certain communicable diseases and epidemiological enquiry of communicable disease; efforts to trace possible contacts and origin of disease; prevention and management of tuberculosis and leprosy, and tuberculosis and leprosy control (including systematic screening of high risk groups); immunisation/vaccination programmes (compulsory and voluntary); vaccination under maternity and child health care. Excludes: vaccination for occupational health; vaccination for travel and tourism on the patients' own initiative; and environmental health services intended to maintain food safety and hygiene.

F6.3.1: Immunisation
This includes special programmes to provide immunisation/vaccination services, including immunisations provided as part of routine maternal and child health care, and rubella immunisation of girls and women. Where immunisation services are delivered using existing infrastructure of other services, such as the MCH services, only the marginal costs represented are accounted here.

F6.3.2: STDs
This includes special programmes to control, treat and manage sexually-transmitted diseases, including HIV/AIDS.

F6.3.9: Others n.e.c.
This includes services not explicitly classified above.

F6.4: Prevention and management of non-communicable disease

This category comprises public health services of health education, disease prevention, and the promotion of healthy living conditions and lifestyles, directed towards non-communicable diseases and conditions. It includes services, such as those provided by centres for disease surveillance and control, programmes for the avoidance of risks incurred through injurious behaviour, and programmes for the general improvement of the health status of the population.

Includes: interventions against smoking, alcohol and substance abuse such as anti-smoking campaigns; activities of community workers; services provided by self-help groups; general health education and health information of the public; health education campaigns; and campaigns in favor of healthier life-styles; and information exchanges, e.g., alcoholism, drug addiction.

Excludes: public health environmental surveillance and public information on environmental conditions.

F6.5: Occupational health care

Occupational health care consists of health services provided to individuals or population groups in their capacity as employees and workers. They comprise a wide variety of health services such as surveillance of employee health (routine medical check-ups) and therapeutic care (including emergency medical services), provided on or off-business premises. No distinction is made as to the sector of employment, including government and non-profit institutions serving households. This excludes, however, remuneration-in-kind of health services and goods, which constitute household actual final consumption rather than intermediate consumption of business.

F6.9: All other public health services n.e.c.

This item comprises a variety of miscellaneous public health services such as operation and administration of blood and organ banks, and the preparation and dissemination of information on public health matters not classified elsewhere.

Includes: public health environmental surveillance and public information on environmental conditions.

Compilation of Sri Lanka National Health Accounts

The full SLNHA is intended to give a detailed functional classification of all health expenditures, from which the estimates of RH spending can in fact be derived directly or with minimal secondary estimation. Unlike in Egypt, detailed budgetary accounts of all central government departments and agencies are publicly available in Sri Lanka, with details given of the purpose of each program and project. These budgetary records were intensively analyzed in order to identify and code by function all government health expenditures at central government level (MOH and other ministries). Where there was any doubt the responsible officer in charge of the relevant department or agency was contacted to clarify the functional use of expenditures. The information in the budgetary records is sufficiently detailed to allow disaggregation of the central MOH budget into over 200 different expenditure elements in this fashion.

The process of budgetary analysis was sufficient to allocate most expenditures to either specific programs with distinctive functions, or to facilities, or other sub-national authorities. The latter comprise one third of expenditures by MOH, since a substantial proportion of government expenditures on health are through the Provincial Councils (PC). In addition, PC budgetary data are not as detailed as MOH data, and in fact only indicate which of four categories of spending expenditures are used for, one of which are detailed enough to achieve a functional

breakdown. Facilities also present a problem as they combine both expenditures that are RH-related and those that are not. Further disaggregation requires use of facility cost data.

Facility cost survey

During 1998-1999, IPS carried out a survey of 250 government health facilities. All facilities in one district in each of seven provinces of Sri Lanka were surveyed (with the exception of the Northern and Eastern Provinces, where field work was not possible owing to the security situation). The districts surveyed were Colombo, Galle, Ratnapura, Badulla, Matale, Polonnaruwa, and Kurunegala. This IPS Public Facility Survey (PFS) was designed to collect data on the costs at facility level, including their distribution by service outputs. Information collected included allocation of staff time to specific activities, and distribution of drugs and supplies to different departments.

The survey produced estimates of the allocation of costs to inpatient and outpatient services in each facility. In the case of facilities which were run by the central Ministry, whose expenditures appear as separate line items in the MOH budget, these ratios were used to allocate expenditures to inpatient and outpatient functions for those line items, if those facilities had been included in the PFS sample. For provincial-level facilities funded from the PC budgets, the average per bed unit cost and cost allocations to inpatient and outpatient services for each facility type in each province was estimated using the PFS data for the district surveyed in that province, i.e., separately for provincial hospitals, base hospitals, district hospitals, peripheral units, etc. The total cost breakdowns by facility type for all the facilities in each province were then estimated using these provincial-specific unit costs and data on the number of beds in each province belonging to each facility type. In the case of outpatient facilities, the relevant unit cost was the total cost per facility.

The bulk of family planning and MCH services delivered by MOH are provided through the MOOH units, which are outpatient units, which deliver family planning and MCH services in an integrated fashion. Many of their services are delivered by their staff on an out-reach basis, with staff visiting houses in the community in order to ensure services are delivered. For the purpose of this study, the PFS added a special section to its survey instrument to collect more detailed information on the allocation of time by different categories of staff to different services: i) immunization, ii) well-baby care, iii) prenatal and postnatal care, and iv) family planning. The most important commodities in the MOOH units are funded out of the central MOH budget, for which the functional breakdown is known. The staff-time allocation data were combined with data on the costs of commodities in the central MOH budget to estimate for each MOOH unit surveyed in PFS the allocation of costs to each of these functions. The average costs allocations obtained for MOOH units in each provincial sample were applied to the total MOOH budgets in each province to obtain provincial allocations to these services. The expenditures for immunization and well-baby care are assigned to the infant and child care function in SLNHA, prenatal and postnatal care expenditures to maternal and childcare function, and family planning expenditures to the family planning function.

Treatment of capital costs

Investment in plant and equipment is separately coded as a function in SLNHA. However, data limitations mean that these numbers refer only to the public sector. Investment activities

by the private sector are captured implicitly in the estimation of revenues of private providers. In order to maintain comparability with the Egyptian cost estimates, the RH cost estimations are adjusted in Sri Lanka's case by adding in their prorated share of public sector investment budgets. This adjustment is made at the end, so final RH expenditures in Sri Lanka are shown to be somewhat higher than some corresponding items in the SLNHA breakdown.

Estimation of private expenditures

Private expenditures in Sri Lanka consist largely of household out-of-pocket spending. There is only minimal insurance coverage, and the available private insurance schemes do not generally cover most items in the RH package, such as family planning, MCH services, and childbirth.

SLNHA estimates of household spending are based on the Central Bank of Sri Lanka's Consumer Finance Survey 1996/97 (CFS 96), which is a large (40,000 individuals) nationally representative survey of household income and consumption. It is supplemented by some other data on pharmaceutical sales from IMS, which is a commercial market research firm, and a survey of private hospitals carried out by IPS in 1997 (IPS/MOH Private Hospital Survey 1997). The estimates as in ENHA have been adjusted for under-reporting in the CFS. These estimates do not give detailed information on the use of expenditures.

To obtain further disaggregation as required by this study necessitated use of another household survey – the Sri Lanka Household Health Survey 1991 (SLHHS-91). SLHHS-91 was a large 9,000 household survey carried out with World Bank support in 1991 in four representative districts of Sri Lanka (Colombo, Galle, Matale and Polonnaruwa). The survey instrument collected detailed information on the use of health care providers and expenditures, obtaining data on up to two provider visits per sickness episode. The recall period was one month for both inpatient and outpatient visits. It also contained a special module that enquired from all adult women the use of family planning and MCH services. SLHHS was conducted in 1991, and so any estimates obtained from it would be out-dated due to inflation. However, Central Bank data from its CFS series indicates that during the 1990s, the relative utilization of public and private providers did not change significantly, and nor did the relative share of health expenditures in total household spending. It was therefore assumed that the relative share of expenditures reported in the survey was applicable to 1997.

Analysis of the SLHHS data was carried out to estimate the proportion of household health expenditures allocated to inpatient and outpatient care, and within outpatient care the proportions allocated to family planning, prenatal and postnatal care, well-baby services, and immunization. In addition, the proportion of expenditures spent on treatment episodes involving infants was also estimated. These ratios were then applied to the SLNHA estimates of total household health spending to obtain a breakdown of household medical spending into inpatient care, outpatient care, family planning, well-baby services, immunization and prenatal and postnatal care.

The only other relevant items of private expenditures for RH are the activities of NGOs in providing contraceptives. Fortunately, the Family Planning Association of Sri Lanka occupies the dominant share in the private market for contraceptive supply. FPASL runs a social marketing campaign to distribute contraceptives, mostly condoms and oral contraceptive pills.

Donors, including USAID, originally subsidized this campaign but in recent years with the withdrawal of donor support, FPASL has depended mainly on donations from its international affiliate – International Planned Parenthood Federation (IPPF). However, with financial constraints at IPPF, the level of this subsidy has been falling, and in fact it is to be completely phased out. FPASL's contraceptive distribution program has thus increasingly been self-financing from retail sales, and full cost recovery was in fact achieved in 1997/98. Sales of contraceptives by FPASL are thus included in the SLNHA as an expenditure item almost wholly funded by households.

Estimation of RH-related outpatient and inpatient clinical service expenditures

As in the case of Egypt, the problem remains of disaggregating outpatient and inpatient medical spending into RH-related and non-RH related spending. A similar solution was applied.

1. For inpatient service expenditures by government and households, the proportion due to childbirth was estimated as the proportion of childbirths in hospital admissions.[9] The proportion was estimated separately for public and private hospitals. Official birth registration data indicate the numbers of births in public and private hospitals. For public hospitals the total number of admissions is known, and for private hospitals the total number of admissions was derived from the IPS/MOH Private Hospital Survey 1997. The ratios that were used were 8.1% of total inpatient costs for public hospitals, and 10.6% for private hospitals. The assumption that admissions for delivery cost the same as admissions for other causes cannot be checked directly. However, examination of PFS data indicated that the two specialist women's hospitals that the central MOH runs have similar unit costs to other general hospitals.
2. For inpatient expenditures for treatment of other obstetric and gynecological cases, the proportion was based on the overall proportion of inpatient admissions that were reported by MOH hospitals as being due to obstetric and gynecological reasons minus the proportion that was accounted for by delivery cases. Since MOH hospitals account for more than 95% of all admissions, this proportion was taken as being representative for private hospitals too. The ratio used was 7% of inpatient costs.
3. For outpatient expenditures for treatment of other obstetric and gynecological cases, the data are less reliable. The only available survey of outpatient morbidity in MOH hospitals was in 1971. This revealed the following proportions of cases in the relevant ICD-9 categories: diseases of the genito-urinary system – 3.1%, complications of pregnancy, childbirth and puerperium – 2.2%, certain conditions originating in the perinatal period – 0.02% (total – 5.3%). A survey of patients at private clinics in 1996 (De Silva and Mendis, 1998) revealed the following percentages of cases classified using the International Classification of Primary Care-2 (ICPC-2) system: pregnancy, child bearing and family planning – 3.9%, female genital (including breast) – 1.8%, female genital (including breast), male genital – 0.6% (total – 6.3%). The proportion of respondents in CFS 96 reporting visits for reasons of urogenital manifestations or maternal and newborn problems was 4.9% in the case of government clinics, and 4.6% for private clinics.[10] Given the potential problems in self-reported symptoms, a ratio of 6% of all outpatient

[9] As in the case of Egypt, a refinement of this method would be to estimate the relative cost of an average delivery in relation to an average admission. This would require detailed cost studies at in a sample of hospitals.

