Sparing Lives

BETTER REPRODUCTIVE HEALTH FOR POOR WOMEN IN SOUTH ASIA

THE WORLD BANK

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FOREWORD

Reproductive ill-health among poor women is a major contributor to mortality and morbidity in South Asia. Each year almost 185,000 South Asian women die from a pregnancy-related cause, and millions more are affected by illness or disability brought about by child-bearing. Many mothers, especially the poorest, suffer from under-nutrition, and the resulting low birth weights affect the starting life chances of their children. Anemia is a common problem among women and children alike. Many reproductive health problems begin in adolescence and are exacerbated by the early marriage and child-bearing patterns that prevail in the region. This report aims to raise awareness of the major reproductive health problems faced by poor women, their primary determinants and consequences, and the high-priority actions needed at program and policy levels in its five focus countries – Bangladesh, India, Nepal, Pakistan and Sri Lanka.

Limited knowledge of reproductive health and of the utility of services such as ante-natal care or institutional delivery is an important constraint that needs to be addressed. The availability, quality and efficiency of reproductive health services deserve greater attention. The supply of services to poor women must be strengthened, beginning with those for which there is considerable 'unmet demand', such as birth spacing. Targeting of special efforts, outreach services and additional resources to underserved geographical areas and the poorest villages and households is necessary to reach many excluded women. Delivering the essential package of reproductive health services in an integrated manner would encourage better use and a continuum of care over the reproductive life cycle, thereby improving results. Health services must also be integrated closely with nutrition of mothers and children in order for reproductive outcomes to be substantially improved.

Demand for and use of services can be addressed not only through enhanced behavior change communication but, importantly, through demand-side financing to enable poor families to access services that are currently unaffordable to them. Several of the improvements in reproductive health services that are needed for poor women call for concerted action in the arena of human resource development, including strategic human resource planning, deployment of staff, and improving skills, motivation and performance. What strategies to use to improve reproductive health, where and how, are questions best answered through local-level outcome-based planning and monitoring. All five countries have

reached the stage where available resources need to be carefully managed and directed at meeting specific local needs and problems. Decentralized planning would help to utilize available resources better and also to increase resources in the correct measure to achieve greater efficiency in expenditure and effectiveness in reproductive health care.

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Acronyms and Abbreviations

AHW	Assistant Health Worker
AIDS	Acquired Immuno-deficiency Syndrome
AMO	Assistant Medical Officer
ANC	Antenatal Care
ANM	Auxiliary Nurse Midwife
ARI	Acute Respiratory Infection
ART	Anti-retroviral Therapy
ASFR	Age-specific Fertility Rate
ASHA	Accredited Social Health Activist
AYUSH	Ayurveda, Yoga, Unani, Siddha and Homeopathy (Indian medical systems)
BBS	Bangladesh Bureau of Statistics
BCC	Behavior Change Communication
BCG	Bacille Calmette Guerin
BD	Bangladesh
BemOC	Basic Emergency Obstetric Care
BHU	Basic Health Unit
BMI	Body Mass Index
BNNP	Bangladesh National Nutrition Program
CAC	Comprehensive Abortion Care
CBO	Community Based Organization
CBS	Central Bureau of Statistics
CEB	Children Ever Born
CEmOC	Comprehensive Emergency Obstetric Care
CHC	Community Health Center
CIET	Canadian Institute of Education and Training
CMH	Commission on Macro-economics and Health
CMR	Child Mortality Rate
COPE	Client-oriented Provider Efficient
CPR	Contraceptive Prevalence Rate (earlier Couple Protection Rate)
CREHPA	Center for Research on Environment, Health and Population Activities
CSSM	Child Survival and Safe Motherhood
CSW	Commercial Sex Worker

DALY	Disability-affected Life Year
DAP	Decentralized Action Planning
DCPP	Disease Control Priorities Project
DCS	Department of Census and Statistics (Bangladesh)
DGFP	Directorate General of Family Planning
DGHS	Directorate General of Health Services
DHAP	District Health Action Planning
DHM	District Health Mission
DHS	Department (or Directorate) of Health Services
DHS	Demographic and Health Survey
DHS	Department of Health Services
DPT	Diphtheria, Pertussis and Tetanus
EAG	Empowered Action Group
EOC	Essential Obstetric Care
EmOC	Emergency Obstetric Care
EPI	Expanded Program of Immunization
ESP	Essential Services Package
FBS	Federal Bureau of Statistics
FCHV	Female Community Health Volunteer
FGD	Focus Group Discussion
FHB	Family Health Bureau
FHI	Family Health International
FP	Family Planning
FPAI	Family Planning Association of India
FPAN	Family Planning Association of Nepal
FNGO	Field Non-governmental Organization
FRU	First Referral Unit
FSW	Female Sex Worker
FWA	Family Welfare Assistant
GCE	General Certificate of Education
GDP	Gross Domestic Product
GOB	Government of Bangladesh
GOI	Government of India
GON	Government of Nepal
GOP	Government of Pakistan