[10] Numbers are from special tabulations prepared for IPS by the staff of the Central Bank of Sri Lanka.

visits and expenditures was finally used to allocate outpatient spending to RH-related cases. This percentage was applied to both household and government expenditures.

4. Al inpatient and outpatient service expenditures by government and households were re-categorized as infant care spending based on the proportion of expenditures reported in SLHHS-91 reported to be for patients less than 1 year old. 0.1% of inpatient spending was allocated this way, and 0.3% of outpatient spending.

The final estimation of expenditures by source and function in SLNHA for 1997 is shown in Table 3.7.[11] As will be noted, RH expenditures in Sri Lanka are equivalent to a combination of all or some of the expenditures identified by functional line items listed in Table 3.6. These items in fact account for more than 80% of all national health expenditures, underlining the need to use other estimation methods to disaggregate RH expenditures further. However, as will be made clear in the results and is apparent in Table 3.6, even though RH expenditures as part of general inpatient and outpatient clinical services only account for a small proportion of general inpatient and outpatient services, they account for a large share of overall RH expenditures, since the other purely RH expenditure items – family planning and maternal and child health care, are in fact quite small components of total national health spending.

[11] The SLNHA functional codes are unique five digit numbers assigned to each functional use of expenditures identified in the SLNHA functional classification. Other than their use in the SLNHA database, these codes also allow direct mapping to the OECD SHA functional classification codes via a conversion table. Note also that functions 92000 to 99999 are not included in the total for national health expenditures in order to remain consistent with OECD expenditure definitions.

Table 3.6: Functional line items in SLNHA which include RH expenditures

SLNHA Functional Code	Category of spending	% of total national health expenditures	% of item which is RH expenditures
11000	**Hospital inpatient care**	30%	15%
11200	Hospital out-patient care	10%	6%
11300	Ayurvedic hospital out-patient care	<1%	2%
11400	Ayurvedic hospital out-patient care	<1%	0%
13000	Out-patient curative care	20%	6%
13200	Other registered medical care professionals	-	6%
13400	Traditional medical providers	3%	2%
50000	Medical goods dispensed to out-patients	17%	6%
61100	Maternal health	1%	100%
61200	Infant and child care	1%	100%
61300	Family planning services	1%	100%
61900	Other reproductive health services	-	100%
63200	STD's	<1%	100%
	TOTAL	**84%**	**10%**

Table 3.7: Functional Classification of health expenditures in Sri Lanka National Health Accounts, 1997

SRI LANKA NATIONAL HEALTH ACCOUNTS 1997: FUNCTIONAL CLASSIFICATION OF EXPENDITURES BY SOURCE (SUMMARY IN RS MILLIONS)

SLNHA Code	Functional categories	MOH and Departments of Health	Other public	Households	NGO's	Other private	TOTAL	Percent of health spending
10000	Services of curative care	-	-	-	-	-	0	-
11000	Hospital curative care	-	-	-	-	-	0	-
11100	Hospital in-patient care	5,733	203	2,711	-	200	8,848	30.0
11200	Hospital out-patient care	2,700	169	-	-	-	2,869	9.7
11300	Ayurvedic hospital out-patient care	36	-	50	-	-	86	0.3
11400	Ayurvedic hospital out-patient care	15	-	15	-	-	30	0.1
13000	Out-patient curative care	77	1	5,720	-	65	5,864	19.9
13200	Other registered medical care professionals	-	-	13	-	-	13	0.0
13400	Traditional medical providers	-	-	750	-	-	750	2.5
13500	Other medical/dental care	0	-	300	-	-	300	1.0
20000	Services of rehabilitative care	25	-	-	-	-	25	0.1
30000	Services of long-term nursing care	-	-	-	-	-	0	-
40000	Ancillary services to medical care	22	-	510	-	-	532	1.8
50000	Medical goods dispensed to out-patients	81	-	4,776	5	25	4,887	16.5
60000	Preventive and public health services	69	-	-	4	-	73	0.2
61000	Family planning and reproductive health services	1	-	-	-	-	1	0.0
61100	Maternal health	194	-	17	-	-	211	0.7
61200	Infant and child care	221	-	42	-	-	264	0.9
61300	Family planning services	184	-	25	27	-	236	0.8
61900	Other reproductive health services	-	-	-	-	-	0	-
62000	School health services	14	-	-	-	-	14	0.0
63000	Prevention and management of communicable diseases	829	-	-	-	-	829	2.8
63100	Immunisation	3	-	-	-	-	3	0.0
63200	STD's	13	-	-	-	-	13	0.0
63900	Prevention and management of other communicable diseases n.e.c	-	-	-	-	-	0	-
64000	Prevention and management of non-communicable diseases	3	-	-	-	-	3	0.0
65000	Occupational health care	-	11	-	-	-	11	0.0
69000	Other public health services n.e.c	-	-	-	-	-	0	-
70000	Health programme administration and health insurance	565	0	-	-	60	625	2.1
90000	Health related functions						0	-
91000	Capital formation of health care provider institutions	2,886	161	-	-	-	3,047	10.3
92000	Education and training of health personnel	277	437	-	11	-	725	-
93000	Research and development in health	70	60	-	-	-	130	-
94000	Other health related functions n.e.c	297	55	-	-	-	352	-
	TOTAL	**14,317**	**1,097**	**14,930**	**47**	**350**	**30,741**	**100.0**

SUMMARY OF NATIONAL HEALTH EXPENDITURES BY SOURCE (1997)

	MOH/LGs	Other public	Households	NGOs	Other private	Total
National health expenditures (Rs. Million)	13,673	545	14,930	37	350	29,535
National health expenditures (% of GDP)	1.6%	0.1%	1.7%	0.0%	0.0%	3.4%
Per capita health expenditures (US$)	$12.80	$0.51	$13.98	$0.03	$0.33	$27.66
Percentage of total by source	46%	2%	51%	0%	1%	100%

4. Results

NATIONAL EXPENDITURES FOR REPRODUCTIVE HEALTH SERVICES

National health accounts have been prepared for both countries. In the case of Egypt, they already existed, and in Sri Lanka this study contributed to their preparation. Household survey data, facility costing studies and detailed budgetary analysis have been used to isolate and quantify items of RH-related expenditure in the NHA. In doing so, the same definitions of expenditure have been followed in both countries, and similar sets of assumptions have been made. In the analysis for Egypt, a nationally representative household survey data set has been the basis for the estimations or RH spending, while in Sri Lanka the NHA itself has been the center of the analysis, with household survey data being used only to help disaggregate the NHA estimations themselves. The final estimates of reproductive health expenditures are given in Tables 4.1 and 4.2. These are full costs, including both the capital and recurrent costs of providing services. In the case of integrated services, they implicitly include the relevant share of program overheads, supporting infrastructure and other non-service delivery costs.

Total spending on reproductive health services in Egypt in 1994/95 was LE 1,054 millions, or just over 14% of total national health expenditures. In Sri Lanka in 1997, reproductive health expenditures totaled Rs. 3,312 millions, or 11% of total national health expenditures. In both countries, public sources (which include donor assistance) accounted for almost two thirds of total RH expenditures, with the percentage being marginally higher in Sri Lanka. Per capita expenditure levels were US$ 5.29 in Egypt in 1994/95, and US$ 3.10 in Sri Lanka in 1997.

Table 4.1: Reproductive health services expenditures by source, Egypt 1994/95 (LE millions)

Item in reproductive health service package	Public	Private	Total	Percentage of total RH spending
Family planning	99	41	140	13%
MCH	80	5	80	8%
Infant care	189	84	273	26%
Child birth	142	88	230	22%
Other OB/GYN outpatient care	66	200	266	25%
Other OB/GYN inpatient care	53	12	65	6%
TOTAL	**LE 630**	**LE 429**	**LE 1,059**	**100%**
Percentage of total RH spending	**60%**	**40%**	**100%**	

Table 4.2: Reproductive health services expenditures by source, Sri Lanka 1997 (Rs. millions)

Item in reproductive health service package	Public	Private	Total	Percentage of total RH spending
Family planning	214	52	266	8%
MCH	225	17	242	7%
Infant care	521	238	759	23%
Child birth	542	288	829	25%
Other OB/GYN outpatient care	197	348	546	16%
Other OB/GYN inpatient care	466	204	670	20%
TOTAL	Rs 2,165	Rs 1,147	Rs 3,312	100%
Percentage of total RH spending	65%	35%	100%	

SENSITIVITY ANALYSIS

Clearly, these estimates would differ with the assumptions made. However, the overall level and pattern of spending are not that sensitive to variations in the assumptions. Table 4.3 presents a sensitivity analysis for the final expenditure estimates with variation in the two most important and most questionable assumptions made. These were the percentages of inpatient and outpatient clinical service costs due to obstetric and gynecological cases (excluding delivery), which were assumed to be 5% and 6% respectively. The table shows the estimates of final expenditures in Egypt recomputed assuming the inpatient share was either 2% or 7%, and the outpatient share was 4% or 8%. As is clear, regardless of the assumptions, the total level of RH expenditures lies in the range US$4.63 – 5.84 per capita.

Table 4.3: Sensitivity analysis for estimate of total RH expenditures in Egypt (percentage share of each item and total per capita dollar cost)

Outpatient share of OBGYN costs	**6%**	**4%**	**4%**	**8%**	**8%**
Inpatient share of OBGYN costs	**5%**	**2%**	**7%**	**2%**	**7%**
Family planning	13%	15%	14%	13%	12%
MCH	8%	9%	8%	7%	7%
Infant care	26%	29%	28%	25%	23%
Child birth	22%	25%	23%	21%	20%
Other OB/GYN outpatient care	25%	19%	18%	32%	30%
Other OB/GYN inpatient care	6%	3%	9%	2%	8%
Total expenditures (LE millions)	**1,054**	927	992	1104	1169
Total expenditure (US$ per capita)	**$5.29**	$4.63	$4.96	$5.52	$5.84

COMPARISON OF EXPENDITURE LEVELS BETWEEN EGYPT AND SRI LANKA

The two per capita expenditure levels of US$ 5.29 in Egypt in 1994/95, and US$ 3.10 in Sri Lanka in 1997 cannot strictly be compared. They are for different years. In addition, average incomes in Egypt are higher than in Sri Lanka, so we would expect per capita health expenditures to be higher, since input prices will be higher. Even if we controlled for income differences, some differences would be expected simply because of the differences in potential demand for different services. The percentage of women in Egypt who are in the reproductive age group (15-49 years) is similar to that in Sri Lanka, but a smaller percentage of women in Sri Lanka are married and thus exposed to the risk of conception. Similarly, the birth rate in Sri Lanka is significantly lower than in Egypt, so the potential demand for childbirth services or MCH and infant care services will be correspondingly less. Table 4.4 compares expenditures levels in the two countries controlling for differences in the birth rate , the percentage of the population who are married women in the age group 15-49 years, and the differences in income levels. The expenditure levels are standardized in 1995 US dollars assuming that Sri Lanka's population structure and income in 1997 were similar to that of Egypt in 1994/95.

What is remarkable is that, when adjusted, the expenditure levels in the two countries are very similar: $5.29 compared with $4.94, although total expenditures in Egypt are still higher. The

higher level of per capita spending is due to higher levels of private spending in Egypt, since Sri Lankan government spending is actually higher than in Egypt. In general, we cannot conclude that expenditure levels in the two countries are significantly different when potential need is taken into account. Nor can we conclude that the higher level of RH service provision in Sri Lanka is achieved with higher expenditures.

Table 4.4: Reproductive health expenditures by source in Egypt and Sri Lanka (standardized dollars)

	Egypt			Sri Lanka		
Item in reproductive health service package	**Public**	**Private**	**Total**	**Public**	**Private**	**Total**
Family planning	0.50	0.20	0.70	0.27	0.07	0.33
MCH	0.40	0.02	0.43	0.36	0.03	0.38
Infant care	0.95	0.42	1.37	0.82	0.38	1.20
Child birth	0.71	0.44	1.15	0.85	0.45	1.31
Other OB/GYN outpatient care	0.33	1.00	1.33	0.31	0.55	0.86
Other OB/GYN inpatient care	0.26	0.06	0.33	0.60	0.26	0.86
Total	**$3.15**	**$2.14**	**$5.29**	**$3.21**	**$1.73**	**$4.94**

Note: All expenditures adjusted by ratio of nominal income levels measured in current dollars. Family planning, other obstetric and gynecological service expenditures adjusted by difference in ratios of population who are married women aged 15-49 years. MCH, infant care and childbirth expenditures are adjusted by ratio of birth rates.

Comparison of family planning costs with international studies

This study does not attempt to estimate the cost per couple-years of protection of family planning services in either country. However, a crude user cost can be estimated as the total cost of family planning services per married woman of reproductive age using modern contraceptive methods.[12] In 1997, the total cost per user of modern methods was $3.60 per user in Sri Lanka taking into account both public and private costs, and $9.06 in Egypt in 1994/95. The user cost in Egypt is somewhat higher than previous studies, which is consistent with the fact that this cost estimate includes all service support costs. The Sri Lankan user cost is quite low, and would appear to be substantially lower than the lowest user cost reported by Janowitz (1993), which was $4.70 in Colombia.

COMPARISON OF THE COMPOSITION OF COSTS

Given that the actual levels of spending are similar, it even more notable that the patterns of costs and financing are also similar. In both countries, family planning and MCH services account for only a small proportion of RH costs – less than 21% in each case, and this finding is robust to the assumptions that are made, as the sensitivity analysis demonstrates. Childbirth is in fact the largest discrete cost component in the provision of RH services, accounting for 22% and 25% of total costs in Egypt and Sri Lanka respectively.

[12] This overestimates the average cost per user of all methods, since in Sri Lanka a high percentage of married women are reported to use traditional methods.

Obstetric and gynecological services other than for childbirth and MCH services account for more than half of the remaining costs. Taking inpatient and outpatient services together they account for 31-36% of all RH costs, again more than for family planning and MCH services combined.

We should be cautious in drawing conclusions about the ideal pattern of spending in Egypt, given that most mothers do not receive full antenatal and postnatal care, and since most mothers do not deliver in facilities. However, in Sri Lanka utilization of these services is almost universal, and a similar pattern of costs is observed. This strongly suggests that in any package of RH services which aims to provide full coverage, the provision of services for childbirth and for routine obstetric and gynecological care will be the most important from a cost perspective. Resource mobilization for family planning and for MCH services is probably of less importance. This does contrast with the pattern of international funding which is mostly targeted at family planning services, and gives minimal support to safe motherhood and inpatient services. Table 4.5 compares the pattern of RH spending in the two countries with the reported breakdown of international donor expenditures for relevant services in 1990. We lack similar data for donor expenditures after 1995, but it would probably not be unfair to assume that the pattern of expenditures has not changed much, despite the widespread commitments after ICPD-5 to integrated RH services.

Table 4.5: Distribution of donor spending for RH in 1990 compared with RH costs in Egypt and Sri Lanka

Percentage of costs in Egypt & Sri Lanka		Percentage of health and population disbursements that can be classified	
Service item	***Share of RH costs***	***Program item***	***Share of disbursements***
Family planning	8 - 13%	Population programs	59%
MCH	7 - 8%	MCH	23%
Infant care	23 - 26%	Child survival	18%
Child birth	22 - 25%	Safe motherhood	<1%
Other OB/GYN inpatient care	6 - 20%	Hospitals	1%
Share of RH costs	75 - 84%	Share of health disbursements	38%

Source: Calculated from Michaud and Murray (1994).

COMPARISON OF FINANCING PATTERNS

The pattern of financing of each of the items in our RH service package is quite similar in the two countries. Table 4.6 shows the relative public and private contributions to funding of each item of service in the two countries. Although public financing is the dominant source of financing for RH services in both countries, its role differs systematically for each service item. Public financing and provision dominates for most types of family planning, MCH services, childbirth, and general obstetric and gynecological inpatient care. Private provision and public financing is dominant for some supply methods of family planning. For general obstetric and

gynecological outpatient care, private provision and financing is dominant in both countries, accounting for approximately two-thirds in each case.

Table 4.6: Relative contributions of public and private financing in Egypt and Sri Lanka

	Egypt		Sri Lanka	
Item in reproductive health service package	**Public**	**Private**	**Public**	**Private**
Family planning	71%	29%	80%	20%
MCH	94%	6%	93%	7%
Infant care	69%	31%	69%	31%
Child birth	62%	38%	65%	35%
Other OB/GYN outpatient care	25%	75%	36%	64%
Other OB/GYN inpatient care	81%	19%	70%	30%
Total	**60%**	**40%**	**65%**	**35%**

MCH and infant care services

In both countries, public financing accounts for more than 90% of all funding for MCH services, which are mostly prenatal and postnatal care. In Egypt, there is recognized to be a low level of demand for antenatal care services by mothers. However, this does not appear to be the reason for the low level of private financing, since even in Sri Lanka where use of antenatal care services is universal, private provision and financing of MCH services is low. Table 4.7.a and Table 4.7.b give the breakdown of family planning, MCH and immunization visits and out-of-pocket costs by public and private provider as reported in SLHHS-91. Not only are over 90% of visits to the public sector, but the bulk of out-of-pocket-spending also takes place during visits to the public sector. Even where demand for these services is high and where utilization of private doctors is also substantial as in Sri Lanka, MCH and infant care services are still predominantly publicly provided.

The reason for this might be inferred from the first-round results of the IPS-PCS 2000.[13] The first round of this reveals that while the majority of private clinic doctors are trained and able to provide MCH and infant care services, the percentage of their patients actually receiving these services has declined since the early 1990s. The results indicate that for these services, the public sector has been taking market share from the private sector during the last decade. This is despite presumably willingness to pay for other medical services on the part of households; private doctors satisfy almost half of all demand for outpatient services in Sri Lanka. One hypothesis is that in the case of MCH and infant care services, integrated provision by MOOH units offers mothers convenience and an assurance of quality that is sufficient to overcome the usual quality differentials which push better-off consumers to the more-expensive private doctors. It may well be that for the very specific services offered by MOOH units, all of which require some special training, equipment and commodities, the public sector has some inherent comparative advantages through economies of scale in the logistics involved.

[13] IPS Private Clinic Survey 2000 is a nationally representative survey of private clinic doctors in Sri Lanka being carried out during 2000 by IPS Health Policy Programme. The survey is collecting information on medical practitioners, including a full profile of services offered, as well as information on a sample of patient consultations for each doctor.

Table 4.7a: Preventative health visits and out-of-pocket costs by type of provider visited, Sri Lanka 1991

	Share of visits		Share of out-of-pocket costs	
Type of visit	**Public**	**Private**	**Public**	**Private**
Family planning	92%	8%	76%	24%
MCH	90%	10%	31%	69%
Infant care	96%	4%	86%	14%
Total				

Source: IPS analysis of SLHHS-91 data.

Table 4.7b: Average out-of-pocket cost for preventative health visits by type of provider visited, Sri Lanka 1991

	Average cost per visit	
Type of visit	**Public**	**Private**
Family planning	Rs. 22	Rs. 80
MCH	Rs. 2	Rs. 46
Infant care	Rs. 5	Rs. 19

Source: IPS analysis of SLHHS-91 data.

Family planning

Family planning is predominantly publicly provided and financed in both countries. This is despite the existence of well-established contraceptive social marketing programs in both countries. The reasons are not hard to explain, and seem to be comparable with the public dominance in family planning in most other developing countries. For clinical methods, such as IUDs, the public sector is the dominant provider in both, and this advantage stems from the logistical advantages that the public sector has in delivering such a technology.

In the case of oral contraceptive pills, the private sector is the dominant provider in Egypt, unlike in Sri Lanka, although in both countries the private sector plays a more important role in provision of supply methods (Table 4.8). Nevertheless, in both countries, the predominant source of funding for this type of contraceptive remains the public sector, since private provision involves largely the sale of highly subsidized products. EDHS-95 data indicate that the predominant reason for choice of public suppliers in Egypt in the case of oral contraceptive pills is lack of knowledge of other suppliers (56%), followed by convenience of supply (13%). It is unclear what impact price differentials have since only 8% of users reported price as being the factor in their choice of a public sector provider.

Price differentials may not be that important in determining the overall level of demand for family planning services. Family planning services are the only service, which the Sri Lankan MOH does not officially provide free, despite the high levels of contraceptive prevalence. Demand is clearly more important a factor. However, that is not to say that price does not have some impact on choice of provider. During 1998, donor subsidies for Sri Lanka's contraceptive social marketing program were eliminated. This program run by FPASL had necessarily to become fully cost-recovering, and raised prices accordingly. This led to some reduction in demand for FPASL distributed contraceptives, as users switched to cheaper MOH supplies.

Table 4.8: Source of supply for contraceptive methods, Egypt and Sri Lanka (%)

	Egypt (1995)		Sri Lanka (1993)	
Type of contraceptive	Public	Private	Public	Private
Pill (supply method)	8.1	88.6	56.3	26.6
IUD (clinical method)	44.5	55.1	91.3	5.2
Injectables (supply method)	55.8	40.4	70.9	24.1
Female sterilization (clinical method)	51.8	48.2	92.9	3.4

Source: Analysis of EDHS-95 by Eltigani E. Elitigani, and SLDHS-93 reports. Note that numbers do not sum to 100%, because of 'others' and 'don't knows'.

Childbirth services and other inpatient obstetric and gynecological care

Childbirth services are predominantly publicly funded in both countries, and the proportion is similar in each case. The reason for this would appear to similar to the reasons for the dominance of public financing in all inpatient services in both countries, as well as in most other developed and developing countries. Inpatient services are predominantly publicly funded: 67% in Sri Lanka, and 69% in Egypt. Inpatient treatment is relatively expensive and most households cannot afford the high costs involved in an episode of hospitalization without access to insurance. With the lower effective demand for private hospital services, the provision of private hospitals is limited in both countries outside the Cairo and Colombo metropolitan areas. So inpatient treatment is predominantly in public facilities in both countries, especially in rural areas.

Childbirth should not be any different, and so one would expect that most mothers would choose a public provider for admission when delivering. To the extent that fertility is higher amongst lower-income families, public provision of free delivery services is also likely to be redistributive in terms of net income, if poorer mothers make equal use of inpatient services. While this is the case in Sri Lanka, there are sharp differentials in the use of institutional facilities for childbirth by socioeconomic status in Egypt. Thus while poorer Egyptian mothers may have higher fertility, they are less likely to use publicly-subsidized services for child birth, and when they do use public facilities, they are more likely to be using lower-cost facilities. Consequently the distribution of MOH subsidies for inpatient childbirth is distributed in a different direction to those of births in the population (Table 4.9).