GOSL	Government of Sri Lanka
GTZ	Gesellschaft fur Technische Zusammenarbeit (German Agency for Technical Cooperation)
HA	Health Assistant
HDI	Human Development Index
HDS	Health and Demographic Survey
HFWC	Health and Family Welfare Center
HIV	Human Immuno-deficiency Virus
HMIS	Health Management Information System
HNP	Health, Nutrition and Population
HNPSP	Health, Nutrition and Population Strategy Paper
HPSP	Health and Population Sector Program
HPSS	Health and Population Sector Strategy
HRG	High-risk Group
HRT	Hormone Replacement Therapy
HSS	Health Sector Survey
ICDS	Integrated Child Development Services' Program
ICPD	International Conference on Population and Development
ICTC	Integrated Counseling and Testing Center
IDU	Injecting Drug User
IEC	Information, Education and Communication
IFA	Iron Folic Acid
IIPS	International Institute of Population Sciences (India)
IMNCI	Integrated Management of Neonatal and Childhood Illnesses
IMR	Infant Mortality Rate
IN	India
IPS	Institute of Policy Studies (Sri Lanka)
IUCD	Intra-Uterine Contraceptive Device
IUD	Intra-Uterine Device
KAP	Knowledge, Attitude and Practice
LBW	Low Birth Weight
LHV	Lady Health Visitor
LHW	Lady Health Worker
LHWP	Lady Health Worker Program
LLP	Local Level Planning

MAQ	Measuring Access and Quality
MBBS	Bachelor of Medicine, Bachelor of Science (basic medical degree)
MCH	Maternal and Child Health
MCHW	Maternal and Child Health Worker
MCWC	Maternal and Child Welfare Center
MDG	Millennium Development Goal
MFPW	Maternal and Family Planning Worker
MIS	Management Information System
MMR	Maternal Mortality Ratio
MNGO	Mother Non-governmental Organization
MO	Medical Officer
MOF	Ministry of Finance
MOH	Ministry of Health
MOHFW	Ministry of Health and Family Welfare
MOHP	Ministry of Health and Population
MOPW	Ministry of Population Welfare
MOSPI	Ministry of Statistics and Programme Implementation
MPAHAPI	Ministry of Public Administration, Home Affairs and Plantation Industries
MPWF	Multi-Purpose Worker Female
MPWM	Multi-Purpose Worker Male
MR	Menstrual Regulation
MSM	Men who have Sex with Men
MTP	Medical Termination of Pregnancy
MVA	Manual Vacuum Aspiration
M&E	Monitoring and Evaluation
NACO	National AIDS Control Organization (India)
NACP	National AIDS Control Program (India)
NDHS	Nepal Demographic and Health Survey
NFHS	National Family Health Survey (India)
NGO	Non-Governmental Organization
NHA	National Health Accounts
NHP	National Health Policy
NIPORT	National Institute of Population Research and Training (Bangladesh)
NIPS	National Institute of Population Studies (Pakistan)
NLSS	National Living Standards Survey

NMCH	National maternal and Child Health
NP	Nepal
NPP	National Population Policy
NRHM	National Rural Health Mission (India)
NSACP	National Secually-Transmitted Diseases and AIDS Control Program (Sri Lanka)
NSS	National Sample Survey (India)
OPD	Out Patient Department
OPV	Oral Polio Vaccine
OR	Odds Ratio
ORS	Oral Rehydration Solution
PAC	Post Abortion Care
PCO	Pakistan Census Organisation
PCPNDT	Pre-conception and Prenatal Diagnostic Technologies
PEP	Peer Educator Programs
PHC	Primary Health Center
PHI	Public Health Inspector
PHM	Public Health Midwife
PHNS	Public Health Nursing Sister
PIDE	Pakistan Institute of Development Economics (Pakistan)
PIHS	Pakistan Integrated Household Survey
PK	Pakistan
PLHA	People Living with HIV/AIDS
PNC	Postnatal Care
POA	Programme of Action (of the ICPD)
PPH	Postpartum Hemorrhage
PPP	Public-Private Partnership
PRB	Population Reference Bureau
PRHFPS	Pakistan Reproductive Health and Family Planning Survey
PRSP	Poverty Reduction Strategy Paper
PRI	*Panchayati Raj* Institution (Local Government Institution)
PSI	Population Services International
RCH	Reproductive and Child Health
RGD	Register General's Department
RGI	Registrar General of India
RH	Reproductive Health