Table 4.9: Distribution of births, MOH deliveries and MOH spending for childbirth by expenditure quintiles, Egypt 1994/95

Per capita expenditure quintile	Percentage of births	Percentage of deliveries in MOH	Percentage of MOH inpatient child birth spending
Poorest	26	12	10
2	22	22	21
3	19	29	27
4	17	25	32
Richest	15	11	10

Source: Estimated as described in text. Percentage of births estimated as percentage of children aged less than 1 year by quintile, in absence of direct birth history information. Per capital expenditure quintiles refer to the ranking of households according to average per capita expenditure on all goods and services.

High rates of maternal mortality are a particular problem in Egypt. Most maternal deaths occur as a result of complications that occur during labor, when it is usually too late to transfer a

mother to hospital (CAPMAS and Unicef, 1993). Many countries, including Sri Lanka, have attempted to use antenatal screening to reduce the number of maternal deaths by identifying high-risk mothers. However, as is now well known this strategy has limitations since the majority of maternal deaths will occur in mothers who will be classified as low risk, since it is difficult to predict with great sensitivity those who will die. In Sri Lanka's case, the limitations of this strategy were realized in the 1970s, and MOH adopted a deliberate policy of positively encouraging all births to take place in hospital. This was successful both in increasing the numbers of births taking place in medical institutions, and in reducing maternal mortality. Although maternal mortality data in both countries is somewhat suspect as regards quality, the maternal mortality rate has fallen faster in Sri Lanka in the past two decades than in Egypt, and the actual rate appears to be one quarter the level of Egypt's level.

The problem in Egypt's case is that most mothers still do not desire to give birth in an institutional setting. A large increase in institutional delivery consequent to raising demand might raise questions as to the cost. These results do not suggest an immediate solution to this, other than that improved efficiency in Egyptian hospitals offers more potential for resource mobilization than simply increasing budgets. Sri Lankan MOH hospitals deliver almost 75% more children a year than Egyptian MOH hospitals, despite consuming less than half the financial resources. At the same time, Sri Lanka does spend more per capita on a standardized basis than Egypt on providing inpatient services for childbirth. Although increasing spending on maternity wards and delivery facilities may not to be the complete solution in Egypt's case, any associated increases in quality might play a part in increasing demand for those services.

Other obstetric and gynecological outpatient services

This category of services in both countries is predominantly privately funded, 75% in Egypt, and 64% in Sri Lanka. Many of the reasons, which explain public sector predominance in the financing of other RH services, do not apply in this category. Most outpatient treatment for reproductive health problems is not expensive, and so private funding does not depend on the existence of insurance mechanisms. Unlike family planning and many MCH services, private practitioners with minimal inputs and supplies can manage most reproductive health problems, and so public sector facilities do not have inherent advantages in logistical arrangements over private providers. Another difference is that with MCH, prenatal and postnatal services, there is considerable potential for public sector program staff to achieve high utilization levels by careful out-reach to and follow-up of target groups, such as pregnant women or newborns. Much of this type of activity is routine, and thus lends itself to efficient bureaucratic management procedures. However, demand for general outpatient care of other gynecological problems is not so predictable, as it is much more client-initiated and individually specific, and the target group is potentially the whole reproductive age group. Quality differentials as perceived by consumers may also be more likely to play a role with these services, especially since confidentiality and trust in the provider-patient relationship may be more important. In addition, given the state of health knowledge in the community, it is quite likely that many women will not recognize that they have gynecological problems *per se* (Younis et al, 1993), and so they are more likely to choose providers as they would with other health problems.

The outpatient treatment of general gynecological problems does seem therefore to be suited to private provision. In countries where most routine outpatient treatment is obtained from

private providers, probably most, it should not be too surprising to find that this type of care is obtained from the same providers. Improving access to quality gynecological services must thus entail improving the quality of these private providers in both Egypt and Sri Lanka, and probably many other countries too. Even where other high quality RH services are provided by the public sector, as appears to be the case in Sri Lanka, women will still tend to take their gynecological problems to the providers who provide their families with most other routine care, even if in the case of the private sector it means paying higher prices. Improving access to this component of RH services must thus involve improving the quality of service provision by most providers. It also suggests that expecting government providers to successfully integrate all components of the RH service package may not be a worthwhile goal. Policy needs to reflect the diverse choices that women make in utilizing medical services. Instead of expecting women to come to the service provider, it may be more effective to concentrate on improving quality of service provision by those providers women already prefer to use.

COMPARISON OF COSTS WITH SERVICE OUTPUTS

The results indicate that the relative magnitudes of expenditure flows into RH services in both countries are in fact comparable. However, the levels of service provision each achieved with these expenditures are not. With lower nominal and adjusted national levels of expenditures, Sri Lankan women receive and have access to substantially greater RH services in all areas. Table 4.10 contrasts several indicators of RH service provision in the two countries. Figure 4.1 gives the percentage ratio of some of the indicators in Egypt to the same indicator in Sri Lanka. With the exception of provision of modern methods of family planning, actual use of RH services in Egypt is one quarter to one half of levels in Sri Lanka. Overall use of modern health facilities by Egyptian women in the reproductive age group is also substantially lower, with outpatient utilization rates less than 80% of Sri Lankan rates, and admission rates only one quarter of Sri Lankan rates.

The higher levels of provision in Sri Lanka are achieved despite lower levels of expenditure and a far lower ratio of physicians to population. This finding is not surprising to those familiar with both systems, given that Sri Lankan government hospitals are recognized to be highly efficient in the use of resources (Hsiao et al, 2000), whilst Egyptian health facilities are known to be extremely inefficient (Salah, 1997 a, b, c).

To some extent, the lower levels of provision reflect lower levels of demand for services. The phenomenon of high levels of reproductive morbidity in Egyptian women alongside low levels of seeking care has been well documented (Younis et al., 1993). However, if the marginal cost of the increased service provision in Egypt necessary to bring provision levels up to Sri Lankan levels was equivalent to current average costs in Egypt, this would require an increase in RH expenditures of 50-100%. It is unlikely that such resources can be mobilized either from public or private sources. The comparison of Sri Lankan data with Egyptian data strongly indicates that if higher levels of RH service provision are to be achieved in Egypt, resource mobilization must focus on increasing efficiency in service production, in both public and private sectors. The Egyptian health care system operates with considerable over-capacity. Government hospitals report occupancy rates less than 60% and private doctors report seeing small numbers of patients each day (Berman et al, 1998). There is thus almost certainly potential for increasing service delivery without substantial expansion of the existing infrastructure. However, substantial quality improvements would presumably be required in

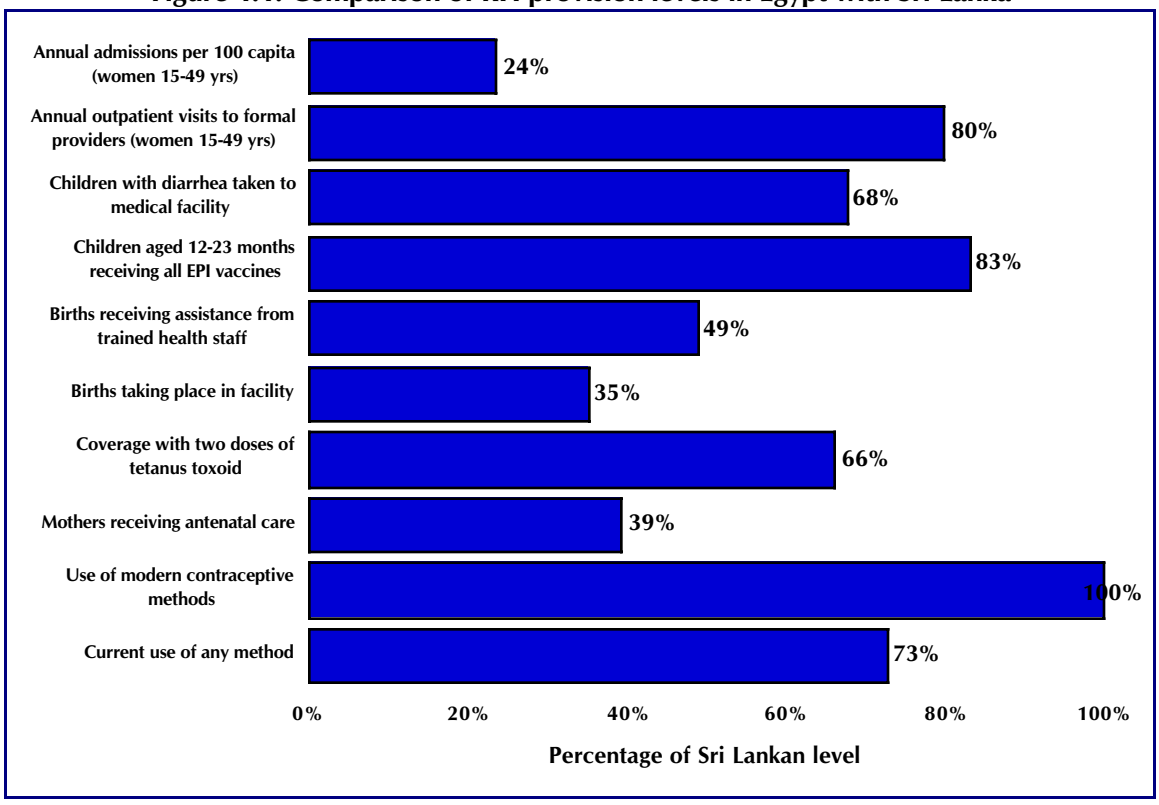
order to increase demand for services, although clearly this is not the whole explanation for levels of demand.

Table 4.10: Comparative indicators of RH service provision in Egypt and Sri Lanka, 1990s

Indicator	Egypt	Sri Lanka
Family planning use in married women		
Current use of any method (%)	48	66
Current use of modern methods (%)	46	44
Maternal care		
Mothers receiving antenatal care (%)	39	99
Coverage with two doses of tetanus toxoid (%)	43	65
Births taking place in facility	33	94
Births receiving assistance from trained health staff (%)	46	94
Infant and child care		
Children aged 12-23 months receiving all EPI vaccines (%)	79	95
Children with diarrhea taken to medical facility (%)	48	71
Stunting in children aged under 5 years (%)	30	24
Wasting in children aged under 5 years (%)	5	16
Access to general medical care		
Annual outpatient visits to formal providers (women 15-49 yrs)	2.8	3.5
Annual admissions per 100 capita (women 15-49 yrs)	4	17

Source: EDHS-95, SLDHS-93., and authors' estimates from EHHEUS and IPS data. Most figures are for Egypt – 1995, and Sri Lanka - 1997.

Figure 4.1: Comparison of RH provision levels in Egypt with Sri Lanka



5. Implications

The Cairo Population Conference set an ambitious agenda for reproductive health. It was always recognized that this agenda implied substantial resource commitments both by countries and by donors. At the same time, the size of those resource requirements and their implications for additional resource mobilization were uncertain and potentially contentious. At the center of this uncertainty lies lack of clarity, or perhaps, more accurately, lack of consensus as to what was being called for in terms of services in the post-Cairo era. Relatedly, there has been an almost complete lack of reliable data on what current services actually cost, especially when considered in the context of the integrated service package that is the essence of the post-Cairo agenda. With little data on what services actually cost, it has not been surprising that projections of resource requirements have diverged widely, and that the potential benefits, if any, of integrated service delivery have remained unclear.

There has been little progress in improving the availability of comparable and consistent cost data for reproductive health services in the second half of the 1990s. This should not be too astonishing, given that for most developing countries, we lack estimates even of overall health expenditures, let alone those on reproductive health services. At the same time, an increasing number of developing countries have started to develop internationally comparable measures of health spending using a national health accounts framework. This development parallels efforts by OECD countries to standardize available expenditure estimations, and increased interest on the part of many agencies, including WHO and World Bank, in standardized health expenditure information. Such developments offer an unprecedented opportunity to better define the resource implications of the wider reproductive health services package.

The national health accounts framework provides the basis for the production at relatively low cost of internationally consistent estimates of expenditures on reproductive health services. The analysis of Egypt demonstrates that relatively simple national health accounts can be refined to obtain such estimates with the use of secondary data and little effort. The Sri Lankan analysis goes further in demonstrating the potential for directly incorporating reproductive health concerns into a country's national health accounting system. This latter strategy not only further reduces the potential cost of making estimates, but also makes it feasible to monitor trends in reproductive health services expenditures with time. Sensible modifications to incorporate reproductive health concerns into national health accounting classification systems make those very systems more useful and policy relevant. Concerted efforts should be made to incorporate such modifications into emerging international standards for national health accounting.

The empirical findings of this study point to three important messages:

1. **The most substantial resource demands are not in family planning and MCH services, but in providing safe child birth and routine obstetric and gynecological services to women**
2. **Reproductive health services are not all the same. They differ in their characteristics, and in the choices women make in using them. This necessitates different strategies in provision and financing.**
3. **The route to universal reproductive health services will not lie in substantial new resource mobilization, but in addressing widespread inefficiencies in many health systems.**

Despite the emphasis on family planning and MCH services by many policy makers and agencies, the greatest resource demands are in providing safe child birth and routine obstetric and gynecological care to women. Egypt and Sri Lanka are two countries with quite different population situations, and with correspondingly different interactions with international population donors. Egypt receives substantial bilateral assistance for its population effort, and Sri Lanka none. Yet in both countries, the expenditures on family planning and MCH services account for less than one quarter of total reproductive health services spending. The greatest needs are in financing childbirth and routine obstetric and gynecological care. These do require real resource commitments, without which high maternal mortality rates and the emerging reality of widespread gynecological morbidity cannot be addressed.

The various elements in the reproductive health services package are not the same from a policy perspective. They differ considerably in their innate characteristics and in the demand for their services. The key MCH services and clinical methods of family planning require a minimum of logistic and managerial resources to be delivered effectively to most women. These characteristics give well-organized public sectors considerable comparative advantage in supply. The policy issue for these services in the poorest countries will be how to ensure efficient public sector delivery, if need be through expanded supply of integrated MCH services and family planning services. Supply methods of family planning can be distributed largely through private provision, but there is little evidence that current levels of contraceptive prevalence can be maintained without continued public subsidy for social marketing programs. Childbirth and most inpatient services cannot be funded predominantly from private sources in most poor countries without the risk that many mothers will go without. Strong insurance arguments favor substantial public resource commitments to making available good quality basic inpatient services to most of the population. Recent literature has highlighted the necessary presence of linked good quality hospital facilities to make effective community-based efforts to reduce maternal mortality. Eliminating the scourge of unnecessary maternal deaths may not be possible without renewed commitment to decent inpatient services for women. In contrast, routine outpatient gynecological care for women has no characteristics favoring public supply, other than the need to subsidize treatment for the poorest. In fact, women choose to obtain such care when given the choice in the same way they choose services for other medical problems facing their families. Recognizing the legitimacy of these choices means that policy should not focus on providing these services combined with family planning and MCH services, but in improving the overall provision of routine medical services by both public and private sectors. This may also imply a policy focus on improving quality of private provision.

The final message is that countries with similar levels of expenditure can achieve very different reproductive health outcomes and levels of service provision. Sri Lanka spends less than Egypt on reproductive health services, yet achieves almost universal coverage with relatively good quality services. Egypt cannot realistically hope to reach those some levels of coverage without improving the productivity of its health services. Problems of inefficiency and poor quality in reproductive health services are usually not isolated issues. Such problems tend to go along with more widespread inefficiencies in a country's health system. The ultimate goal maybe to ensure adequate provision of reproductive health services. To do this at costs that countries can realistically afford and that taxpayers and households are willing to pay for requires that more fundamental problems in health system inefficiency must be addressed. The goal of universal reproductive health care cannot be divorced from that of building sustainable and effective health systems.

Annex A: A Review of Egypt Population Policy

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DEVELOPMENT OF NATIONAL POPULATION POLICY

Awareness by demographers and social scientists about Egypt's population problem was evident early in the 1930s (Ibrahim 1995). However, formal governmental involvement started only in the early 1950s. In 1953 the National Committee for Population Affairs (NCPA) was formed. The formation of NCPA led to the establishment of 20 clinics by 1958 (Stycos et al. 1988). These clinics were regarded as experimental and when queried by the National Assembly about its position on birth control the government replied that it had not yet taken a definite decision on the question of birth control. The clinics were turned to voluntary organizations (Waterbury 1972, cited in Stycos et al. 1988). In the early 1960s the government made a more explicit commitment on the population question when it stated in the National Charter that "high growth rates represent the most dangerous obstacle that hinders efforts to raise the standard of living of the Egyptian people" (cited in Ibrahim 1995).

Four years later, 1965, the Supreme Council for Family Planning and the Executive Board for Family Planning were formed. The Board was charged with planning, coordinating, and monitoring the family planning services. The government declared its first population target of reducing the crude birth rate (CBR) by 1/1000 per annum. It also declared its support for family planning efforts pledging to prepare a network of family planning service delivery outlets. However, the government was preoccupied at the time with pressing economic and military concerns. It invested little other than rhetoric during this period.

The Supreme Council issued National Population Policy (covering the period 1973-1982), the first in 1973. The main target of the policy was to reduce the CBR from 34/1000 in 1973 to 24/1000 in 1982. The policy emphasized that population growth was dependent, in part, on socioeconomic development and that the manipulation of socioeconomic change should itself be an element in a comprehensive population policy. To achieve the policy objective of reducing the CBR, nine programmatic emphases were announced. These were:

- Raising the general standard of living of the family.
- Expanding functional education.
- Upgrading the status of women and increasing their participation in the labor force.
- Mechanization of agriculture and spreading cottage and agro-industries.
- Reduction of infant and child mortality.
- Extension of social security.
- IEC programs supportive of change in norms and adoption of family planning.
- Upgrading family planning services.

In 1975, the policy was further articulated and four dimensions of Egypt's population problem were clearly identified: rapid growth, spatial mal-distribution, low-level characteristics, and uneven structure (NPC 1994 cited in Ibrahim 1995).

A second document was issued in 1980. It was titled "National Strategy Framework for Population, Human Resource Development and the Family Planning Program". This and related documents set clear targets and definite measures for their achievement according to a specified time schedule. The objective of the Strategy was to reduce the CBR by 20/1000 by the year 2000. To achieve this objective the strategy stressed three programmatic areas:

1. Upgrading family planning services that are integrated with relevant social activities.
2. Instituting community based socioeconomic programs conducive to family planning practice.
3. Strengthening population education and IE_C programs aiming at changing family size norms and encourage the use of modern contraceptives.

These policy directions were programmatically formulated within the Population and Development Program (PDP). PDP started in 1979 and was nationally extended to cover 70 percent of the total rural population aiming at: The promotion of family planning and improvement of services; mobilizing local resources and human participation to increase the pace of socioeconomic development; and upgrading of management capabilities at the local level (Stycos et al.1988).

A mark of the commitment of the Egyptian government commitment to tackle the issue of population was the holding of the National Population Conference in 1984 and the establishment of the National Population Council (NPC) shortly thereafter to replace a succession of lower-level governmental bodies. The president himself headed the NPC board in its early years (Ibrahim 1995). In 1986 NPC formulated the third national population plan, together with a 'quantitative objective' document. . This plan came as a response to the growing concern that previous efforts failed to achieve any progress. The plan reiterated the description of the population problem of Egypt and re-emphasized the interaction between population and development factors. The plan recognized seven principles, expected to lead to the achievement of the same previously stated objectives in past documents. These principles include:

1. Recognition of the right of each family to decide on the appropriate number of children to have and their right to obtain information about means to enable them to achieve their decision within the framework of religion and cultural norms and values of the society.
2. Avoidance of the use of abortion or sterilization as means of family planning.
3. Recognition of the individual right to migrate within, and outside the country.
4. Adoption of positive incentive system based on increased awareness of the individual and the community, and avoidance of methods of coercion, negative incentives or punitive methods.
5. Education, cultural and health development of the individual to help them become a source of productive energy.
6. Local government bodies are considered the base for implementation of all programs.
7. Encouragement of voluntary efforts and community participation in the solution of the problem.

The policy identified 11 programmatic areas that can lead to the achievement of its objectives. These were:

1. Dissemination and upgrading of family planning services, with special emphasis on rural areas.
2. Upgrading of health services to lower maternal and infant mortality rates.
3. Preparation of an information program, which stresses more the face-to-face communication than on mass media channels, and aiming at changing values and norms thereby achieving changes in reproductive behavior.
4. Develop the roles of mosques to become a source of radiation in the religious, education, and health fields.
5. Development of population education in all stages of education.
6. Raise status of women and encourage their participation in public life.
7. Design clear strategy for population redistribution in Egypt aiming at a relative equilibrium between population in the delta and Nile Valley, on the one hand, and Egypt's deserts on the other.
8. To raise the standard of living of the rural population through comprehensive development programs to improve Egyptian villages and encourage settlement therein to curb rural-urban migration.
9. To limit pull factors in major cities and in particular he nation's capital by halting further industrial expansion in Greater Cairo and further labor recruitment in the capital unless real employment opportunities exists.
10. Design a manpower plan correlated with education and training policies to face the real demand for different categories of manpower in the internal and external labor markets.
11. To endeavor to eradicate illiteracy and achieve complete absorption of school age children in compulsory education and limit school dropouts.

The third plan prepared by NPC was far more advanced than previous plans in its targets and programmatic implementability, and in fact many of its objectives were achieved on time or even before the set dates. A factor contributing to the success of the plan was its integration into the National Five-Year Plan of 1987/88-1991/92, which meant among other things a parliamentary debate enacting it into law, and specific allocation of budgetary resources for its implementation (Ibrahim 1995)..

In 1991 the National Population Council produced a document specifying a national population policy for the period 1992-2007. The basic objectives of the plan were: Reduction of population growth rates; improvement of population characteristics; and achievement of better spatial distribution of the population (National Population Council 1991).

The plan was to reduce the CBR from 32.2/1000 in 1991 to 27/1000 in 1997 and to 25/1000 in 2007. The natural rate of increase of population was expected to decline from 2.5 percent in 1991 to 2 percent in 1997 and to 1.8 percent in 2007. Regarding TFR, the plan aimed at reducing the TFR from 4 children to 3.5 children by 1997 and to 2.7 children by 2007. To achieve this reduction in fertility, contraceptive prevalence should increase from 48 percent in 1991 to 53 percent in 1997, and to 63 percent in 2007. Furthermore, contraceptive efficiency should also be improved. The efficiency of the pills was planned to increase from 80percent in

1991 to 90 percent in 2007. For the IUD the efficiency was planned to improve from 90 percent in 1991 to 95percent in 2007. For other methods the increase will be from 70percent to 75 percent by the end of the plan period.