RMO	Registered Medical Officer
RTI	Reproductive Tract Infection
SACS	State AIDS Control Society
SBA	Skilled Birth Attendance
SC	Scheduled Caste
SHC	Sub-Health Center
SHG	Self-help Group
SL	Sri Lanka
SRH	Sexual and Reproductive Health
ST	Scheduled Tribe
STD	Sexually-transmitted Disease
STI	Sexually-Transmitted Infection
TB	Tuberculosis
TBA	Traditional Birth Attendant
TFR	Total Fertility Rate
TISS	Tata Institute of Social Sciences (India)
TNMSC	Tamil Nadu Medical Services Corporation (India)
TT	Tetanus Toxoid
U5MR	Under-5 Mortality Rate
UHC	Upazilla Health Complex
UHFWC	Urban Health and Family Welfare Center
UN	United Nations
UNDP	United Nation's Development Programme
UNESCO	United National' Educational, Scientific and Cultural Organisation
UNFPA	United Nation's Population Fund
UNICEF	United Nation's Children's Fund
USAID	United States Agency for International Development
VaRG	Valley Research Group (Nepal)
WB	World Bank
WHO	World Health Organization
WWC	Well-Woman Clinic

Executive Summary

Why Reproductive Health in South Asia Requires Attention

About 14 years have passed since the International Conference on Population and Development (ICPD) formulated a reproductive health agenda for the world, and about seven years remain for the Millennium Development Goals (MDGs) to be achieved. Whether poor countries will be able to improve health outcomes among women and children through comprehensive, good-quality services that are responsive to the needs of the poor is now an urgent question. South Asia has not yet achieved the momentum required for reproductive health interventions, quality improvements and financing arrangements to ensure that the women of the region – particularly the poorest – are able to achieve the good outcomes called for by these global agendas. However, many countries in the region have embarked on health sector reforms – both the opportunity these reforms present and the challenges they pose need to be met to improve the reproductive health of *poor* women in South Asia.

Among the region's 500 million poor, women are particularly disadvantaged. Its sex ratios reflect the discrimination against females from *before birth* to the age of 35 years. Contributing to the 'missing women' are deaths that occur in pregnancy. Anemia, a condition that is relatively simply prevented or treated, is widespread among women and adolescent girls. The region also has very high rates of undernutrition, beginning with low birth weight among one-third of infants due to chronic or acute undernourishment or infections among their mothers. South Asia accounts for half of all low birth weight babies in the world. Over ten percent of infants die due to this or other preventable causes.

Many women, from adolescents to those in their prime, are bearing unwanted children because of poor access to contraception. Many undergo abortion at great risk to their lives or health: at least four million unsafe abortions take place in South Asia, causing 10 to 20 percent of the region's maternal deaths. Fertility is high in the region as a whole but varies widely across and within countries. An adolescent population of 73 million girls provides momentum for continued high population growth. At the same time, higher life expectancy is increasing the number of elderly. South Asia's health systems are being stretched to deal simultaneously with diseases commonly associated with poverty and a young and growing population, and chronic

conditions related to old age or affluence. These are among the many reasons why the reproductive health of the region is important and a challenge.

In this context, the overall purpose of this review is to bring attention to the opportunities that five countries in the region – Bangladesh, India, Nepal, Pakistan and Sri Lanka – have to strengthen and expand interventions to improve the reproductive health of poor women. The specific objectives are:

- to provide an accurate picture of the current status of women's reproductive health, describe the use of reproductive health services and barriers to use, and identify the improvements required to increase their effectiveness and improve health outcomes;[1]
- to elucidate individual and household characteristics that affect reproductive health status and use of services so that the most important of these can be used to identify women and households with the greatest need for care to achieve better health;
- to describe a simple and effective approach – decentralized action planning – that can be used widely in all five countries to improve reproductive health service delivery and outcomes, and point to a body of best practices in reproductive health that provides models and lessons for improvements in South Asia; and
- to strengthen the case for investing in poor women's reproductive health by demonstrating the links between poverty, inequality, reproductive health care and expenditure.

Reproductive Health Outcomes are Poor and Unequal

A comparison of the reproductive health goals in the MDGs and current status shows that four of the five countries (excluding Sri Lanka) face enormous challenges. Maternal mortality is two to five times higher than the targets set for 2015. Under-five mortality is 1.6 to 2.6 times higher. This is due in part to the low ages at marriage and childbearing of South Asian girls. The median ages at marriage in Bangladesh, India and Nepal are still below or close to the legal age in these countries and, for example, in India, almost twice as many of the poorest rural girls aged 15-19 years are married compared with the richest. In urban areas it is six times as many. Adolescents in several countries have very high fertility rates. Overall fertility is high everywhere except Sri Lanka and a handful of Indian states; and that of the poorest is almost twice that of the richest in Nepal, and still about a third higher in Sri Lanka.

Underlying the high child mortality of the region are high rates of undernutrition (especially anemia) among mothers, beginning in childhood. Anemia and undernourishment are 25 percent higher among the poorest rural adolescent girls compared with the richest, and in urban areas this increases to 50 percent. Child malnutrition is appallingly high on average, and two to three times higher among the poorest quintile of children than among the richest in India, Nepal and Sri Lanka. The poor:rich ratios in infant mortality in Pakistan and child mortality in Bangladesh, India and Nepal – all between four and five – are particularly distressing. Female

child mortality remains 25 to 50 percent higher than male child mortality in the last three countries. All told, the data leave little doubt that adolescents and poor women have been highly neglected by the health services in South Asia and must be the focus of attention henceforth if reproductive health goals are to be achieved.