To realize these objectives, the plan outlined the following procedures:

1. *Reduction of fertility rates* through availability of family planning services with special emphasis on deprived areas, improvement of quality of services, and availability of appropriate mix of contraceptives.
2. *Mother and child care*. Development of comprehensive plans for child health care; improvement of quality of mother and child health care services with greater utilization of special projects to increase overall demand for the services specially in deprived areas; and promotion of effective procedures to raise health and reproduction awareness of mothers in issues related to health of mother and child.
3. *Protection of the family*. Review of legislation that affect reproductive norms and promote legislation that support small family norms, promotion of expansion of social security coverage and old aged services, and raise children education values among parents.
4. *Raising women's status*. Raising educational and social position of women to enable them to effectively fulfill their roles, increase employment opportunities for women, and continue with adult education efforts to reduce illiteracy especially among rural women.
5. *Youth and development*. Development of social and educational programs to raise their skills, disseminate and integrate concepts of small families and integrated population concepts in educational curriculum, and utilize youth support as leaders in population and family planning within their respective local communities.
6. *Education and literacy*. Provision of necessary resources to achieve education objectives of all levels of education, eliminating school drop-out especially among girls, and support local community efforts to confront adult literacy.
7. *Population communication*. Coordinate IEC activities in population programs. Stress the importance of face-to-face communication, as the most effective communication strategy, to promote ideas especially in rural and urban low-income communities. Greater utilization of local informal community leaders in disseminating family planning concepts; and expansion of promotional activities to increase public awareness of family planning centers, clinics, and modern contraceptive methods.
8. *Rural community development*. Raise the quality of life in rural communities to reduce the flow of rural-urban immigration.
9. *Population distribution*. Continue implementation of the Egyptian population map approved by NPC; rationalization of pattern of land use; and application of cost-benefit principles to the resettlement policy and preparation of time schedules and detailed action plan for implementation of this policy including the necessary financial resources.
10. *Environmental protection*. Development of necessary legislation for the protection of human environment, promote public awareness through environmental IEC activities, and encouragement of community participation to support environmental protection and preservation.
11. *Studies and research*. Linking scientific research to policy objectives, setup integrated population management information system at the national and regional levels to be used in the planning and implementation of the population policy.

12. *Management of population programs*. Setup an integrated system for managing population programs that guarantee sound decision making at both central and local levels.

In October 1995, a modified population strategy was developed, based on the recommendation of the 1994 International Conference on Population and Development (ICPD). The ICPD Program of Action recommended a set of interdependent goals and objectives. These included universal access to primary education, with special emphasis to closing the gender gap in primary and secondary education wherever it exists: universal access to primary health care : universal access to a full range of comprehensive reproductive health care services including family planning : reduction in infant, child, and maternal mortality and morbidity. The Program of Action articulated a comprehensive approach to issues of population and development identifying a range of demographic and social goals to be achieved over a 20-year period.

Funding for family planning services is primarily provided by the (GOE) and donor agencies. A study of the cost of family planning activities during the period July 1, 1995-June 30, 1996 revealed that, of the total cost of activities conducted by the not-for-profit sector (L.E 85,619,147) the GOE provided the most funding (58 percent), donor agencies provided 34 percent, while client payments covered 8 percent of the cost. As for the total cost associated with family planning activities conducted by agencies servicing the for-profit sector (L.E 9,991,837), the same study estimated that GOE provided funds to cover 54 percent of this cost, donor agencies provided 27 percent, and the non-public sector provided 20 percent of this cost (USAID/Cairo 1997).

INSTITUTIONAL FRAMEWORK FOR POLICY FORMATION

Reflecting the increasing importance of population issues on the priorities of the Egyptian government was the creation in October of 1993 of a Ministry of Population and Family Welfare. In 1996 a new population sector was created in the Ministry of Health which was renamed the Ministry of Health and Population (MOHP).

The Ministry of Health and Population (MOHP) has the largest role in service delivery through 3700 of its service units in both urban and rural areas (hospitals, MCH centers, health centers and units). In addition to administering these units and training of their personnel in family planning service delivery, the MOHP is responsible for ensuring availability of adequate supplies of all types of contraceptives for MOHP units, those of voluntary organizations, and the general market. Thus, the MOHP is responsible for importation, and local production, of contraceptives; and for distribution of contraceptives to approximately 4000 family planning centers, and to over 9500 pharmacies, to private hospitals and clinics, and to retailers. In addition to the health units directly related to the MOHP, other health care organizations that operated under the MOHP also provide family planning services. These organizations include: Cairo Curative Organization; Teaching hospitals Organization; and Health Insurance Organization.

The Ministry of Social Affairs (MOSA) is responsible for supervising voluntary activities in the field of population and family planning. The MOSA supervise the activities of the Egyptian Family Planning Association, which operate about 450 service delivery units. In addition, the

MOSA provides training of workers and community leaders in the fields of population and family planning, and implement programs in the field of women and development.

Other government ministries and agencies were assigned roles that fall within the scope of their activities. These include: Ministry of Information, Ministry of Education, Ministry of Local Government, and the Central Agency for Public Mobilization and Statistics (CAPMAS). Other institutions play a role in national population programs, mostly in research, technical assistance, and training. These institutions include; Cairo Demographic Center; the Islamic Center for Population Studies and Research of Al_Azhar University; the Population Education Institute of the Workers University; and the Regional Center for Training at Ain Shams University.

Religious organizations, both Muslim and Christian, play a role in encouraging provision of family planning services. Two such organizations are the Coptic Evangelical Organization for Social services (CEOSS), and the Bishopric of Public, Ecumenical and Social Services/Coptic Association for Social Care (BPESS/CASC). CEOSS provides family planning services in 12 governorates through its rural health clinics, mobile clinics, and its community based distribution of contraceptives. The BPESS/CASC provides family planning services through its network of 23 clinics in 11 governorates, mainly in Upper Egypt.

Private physicians, pharmacies, and private hospitals/clinics also play an important role in family planning and health service delivery. Data from recent surveys showed that the majority of modern contraceptive methods users obtain the supply of their methods from private sector sources. Most pregnant women also follow-up on their pregnancy at private sector health facilities.

CURRENT POLICY FRAMEWORK

The population strategy, which was designed following the 1994 ICPD placed greater emphasis on providing reproductive health services and supporting non-governmental organizations and private sector in the development of local communities.

The revised policy is based on the following principles:

1. All individuals are entitled to enjoy the freedom and rights included in national
2. Conventions and the International Declaration on Human Rights.
3. All citizens are equally entitled (regardless of sex) to knowledge, education and technical training that is necessary for development.
4. All male and female citizens have the right to obtain the highest standard of physical and psychiatric health, and the enjoyment of the basic health care service especially reproductive health care. Separate health programs catering for children, adolescents, women, disabled, and the elderly should be designed.
5. All children are entitled to enjoy adequate standard of living. Parents and the Government should be responsible for providing care, guidance, and protection from exploitation.
6. The elderly and disabled population has the right to enjoy care to ensure their participation in economic and social life.

7. The family represents the basis of society. It should receive support and protection, and that the married couple should have the right to receive the information and the methods that help them achieve their desired number of children.
8. All citizens have the right to move within or outside the country, with the emigrants receiving all the care and protection as mandated by international conventions and agreements.
9. Support the participation of women in development activities, and achievement of equality between the sexes in economic, cultural, civil, social, and political activities.

According to this strategy, the MOHP is to blend family planning and maternal and child health services into a broad women's health program. The Population Sector of the MOHP adopted new approaches emphasizing women's health, adolescent care, and male involvement and gender equity. To make services more accessible and more affordable to communities, integration of population services and reproductive health within the primary health care activities was attempted. The strategy concentrates on the areas of health affecting the vulnerable groups: women, children and poor sectors of the community.

During the five years that following ICPD, Egypt continued to build upon its past experiences in the field of Health and Population. Political support for family planning and reproductive health has continued to increase and is reflected in the moral and financial support given to population programs

The implementation of the Egyptian strategy is based on the following framework:

6. The importance of a holistic approach to women's issues and concerns with health and development. Reproductive health issues and development cannot be separated, because they affect and are affected by each other.
7. Attempt to reaching the sectors of the community which still has unmet needs through adoption of approaches ensuring accessibility and affordability of services, increased awareness and knowledge to help proper decision making and informed choice within families.
8. In the case of adolescence, different organizations and stake -- holders in adolescent care are working together to ensure proper approaches, with cultural and social norms acceptable to the community.
9. Gender issues should be approached in a way that includes both men and women. This entailed mobilization of decision makers and community leaders to examine carefully the issues that need to be addressed in order to change gender discrepancies between males and females and to allow women's empowerment and their participation in decision - making.

To achieve improvement in women's health, Egypt has embarked on providing the necessary infrastructure by expanding its service network through the building of 350 new women's health units in rural areas, and upgrading of 1300 units, bringing the total to 4200 units. To reach remote areas, MOHP provided 320 mobile clinics distributed throughout the country, and supported NGO clinics by supplying equipment to increase their participation in service provision. To complete the network Egypt initiated a Private Sector Program to train private sector providers to improve quality of services. MOHP also ensured the continuous supply of RH pharmaceuticals and contraceptives. The MOHP also provided 60 mobile delivery

ambulances either to complete delivery at home or to transfer cases to the hospitals and upgrade 30 Obstetric/Gynecology departments in maternity hospitals.

One of the most important interventions undertaken by the MOHP is the provision of antenatal care through the mobile clinics for the areas and pockets of high maternal mortality. Post-partum services are also provided. The MOHP also devoted effort for manpower development in an attempt to improve quality of services through the Quality Improvement Program implemented since 1996. A program of the family doctors was also implemented to ensure universal coverage of reproductive health services.

To increase knowledge about reproductive health issues, Egypt launched extensive information, education, and communication (IEC) campaigns involving TV, radio, and inter-personal communication. There are 96 monthly hours on TV and radio covering population issues such as adolescent and gender issues. In the field of interpersonal communication MOHP has a grassroots network of about 260 IEC field officers, in addition to 22 A/V vans complete with the necessary equipment for presentations in clinics, seminars, and public meetings.

In the area of population and geographic redistribution Egypt built l3 new satellite cities, and is embarking on development of 3 major land reclamation projects in Sinai and Toshka in Upper Egypt. The new satellites provide job opportunities and settlements away from the Nile valley. However, judging from past experience success in this issue is expected to be limited. Despite the large amounts of public and private investments that were made in past projects they have not attracted more than 7 percent of the targeted population (Ibrahim 1995).

FUTURE POLICY AGENDA

In spite of the great strides taken by the country to achieve the ICPD recommendations there is still the need for more effort for community mobilization to link health with population issues.

There are often large differentials in current use of family planning methods by residence. Data from EDHS95 indicate that contraceptive prevalence among married women in rural Upper Egypt continued to be low (24 percent). Contraceptive prevalence in that region is low even when compared to prevalence rates among married women in rural Lower Egypt (53 percent) and to married women in the Frontier Governorates (42 percent).

The slowing in the growth in contraceptive use is another area of concern despite the fact that contraceptive prevalence has doubled between 1980 and 1995 (from 24 percent to 48 percent). Most of the increase in contraceptive prevalence has occurred during the 1980s. However, contraceptive practice seemed to have reached a plateau since the early 1990s. However, data from the EDHS97 reported an increase in contraceptive prevalence, following a period of virtually no change in contraceptive prevalence between 1991 and 1995. The stagnation in prevalence rates between 1991 and 1995 signals the need to examine the adequacy of the current family planning delivery system. The heavily medically oriented delivery system may needs to be supplemented by a strong outreach program

Another area of concern for the family planning program is the high discontinuation rates among contraceptive method users. It was estimated that one-half of the married women

practicing family planning stop use of their method within two years, and that almost two-fifths of the contraceptive discontinuations were due to side effects, while one-fifths was due to method failure (El-Tawila 1995). This pattern of discontinuation necessitates putting more effort in screening and counseling of prospective users on the appropriate method to be used. Also, expanding contraceptive choice available to women by offering them the opportunity to switch methods rather than discontinue use when they experience side effects associated with the method used.