Low Use of Services is a Significant Problem

Sri Lanka and the Indian states of Kerala and Tamil Nadu show that better and more equitable reproductive health outcomes can be achieved in the region. Using Sri Lanka as a yardstick to assess health services, we find that coverage with family planning in the other countries falls short by 25 to 60 percent. Contraceptive use among the poorest quintile of women ranges from about 25 percent of that among the richest quintile in Pakistan to 40-50 percent in Nepal and rural India, to 75 percent in Bangladesh and urban India. Overall 'unmet need' for family planning is highest in Nepal and Pakistan (24-28 percent), but substantial even in Sri Lanka (11 percent). Among the poorest women, it ranges from 23 percent higher than among the richest in Pakistan to 87 percent higher in Bangladesh, pointing to service delivery and utilization failures rather than only to 'lack of awareness' or 'desire for more children.'

Although the use of antenatal care (ANC) is higher than that of contraception in four of the five countries (excluding Bangladesh), the poorest quintiles of women in four countries (excluding Sri Lanka) have half to one-third as much coverage as the richest. There is virtually no difference in the coverage of poor and rich women in Sri Lanka. Elsewhere, there are substantial differences even in the simplest intervention, tetanus immunization of mothers. In Pakistan, the poorest women have one-sixth the coverage of the richest; in Nepal and rural India, the ratio is about half; and in Bangladesh and urban India it is about four-fifths. In most countries, the number of ANC visits, their contents and quality, need serious attention to contribute to better reproductive health.

Institutional delivery, an effective intervention to reduce maternal mortality, is under 25 percent in Nepal, Bangladesh and Pakistan; in Sri Lanka it is near universal. The rich:poor ratios for this service are striking: almost 18 in Nepal, 13 in Bangladesh; 6 in Pakistan, and 5 in rural India. Despite supportive policies and guidelines, postnatal care is highly neglected. Coverage and equity in child immunization are most disappointing, given over 20 years of emphasis on 'universal immunization' in the region. Compared to Sri Lanka's 94 percent, coverage in Bangladesh and Nepal is 65 percent, Pakistan 53, and India only 43 percent.[2] Inequality is high in all countries: the poorest in Bangladesh have 72 percent the coverage of the richest; in Pakistan this is 63 percent; in urban India, 55, and in rural India, 37 percent.

The distortions in health service coverage suggest not only that services need to be targeted to the poor but that concerted attention is needed to the many supply- and demand-side factors that cause inequalities in access, use and outcomes of reproductive health care. The determinants of outcomes and use point to the importance of other sectors in bringing about improvements.

Girls' education and women's empowerment deserve special attention, and have been improved successfully in some parts of South Asia, but many gaps persist in the formulation and implementation of social policies in the region. Policies to promote the value of girls, increase the age of marriage, reduce son preference, prevent gender-based violence, and increase women's autonomy are important to address South Asia's glaring gender inequalities and improve the reproductive health of poor women.

Health Services Need Great Improvement

Indeed, low service utilization levels can be explained by prevailing demand- and supply-side barriers. Information about services is poor, and awareness even of the *need* for certain services (such as ANC) is inadequate. Demand for services such as family planning and skilled birth attendance is low, in part because of social prescriptions (e.g., to have a child soon after marriage) or proscriptions against use. Cultural norms and social attitudes prevent women from seeking health care even for problems they recognize (such as reproductive tract infections), or cause them to approach the wrong providers (such as 'quack' abortionists). Some crucial supply-side constraints to the use of public reproductive health services are:

- the unavailability of appropriate health facilities within distances that are physically, socially and economically negotiable by women and children;
- a lack of staff, particularly of female doctors and trained paramedical workers, on account of vacancies as well as absenteeism;
- inadequate amenities, equipment and medicines at health centers and for outreach;
- overcrowding and a lack of privacy at health facilities;
- low technical and/or managerial competence among providers and managers;
- inadequate provision of information and counseling; and
- improper behaviors among staff.

Superimposed on the household constraints faced by women, the structures and processes of public health services are particularly daunting for the poor, who consequently remain less covered by health care than they need or want to be. All these problems must be addressed either directly, e.g., by increasing public information, supplies, staff and facilities, or indirectly, e.g., by providing incentives to clients to use services ('demand-side financing'), to public providers to improve their behavior, quality and accountability, and/or to private practitioners to serve more poor women at a cost they can afford.