Despite the emphasis laid on improving maternal health care, the data indicated that many Egyptian mothers do not receive antenatal care, and that the percentage of mothers observing the official policy of "at least four antenatal visits during pregnancy" remained small. This necessitates the design of IEC programs to educate mothers on the importance of antenatal care, and to remove the physical, financial, and social barriers that restrict their access to this service.

Another area representing an important challenge to health policy makers is that, non-trained health personnel assisted the majority of births. This is despite the relative availability of trained health personnel and health facilities.

Financing of health services is another issue that merits consideration. Introduction of health insurance will facilitate the development of the medical care facilities and the addition of new methods of treatment. The MOHP is currently applying a health insurance scheme for students. The scheme has succeeded in providing an improved medical service to about 15.8 million students. Devising schemes to expand coverage of other segments of the population is a challenge that entails both the designing an efficient and affordable insurance system and of a high quality health care service that attracts clients to join such a system.

Annex B: A Review of National Population Policy in Sri Lanka

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DEVELOPMENT OF NATIONAL POPULATION POLICIES

Population policies enacted in Sri Lanka are some of the tools available to the government to improve the welfare and living standards of people. Generally two kinds of population policies can be identified. Firstly, population responsive policies or indirect policies and secondly, population influencing policies or direct policies. Policies concerning educational expansion, food supply, development of towns and cities and resource development are in the first category, while family planning programmes to reduce fertility, public health and nutrition programmes that lower mortality and transportation and industrial planning to influence internal migration are the second.

Population Redistribution

The pattern of spatial distribution of the population in Sri Lanka shows a high degree of unevenness. As Frindley (1977) and Hameed et al. (1977) observed, Sri Lanka is one of the few countries in Asia to implement land settlement programmes consistently for the purpose of relieving the pressure of population on land in the wet zone and increasing the agricultural production. The history of these programmes goes back to 1930s and should be identified as direct policy for population distribution. The Land Development Ordinance enacted in 1935 provided crown land to landless peasants. As a result, during 1953-1969, a total of 70,686 families were resettled in the major colonization schemes in the dry zone. The program on malaria eradication in the mid 1940s and control of communicable diseases also helped to redistribute the people from wet zone to the dry zone as an indirect policy.

The majority of land settlement programmes after 1970 were implemented through the Mahaweli Development Programme (MDP), which targeted a resettlement of 220,000 families in the dry zone in a system of irrigation schemes over 30 years, from 1970 to 2000 (Mendis, 1973). On completion, the accelerated phase of the MDP (1977-83) was expected to settle 140,000 families, creating direct employment for 300,000 people and indirect employment for another 50,000 people. However, by the end of 1992 only 113,853 farmer families were settled (Mahaweli Authority of Sri Lanka, 1993). This disparity between the expected settlement of families and the actual settlement of families is due to the low level of infrastructure facilities in the settlement areas.

To remedy the situation, the government initiated some plans to distribute the resources to the sparsely populated rural sector. The decentralized development strategies have been designed to improve agricultural productivity and socio-economic status and to alleviate poverty among the people in the rural sector. As John and Selvarathnam (1970) and Abeysekera (1981) stated,

the expansion of facilities such as agricultural extension services, banking, marketing, education, network of roads and improved health systems in the rural sector have helped to minimize rural-urban disparities and prevent rural-urban polarization.

As De Silva (1995) observes, another issue to be considered by government of Sri Lanka is the population redistribution due to civil disturbances in war areas of Northern and Eastern Provinces of the country. This has resulted in migration of people to Colombo district and the adjoining districts in which the population density is already at a high level.

Immigration and Emigration

The relative contribution of the two components natural increase and migration increase to the population growth in Sri Lanka has varied over time. From 1871 to 1901, the increase in population due to migration exceeded that due to natural increase. Large-scale immigration of Indian laborers from the 1830s to the country to work on coffee and tea plantations was the main reason for this. In the 1940s, the government paid much attention to control migration to Sri Lanka for permanent settlement, as it had become a major demographic issue. As a result, the Citizenship Act of 1948 and the Indian-Pakistan Residents Act of 1949 introduced an eligibility criterion regarding the obtaining of citizenship of Sri Lanka by non-Sri Lankans. These restrictions imposed by the government on immigration have led to reduction in the number of immigrants. In 1964, another agreement was drawn up between the Prime Ministers of Sri Lanka and India to repatriate 525,000 persons of Indian origin, while Sri Lanka citizenship was to be conferred on another 300,000 over a period of 15 years.

Since employment abroad has become a major source of foreign exchange earning in Sri Lanka, emigration of Sri Lankans from skilled levels has become a recent phenomenon. As a result of the loss of academically and professionally qualified persons through emigration from the beginning of 1970s, Sri Lanka faced a severe shortage of skilled personnel. As this had a major impact on the development of the country, the government was forced to implement policies such as compulsory service for highly qualified personnel to restrict the outflow of professionals. On the other hand, emigration of semi-skilled and unskilled workers to the Middle East countries commenced after 1975. This has become a partial solution for the unemployment problem of Sri Lanka. Because of economic benefits for the individual families and for the government as a whole, the government encourages this emigration to Middle East through several programmes.

Since 1901, the contribution of immigration to the growth of population in Sri Lanka has become less significant. In recent years, immigration has had a negative effect on the growth of population with an average annual net migration rate of –3.1 percent. As a result of the migration policies introduced by the governments, natural increase has become the major contributory factor for the population growth of Sri Lanka in recent years.

Health services

While the population policies on immigration and emigration were introduced and actions were taken by governments from time to time, successive regimes have committed themselves to provide free health services to the people to achieve healthy life and higher longevity. The key factor to the decline of mortality in Sri Lanka was the public sector expansion and

development of health services. Even prior to the independence, the government has taken actions to improve public health facilities and to control communicative diseases. Since 1870s, cholera was controlled mostly through the quarantine measures. In 1926, prevention and curative medicine was amalgamated under the Ministry of Health. The anti-malaria campaign implemented in the late 1940s helped to eradicate malaria and as a result there was a sharp decline in mortality; crude death rate declined from 19.8 in 1946 to 14.0 per 1000 population in 1947.

There was a gradual expansion of primary health care facilities after the 1940s. Expansion of the cadre of the medical and paramedical personnel, replacement of traditional birth attendants by trained midwives and the introduction of medical technology have made major contributions to improving the health system in Sri Lanka, and thereby to the decline of mortality throughout the country. Improvement in the immunization against communicable diseases and antibiotics helped to strengthen the health services. Sanitary improvements such as provision of safe drinking water, sanitary methods of sewage disposal and public health regulations also contributed to the decline of infant and child mortality.

Several actions taken by the government to improve the socio-economic conditions of the country also helped indirectly for the reduction of mortality in Sri Lanka. As it was possible to import food, it contributed to improve the nutrition levels of some segments of the population. The food subsidy program launched by the government for more than three decades has helped to improve the nutritional levels. In addition, it helped to ease out problems of poor families to some extent. Indirectly, the rise in educational attainment especially among females has influenced the decline in mortality. The rise in female literacy rate from 8.5 percent in 1901 to 83.2 percent in 1981 has resulted in more mothers making use of modern health facilities for preventive and curative purposes.

Fertility and Family Planning

Since successive governments have taken action to reduce the mortality levels in various ways, population continued to increase at a higher rate especially during 1946-53. Therefore, the government realized the implications of population growth and expressed its concern through the 1958-1968 Ten Year Plan for the first time. But, no policy actions were taken. In the early years the government was a little hesitant in moving openly into the family planning field. It let the Family Planning Association of Sri Lanka do the initial running. In 1958 the Swedish government, through the Swedish International Development Agency (SIDA), came in to the picture. SIDA was invited by the Sri Lankan anchorites to establish a pilot project in community family planning, probably the first instance of outside assistance to family planning in a developing nation. The results of the project convinced the Sri Lankan government and the public would welcome a more active and open role by the government authorities in family planning. Structurally the Sri Lankan authorities came out more forcefully with a population policy. The government accepted family planning as a policy in 1965 with emphasis on better quality of life, development of the family particularly mother and the child. This was made operative with the establishment of the Family Health Bureau (FHB) in 1968.

The successive governments continued the emphasis given to population and development. Government made a precise statement on the need to regulate the rate of growth of population in the 1971-1976 Five Years Plan. It identified that a higher birth rate in the

context of low standards of living and malnutrition can lead to a general deterioration in the health of population and to an increase in the incidence of disease causing a rise in infant mortality. After 1972, under the umbrella of FHB, there was a gradual expansion of family planning activities and these services were integrated with the already well developed maternal and child health services which were provided throughout the country.

Since the government elected in 1977 realized the implications of unplanned population growth of Sri Lanka, population policy formulation and implementation became a gazzetted function directly under the President of Sri Lanka. In 1978 special emphasis was made to achieve the higher levels of contraceptive prevalence through clinical services. Incentives were introduced for service providers and acceptors of permanent methods. As there was a gap between population policy formulation and the delivery of family planning services, the need of an institution to coordinate the entire programmed was felt and in 1979 the Population Division was established within the Ministry of Plan Implementation. The new policy embraced all aspects of family welfare, particularly maternal and child health, nutrition, women's education and women's rights.

By the end of 1980s, the programmed became more supply oriented, with the small family norm being increasingly accepted among married couples. At the same time, there was an attitude towards the use of modern contraception. The civil unrest during 1987-88 seriously affected the service delivery system, particularly affecting the sterilization element of the programmed. In 1989, population policy formulation was assigned to the Ministry of Health. Population Division was brought under the Ministry of Health to coordinate and monitor the implementation of population related programmes in the country. Furthermore, programmed of Information, Education and Communication (IEC) was initiated to enhance public awareness of the benefits associated with the small family norm.

An important development influencing the policy implementation in Sri Lanka relates to the establishment of Provincial Councils in 1989 and consequent devolution of management responsibility to Provincial Ministries of Health supported by the Provincial Directors of Health Services. With the help of these policy programmes and activities, population growth of Sri Lanka has come down to about 1.2 percent per annum. Even then, the annual addition to the population is still about 200,000 and would double the population in 40 years. For the purpose of achieving the replacement level fertility, the National Health Council (NHC) that is chaired by the Prime Minister, issued a population policy statement to this effect (Ministry of Health, 1991).

For the first time the Government has set a target of achieving a total fertility rate (TFR) of 2.1, which is equivalent to replacement level fertility by the year 2000 in its population policy statement issued in 1991. The population Policy Statement is as follows:

" Whereas Sri Lanka, having pursued an enlightened population programmed in the last two decades, has made considerable progress in providing to its people a high quality of life,

And whereas this achievement has been made through a consistent Government policy on population and a commitment to improve the standards of education and health, chiefly maternal and child health, and of other factors that enhance the well-being of its people,

But notwithstanding these achievements, Sri Lanka continues to be among the more densely populated countries in the world; and the continued increase in its population would result in severe stress being placed upon the natural resources and environment; and also efforts to improve the quality of life of its people through better distribution of goods and services, and of population and particularly the alleviation of poverty, providing full employment and housing for all,

And whereas it is therefore necessary to reach replacement level fertility - an average of two children per women in the reproductive ages - at least by the year 2000, which would result in a stable population by the middle of the next century,

Declares, that as the Government is concerned with the present rate of growth of the population, it is Government policy to take all measures to sustain a population in keeping with the resources of the country."

The Government has established central policy and monitoring authorities to achieve the established goal. The National Coordinating Council on Population (NCCP) chaired by the Secretary, Ministry of Health, coordinates and monitors the national population program.