The ICPD Program of Action was accepted by all the five countries (UN, 1995). Despite this, several key aspects of the 'paradigm shift' have not yet been implemented. These include instituting a 'client-centered women-friendly approach' to services; integrating the essential package of reproductive health services; focusing on adolescents and sexuality; and advancing

reproductive rights. There is also limited evidence of key policy and implementation changes needed to achieve country and global aims such as pro-poor actions, preventive health activities, or measures to reduce cost burdens on the poor.

The Costs of Care Must be Met

Besides the limitations imposed by poor awareness of need and low familial permission to use health services, affordability of care is a serious constraint faced by poor women. This affects the use of private as well as public services, which have direct (often informal), indirect and opportunity costs. Health crises such as hospitalization are known to be major causes of indebtedness and can result in poor people falling deeper into poverty. Private reproductive health expenditure (as a share of GDP) is two to three times higher than public expenditure in Bangladesh and the Indian state of Rajasthan, while in Sri Lanka it is half.[3] In Bangladesh, more than half of private spending is on infant care, while in Sri Lanka other outpatient reproductive services account for most private spending. High out-of-pocket expenditure on reproductive health has grave consequences for equity and financial protection against the costs of illness. It is a strong explanation for low care among the poorest and their dreadful outcomes. Despite their greater disease burden, the poorest quintile of women accounts for only 10 percent of reproductive health spending while the richest accounts for 60 percent.

In South Asia, reproductive health expenditures amount to a mere 0.2 to 0.4 percent of GDP. In Bangladesh and Nepal, this spending has been largely on family planning and infant care (mostly immunization), while spending on childbirth and other reproductive health services is relatively small. By contrast, in Sri Lanka, childbirth and other reproductive services for women, particularly in-patient services, make up the largest share of public spending on reproductive health. Over time all the five countries have increased their reproductive health expenditures. In Bangladesh and Nepal, family planning services have received most of the increases, while in Sri Lanka the proportion of total expenditure on family planning has decreased and that on pregnancy/childbirth services and other inpatient obstetric/gynecological care has increased. Donor contributions account for about three percent of reproductive health spending in Sri Lanka (primarily to family planning) but 65 percent of reproductive health spending in Nepal. Donor contributions to childbirth services appear to be insignificant across countries, which is disappointing, given the importance attached to safe motherhood and the MDGs in South Asia, and the global commitment to achieve them.

Not only do South Asian governments have to increase the supply of services to the poor, but they must do so ensuring that poor women do not remain vulnerable to high direct or indirect costs, formal or informal. Resource allocations within reproductive health must redress the imbalance of services/spending, and donor contributions should be increased especially for the most needed, under-funded and costly services.

Actions to Improve Reproductive Health

Improving reproductive health in South Asia will not be easy as a number of actions are required. Many are closely related, presenting dilemmas about what should be done first. Some lie outside the health sector or call for other sectors to collaborate. Nevertheless, several measures can be taken expeditiously by the health sector and would produce good results if implemented well. The most important actions needed to improve poor women's reproductive health are given below.

First, in all five countries (including some areas and services in Sri Lanka) mechanisms to increase the supply of reproductive health services to *poor* women must be strengthened. This should start with those services, such as birth spacing, for which there is considerable 'unmet demand' among poor women. The chief approaches are to target poor geographic areas for special planning and resource allocations (at the national, state/province/etc. and decentralized levels), and the poorest villages and households for attention through local outreach mechanisms (e.g., fieldworkers, camps, mobile services, etc.) and demand-side financing (discussed further below).

Reproductive health services must also target adolescents (married and unmarried) as they are *central* to the achievement of reproductive health goals. They require information as well as services. These can be provided through frontline health workers if they are given a clear mandate and training in the social and counseling skills required to reach this difficult group. These interpersonal efforts must be bolstered by behavior change communication (BCC) programs through mass media, schools and community institutions. Many innovative approaches have been developed that could be supported through public grants.

Second, a corollary of targeting is to enhance demand among the poor for services that are inadequately understood and underutilized, notably ANC and safe delivery. For this, BCC efforts must be made relevant to *poor women,* and demand-side financing used to reduce cost barriers, particularly for the use of indoor services and purchase of medicines. Supply-side improvements that address the problems listed above would also enhance demand.

Third, all countries need to deliver the Essential Package of Reproductive Health Services in an integrated manner.[4] The services that should be provided through single-window primary health facilities and workers are: maternal and child health care, nutritional prophylaxis, family planning, safe abortion (where legal), diagnosis and treatment of RTIs/STIs, all relevant counseling, and referral to emergency/surgical/specialized care at secondary facilities. To start with, it is advisable to integrate separate departments of family planning, health, and nutrition, and develop unified policy and program guidelines. In the field, providing clear guidelines, tools and training would help workers implement a client-centered approach efficiently, and managers to encourage and monitor performance on the basis of *a continuum of care*. Creating

and disseminating the know-how for this could be a central function while implementation and management are decentralized. Integration will improve demand for and use of services.

Some neglected aspects of the essential package require special attention.[5] Throughout South Asia, the incidence of unsafe abortion is unacceptably high, especially in the private sector. Where abortion is legal, the public systems could increase availability of medical abortion and vacuum aspiration facilities, and public financing could help increase the availability of a range of private services. Providing capital grants and/or per-service subsidies (especially for poor women) through contracts, and social franchising of clinics are some approaches that have improved services in South Asia. Simultaneously, governments must implement their regulatory role in this area effectively, cracking down on unqualified providers to eliminate the considerable mortality and morbidity related to unsafe abortion.

Counseling to improve mother and child nutrition, anemia prophylaxis and care of the undernourished are currently inadequate everywhere, and must be enhanced by training health staff better to prevent and manage undernutrition. Their efforts should start with a focus on poor women who are at the greatest risk of bearing low birth weight infants. Health systems must take responsibility for this care because it is central to maternal and infant survival.

While ANC and skilled delivery receive attention and efforts to increase the availability of essential obstetric facilities continue, *postnatal care* needs more emphasis. Improvements in timing and quality could help to reduce maternal and neonatal mortality and morbidity. Women who deliver at home should be visited within 24 hours of delivery by a qualified female paramedic, and transport vouchers, funds or reimbursements provided to those who need medical attention.

Fourth, progress in poor women's reproductive health will depend greatly on improving the quantum and quality of outreach care by frontline women workers: they need to be readily available (i.e., in larger numbers, more efficiently deployed), more highly skilled, adequately equipped, and supplied with medicines. The critical role they play in ensuring South Asia's health must be fully recognized and rewarded as their status is reflected in their behavior toward clients. Women providers must be the focus of the 'health system fix.'

Reproductive Health Needs Reform

The recommendations above: to increase the supply of reproductive health services to poor women and adolescents by specifically targeting the poorest areas and households; to enhance demand among the poor for key services using BCC and demand-side financing; to integrate reproductive health services through a client-centered approach, and strengthen weak services using specific relevant approaches; and to improve the reach, quality and status of women providers by better training, deployment and support are the 'frontline' improvements required

for better reproductive health among poor women in South Asia. To bring them about three significant reforms are required in the health sectors of the five countries.

First, particularly to improve the supply and quality of services to the poor, outcome-based planning and monitoring must be introduced/expanded. Planning actions and allocating resources should be decentralized at least to the district level in all countries, requiring higher levels to commit to flexibility in decision-making. Decentralized action planning (DAP) identifies what needs to be done and can be done locally, and measures results in repeated cycles using local data. It can improve the effectiveness of available resources by ensuring their application to priority problems, and by helping service providers and managers do what works in local experience or promising examples. DAP can enhance the technical and practical knowledge of those involved as information is shared during the planning efforts. Besides improving the supply of services, it can motivate efforts to create demand and integrate services. In addition to health staff and managers, DAP can involve local government members, private providers, clients and others to ensure that public resources are used efficiently, and to mobilize other local resources. Good results would help attract additional public or private, local or 'transferred' resources. Decentralized and participatory planning could be the cornerstone of increased ownership and accountability in South Asia's health systems.

Second, the recommendations above call for robust human resource development in the five countries, including attention to strategic 'womanpower' planning and to developing staff skills, motivation and performance. Some specific measures are:

- increasing the numbers of qualified female staff (especially doctors and paramedics) at the frontline; the important strategies to achieve this include additional recruitment, contracting in, improved allowances and support, and performance-based incentives;
- providing technical and managerial training, and making appropriate implementation and monitoring guidelines and good practice information available to all levels to enhance the organization and management of integrated reproductive health service delivery;
- improving attitudes and behaviors toward poor women through sensitization programs and accountability measures; and
- increasing accountability for health outcomes among providers and managers using performance incentives in addition to decentralized planning.

Third, in addition to better spending through decentralized planning and monitoring, more public finance must flow to the reproductive health sub-sector. This is necessary to ensure that pressing needs for staff, equipment, medicines, etc., in the public system are met, and that the availability of services to the poor is increased greatly by reducing the costs to them of using private services. From an equity perspective, general revenue financing is desirable as it is a progressive source of health care financing and when combined with low user fees and universal coverage it provides high levels of financial protection against catastrophic ill-health.

Promising demand-side financing options include voucher schemes to assist poor women to have institutional deliveries in the private sector, reimbursement of transport and other out-of-pocket expenses when they use public facilities, and conditional cash transfers (e.g., after completion of three ANC visits). Private resources for poor women's reproductive health can be enhanced through public-private partnerships, including social marketing/franchising schemes, contracting out, grants or subsidies (e.g., for safe delivery or in-patient facilities), and support in cash or kind to services (e.g., for adolescents in schools or communities).