Reproductive Health

Along with 179 other countries, Sri Lanka was a signatory to the program of action adopted at the International Conference on Population and Development held in Cairo in 1994, which "endorsed a new thinking that population growth can be stabilized and development efforts enhanced by the advancement of women" (Ashford, 1995) and stressed the importance of reproductive rights and provision of comprehensive reproductive health services to all.

The Sri Lanka policy environment has also been influenced by the new international vision of population and development from the ICPD of 1994. This is particularly true with regard to the goals formed on the basis of the reproductive approach.

According to the ICPD National Report, ultimate goal in the achievement of a stable balance between human needs and aspirations, population resources and the environment in order to enhance the quality of life of the people of Sri Lanka has been stressed. It has highlighted the role of maternal health, child health and family planning services influencing population growth through reduction in infant and child mortality, reduction in maternal mortality, better birth spacing and breast-feeding practices and improved accessibility of family planning services. Supportive environment is provided by the improved role and status of women and the rising educational levels to the success of maternal, child health and family planning programmes (Ministry of Health, 1995).

Family health and integral component of national health care system in Sri Lanka consists of maternal health, child health and family planning and it is provided through a health infrastructure consisting of referral network of dispensaries, maternity homes and graded hospitals servicing defined geographical health units with catchment populations of 50,000 to 800,000 (Ministry of Health, 1995).

Other Policies and Programmes

A number of socio-economic policies such as education, employment, status of women and housing have also indirectly influenced for the fertility decline in Sri Lanka. Female literacy which was only 8.5 per cent at the turn of this century rose to 83 percent in 1987 and nearly one half of women in the reproductive ages had 8 or more years of schooling. The rise in the educational attainment of females has been the single most crucial socio-economic factor, which has contributed to fertility decline by influencing age at marriage of females, which has increased from 18.2 years in 1901 to 25.5 years in 1993. Contraceptive prevalence has increased from 32 per cent in 1975 to 66.1 percent in 1993 (Department of Census and Statistics, 1994). Increasing female education has not only influenced contraceptive prevalence in Sri Lanka but also contributed to overall decline in infant mortality and maternal mortality (De Silva, 1995).

INSTITUTIONAL FRAMEWORK FOR POLICY FORMULATION

The Population Division of the Ministry of Health in Sri Lanka works out all the background information, different scenarios for policy options and all other supporting information required. It provides the information to the National Coordinating Council on Population (NCCP). The NCCP chaired by the Secretary of Health discusses all inter-sectored and other policy relevant issues and provides the necessary information to identify policy needs , including design aspects and evaluation procedures to the National Health Council (NHC). The NHC chaired by the Prime Minister is the highest policy making body with regard to health and related subjects.

INSTITUTIONAL ARRANGEMENTS FOR PROGRAMME IMPLEMENTATION AND MONITORING

Public Sector

The key institutions are as follows.

Population Division: Facilities the coordination and monitoring of the national population program.

Family Health Bureau: Central organization of the Ministry of Health responsible for implementation of the maternal and child health and family planning programmed such as:

10. In-service training of family health workers

11. Conducting relevant health services for research to support and strengthen service delivery
- Procurement and distribution of contraceptives equipment and other supplies needed for family planning services.

The Director General of Health Services: Provision of curative and preventive health services throughout the country through the hospital system.

The government provides facilities for male and female sterilization through medical institutions. Facilities for laparoscopic sterilization are available at FHB. IUD and injectables are made available through family planning clinics. Oral contraceptives and condoms are distributed by the public health personnel in the field and are also available at the family planning clinics, medical institutions and health centers at subsidized price.

Private Sector

Family Planning Services are also provided by Non Governmental Organizations (NGO's) such as Family Planning Association of Sri Lanka (SLFPA), Sri Lanka Association for Voluntary Surgical Contraception (SLAVSC), Population Services Lanka (PSL) and Community Development Services (RDS).

The main role of NGOs is to complement and supplement government's reproductive health and family planning programmed. They also have a role in advocacy and education of adolescents both in and out of school. External donors, government contributions and some user fees generally finance these NGOs.

CURRENT POLICY FRAMEWORK

Reproductive Health

The "Cairo Process" which began a few years before the ICPD (International Conference on Population and Development) and continues to this day, helped some countries complete, consolidate or revise policies related to reproductive health. Even though many countries began the process of shifting their policies and programmes from family planning to reproductive health before the 1994 ICPD, some countries have now taken the definition of reproductive health from the ICPD Programme of Action. The definition is as follows:

"Reproductive health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity, in all matters relating to the reproductive system and its functions and processes. Reproductive health therefore implies that people have the capability to reproduce and the freedom to decide if, when and how often to do so. Implicit in this last condition are the rights of men and women to be informed and to have access to

safe, effective, affordable and acceptable methods of family planning of their choice, as well as other methods of their choice for regulation of fertility which are not against the low, and the right of access to appropriate health care services that will enable women to go safely through pregnancy and child birth and provide couples with the best chance of having a healthy infant. In line with the above definition of reproductive health, reproductive health care is defined as the constellation of methods, techniques and services, which contribute to reproductive health and well-being through preventing and solving reproductive health problems. It also personal relations, and not merely counseling and care related to reproduction and sexually transmitted diseases" (Hardee et.al., 1998).

The success story of Sri Lanka in achieving its demographic goals has been internationally acknowledged. However, notwithstanding these successes there are a number of emerging areas that need to be addressed such as the strategic transition from maternal and child health and family planning to more holistic Reproductive Health (RH) approach, which is client centered and gender sensitive. Other crucial areas that need to be addressed include reducing the incidence of abortion, addressing the unmet RH needs of vulnerable groups and undeserved geographical areas, and providing RH information and choices and access to services for adolescents and youth (UNFPA, 1997).

According to the National Report prepared by the Sri Lanka government, (Ministry of Health, 1998), the ultimate goal of the government is to achieve a stable balance between human needs and aspirations, population resources and the environment for the purpose of enhancing the quality of life of the people in Sri Lanka. The report highlighted the significant role of the maternal, child health and family planning services influencing population growth through reduction in infant and child mortality, better birth spacing and breast-feeding practices and improved accessibility of family planning services.

Current Policy Framework for Family Planning and Reproductive Services

The population and reproductive health policy for Sri Lanka for the next decade was present by the Ministry of Health and Indigenous Medicine in 1998. The policy aims at achieving a higher quality of life for its people by providing quality reproductive health information and services, achieving gender equality, providing health care and social support for the elderly, promoting the economic benefits of migration and urbanization while controlling their adverse social and health effects and reaching a stable population size in the long term.

The policy statement is structured with eight goals on the basis of a rationale for each goal accompanied by a set of strategies. Following are the eight goals:

Goal 1 Maintain current declining trends in fertility so as to achieve a stable population size at least by the middle of the 21st Century.

Goal 2 Ensure safe motherhood and reduce reproductive health system related morbidity and mortality

Goal 3 Achieve gender equality

Goal 4 Promote responsible adolescent and youth behavior.

Goal 5 Provide adequate health care and welfare services for the elderly

Goal 6 Promote the economic benefits of migration and urbanization while controlling their adverse social and health effects

Goal 7 Increase public awareness of population and reproductive health

Goal 8 Improve population planning and the collection of quality population and reproductive health statistics as the national and sub national levels.

All these goals are directly or indirectly related to reproductive health.

CURRENT STATUS OF REPRODUCTIVE HEALTH PROGRAMMES

The current status of reproductive health programmes in Sri Lanka can be categorized as family health, which includes family planning, maternity services and child health, adolescent health, sub fertility and reproductive tract infections including STDs and HIV/AIDS.

Family Health

Since the official commencement of the government family planning programmed, family planning services have been delivered as a core component of maternal and child health services. Service outlets for family planning information and contraceptive services have increased considerably over the years with the great involvement of the government. These services are provided through the delivery outlets and public health personnel.

The social marketing programmed is managed by FPASL utilizing the retail sales outlet such as shops, boutiques and pharmacies. In addition to the public service, the four non-governmental organizations FPASL, SLAVSC, PASL and CDS also provide family planning services. As a result of these services contraceptive prevalence of Sri Lanka has increased from 32 per cent in 1975 to 66 percent in 1993 (DHS, 1993).

Regarding maternity services, antenatal care is almost universal, with 92 per cent pregnant women receiving prenatal care. Anemia is common, affecting between 50-70 per cent of pregnant women (Annual Report on Family Health, 1992). Maternal mortality has declined from 20 per thousand live births in the mid 1930s to 0.6 in 1986 of which up to 12 per cent in attributed to septic abortion. Furthermore, septic abortion is described as a countrywide phenomenon this is increasing in magnitude. Existing legislation on abortion is very restrictive and is allowed only for the sole purpose of serving the life at the mother (Ministry of Health, 1995. In the mean time unmet need for maternity services have been identified in certain areas. Pockets of low contraceptive prevalence have also been identified.

Regarding the child health, the average birth weight in observed to be 2 kg and breast-feeding is almost universal with an overall mean duration of 25.4 months (DHS, 1993). But exclusive

breast-feeding is frequently curtailed before the recommended minimum duration of 4 months due to the mother's observation of insufficient milk. Immunization coverage is high and the incidence of childhood diarrhea is low with all children under five years of age (DHS 1993).

Adolescent Health

The Sri Lanka National Report on Population for the 1994 ICPD identified, young people of age 15-24 years as emotional and behavioral leading to suicide, alcoholism and delinquency. Out of the annual births, 7.7 per cent were to the women in this age group. It was noted that pre-marital sex also on the increasing side for this group. Even though, there are no much data, daily newspapers report increasing number of incidents of sexual abuse of young people. To remedy the situation, several programmes are conducted through different media to educate young people and others in the community. However it should be noted that as with many developing countries in Sri Lanka too there are no organized contraceptive services for adolescents although oral pills and condoms are available through retail and other outlets of the social marketing programmed.

Sub Fertility

Though definitive evidence of the magnitude of the problem of infertility is inadequate, between 8 and 12 per cent of couples are estimated to be sub fertile with as high as 50 per cent of cases being due to male infertility. Misconceptions regarding the responsibility of females for marital sub fertility and the sex of the child are still widely prevalent. At the FHB, couples are registered for investigation and treatment, but investigative and treatment facilities are extremely limited particularly in the provinces.

Reproductive Tract Infections

Sri Lanka exhibits middle range levels of pelvic inflammatory disease. Institutional data indicate that ectopic pregnancy is a common condition; the Obstetrics and Gynecology Department of the Colombo Medical School estimates an incidence rate of 60-70 per thousand deliveries. However, the epidemiological pattern of reproductive tract infection is unclear (Ministry of Health, 1995).

HIV/AIDS is described as commonest in the Western and Central Provinces of the country. Even though, there has been no study of the prevalence of sexually transmitted diseases to date.

Reproductive Tract Infections and Other Reproductive Health Conditions

The above description of the current situation of family planning and reproductive health indicates that there still exist major areas to be improved. If the population continues to increase at the current rate, it will act as a constraint to improving people's quality of life. Maintaining the current decline in fertility is vital. Therefore, as declared by the Ministry of Health, 1998, it is important to address the following crucial emerging issues: safe motherhood, sub fertility, induced abortion, reproductive tract infections and sexually transmitted diseases, promotion of responsible adolescent and youth welfare, achieving gender

equality, provision of health care and welfare activities to the elderly, promotion of economic benefits of migration and urbanization while controlling their adverse effects, increasing public awareness on population and reproductive health issues and strengthening the infrastructure for implementation at national and sub-national levels.

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