These improvements fit squarely with the overall agenda for health sector reform in the region which includes greater responsibility to sub-national and local authorities for the delivery of essential services, improved efficiency in health spending, and the development of financing mechanisms to reduce the burden on the poor of out-of-pocket spending. As health reforms are strengthened, special attention must be paid to reproductive health. By examining outcomes, use of services and determinants, and planning and financing of reproductive health, this report seeks to contribute to constructive action to improve the health of the region's most vulnerable citizens, women in poverty.

NOTES

1. Chapter 1 presents the conceptual framework and approach of the study, and Annex 2 describes the methodology and indicators used in the analyses. Most of the discussion in this report is based on comparable data for the five countries covered. At the time of writing such data were available only for years around 2000. Subsequently, data pertaining to 2005/2006/2007 have become available and are cited where relevant. Any significant changes between the two sets of data and impacts on the analysis are also noted where necessary.
2. In 2006/2007, coverage levels were: Sri Lanka: 97 percent; Bangladesh, 82 percent; Nepal, 80 percent; Pakistan, 47 percent; and India, 43 percent.
3. Our analysis of health expenditure in Indian states covered only Rajasthan, Andhra Pradesh and Karnataka. The ratio of private:public health expenditure is similar in these three states, and close to the all-India average, but it varies considerably across Indian states, e.g., from 2.7 to 9 among the large states.
4. The Essential Package is described in Annex 4.
5. RTI/STI services are also important and neglected, but emphasized less here because of the paucity of reliable data on morbidity as well as services and their utilization.

Better reproductive health begins with information and care of young girls.

Chapter 1

Reproductive Health in South Asia

Poor and Unequal

Every year about 185,000 South Asian women die from causes related to pregnancy (WHO, 2004). Millions more are afflicted by illness or disability as a result of childbearing. Many suffer from anemia and undernutrition which increase their risk of ill-health and affect the starting life chances of their infants. About 11 million infants are born low birth weight every year, 2.4 million die due to this and other preventable causes, and a high proportion of survivors suffers from malnourishment. Many women at risk of maternal death are bearing unwanted children, in part because of high child loss. A fair number are adolescents under pressure to 'prove' their fertility within a short period of marriage. Almost one-third of South Asia's 73 million 15-19 year-old girls are married. Not yet fully grown and with limited education and poor life skills, they have little knowledge or choice in the matter of childbearing.

Many adult women too conceive against their wishes because they lack the appropriate knowledge, means or autonomy. Some do what their teenage counterparts find more difficult: undergo abortion. An estimated eight million abortions occur annually in South Asia, half of them unsafe. Their sequelae (such as hemorrhage or infection) are among the leading causes of maternal death. Botched abortion can also lead to infertility, a difficult condition for South Asian women because the region's cultures still place a premium on childbearing. Maternal deaths, disability and excess childbearing have profound impacts on children's well-being and can impoverish families.

All women who are sexually active run the risk of contracting reproductive tract or sexually-transmitted infections (RTIs/STIs) including HIV/AIDS. South Asia was a major contributor to the 340 million new cases of STIs that occurred worldwide in 1999 (WHO, 2001). Currently at least 2.5 million people in the region are infected with HIV. Other reproductive tract problems such as uterine prolapse, breast and cervical cancer are increasing as South Asian women live longer. As they attain menopause, changes in their hormonal and social status result in physical and psychological stresses that require attention to ensure health and a better quality of life.

In most of South Asia, poor women fare substantially worse than rich women on almost all reproductive health indicators. Thus, efforts to improve reproductive health must be targeted to them if regional and equity goals are to be met. The importance of adolescence to establishing good reproductive health and

behaviors and the starting points of adolescent girls in South Asia (inadequate awareness of sex and reproduction, poor communication with parents and other adults who could provide information, lack of access to formal structures such as schools, pressure to marry and bear children, and pervasive gender discrimination) require targeting of reproductive health efforts to both married and unmarried adolescents to meet their special needs (and large numbers). The continuum of need over the reproductive life cycle calls for care to be provided in an integrated manner using a person-centered approach. The importance of women's education and empowerment in influencing reproductive health outcomes puts a responsibility on program designers and implementers to help women overcome the handicaps of illiteracy and lack of autonomy.

Why Focus on Reproductive Health in South Asia?

Among the world's regions, South Asia has the largest number of poor – almost 500 million (World Bank, 2008).[1] This mass of poverty cannot be reduced substantially without serious, systematic and effective attention to the region's reproductive health. Why?

- Poor reproductive health increases the risk of individual and family impoverishment through health crises, maternal and child deaths, and excess fertility; and poverty in turn engenders serious reproductive health problems, setting up a vicious cycle.

BOX 1.1 Reproductive Health and Rights

The **definition of reproductive health** accepted by all countries at the International Conference on Population and Development at Cairo in 1994 is 'a state of complete physical, mental and social well-being… in all matters relating to the reproductive system….' Reproductive health care is defined as 'the constellation of methods, techniques and services that contribute to reproductive health and well-being…(including) sexual health, the purpose of which is the enhancement of life and personal relations, and not merely counseling and care related to reproduction and sexually-transmitted diseases.' In the context of South Asia's health needs and delivery systems, reproductive health care includes: sexual health and safe, responsible sexual behavior, including that of adolescents and youth; family planning, fertility regulation and safe abortion (where legal); maternal health, safe delivery and infant care; prevention and treatment of reproductive tract and sexually-transmitted infections including HIV/AIDS; treatment of sub-fertility; early detection and treatment of reproductive organ malignancies; and care of the reproductive systems of the elderly.

Reproductive rights 'rest on the recognition of the basic right of all couples and individuals to decide freely and responsibly the number, spacing and timing of their children and to have the information and means to do so, and the right to attain the highest standard of sexual and reproductive health.' Given the prevailing gender inequalities of South Asia, it is important that 'as part of (governments') commitment to reproductive health, full attention should be given to the promotion of mutually respectful and equitable gender relations and particularly to meeting the educational and service needs of adolescents to enable them to deal in a positive and responsible way with their sexuality.'

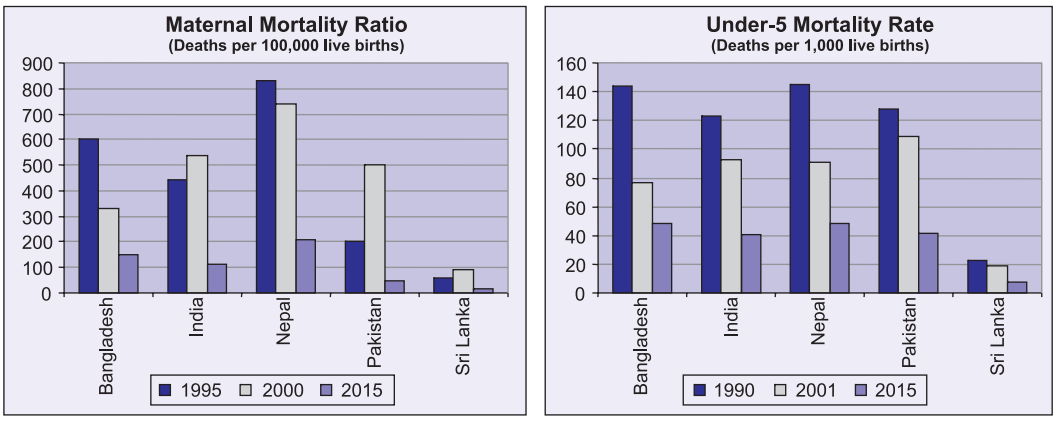
– ICPD Programme of Action, paras 7.2-7.3

- Reproductive ill-health contributes significantly to the morbidity, mortality and fertility burdens that undermine economic growth, especially in low-income countries.

Several recent trends make an assessment of reproductive health in South Asia invaluable at this juncture. First, as about 14 years have passed since the International Conference on Population and Development (ICPD) at Cairo, it is time to review South Asia's progress in implementing the reproductive health agenda (see Box 1.1; UN, 1995). How well have the five countries that are the focus of this report – Bangladesh, India, Nepal, Pakistan and Sri Lanka – implemented the recommendations of the ICPD Programme of Action (POA)? An examination of current reproductive health status in the countries and of their services will reveal both their achievements and the obstacles they face.

Second, while they do not cover reproductive health fully, the Millennium Development Goals (MDGs) drawn up by the international community in 2000 include some specific reproductive health targets.[2] The region is important for the achievement of the poverty and health Goals because of its large population (about 22 percent of the world's total), high maternal and child mortality rates, and widespread communicable diseases. Although all the five countries have progressed since 1990, improvements have been variable across countries and indicators (Figure 1.1). Only a few years remain to 2015 and, unless efforts are accelerated, both local and global goals will not be reached. Fortunately, there is substantial evidence that reproductive health

FIGURE 1.1 Reproductive Health Levels and Goals for the Five Countries of South Asia



Note: The graphs above are based on modeled estimates provided in WHO (2004) which facilitate comparisons across the five countries. The 2006 Nepal DHS has provided new estimates of the MMRs for Nepal in 1995 (539), 2000 (470) and 2006 (281), and a revised goal for 2015 (213) based on the estimated 1988 (rather than 1990) level (GON-MOHP et al., 2007). It also reports a U5MR of 61 in 2006. India's U5MR between 2001 and 2005 was estimated as 74 per 1000 children born, and for 2005-06 it was 52 (IIPS and Macro International, 2007). An official MMR estimate for 2001-03 is 301 (GoI-RGI, 2006). The 2006-07 DHS in Pakistan has measured an MMR of 276, lower than the previous estimate of 320; and a U5MR of 94 (NIPS and Macro International, 2008).

can be improved, and the governments of South Asia and international donors are committed to doing so.

A third trend pre-dates the other two but has increased in importance more recently in South Asia. Health sector reforms began hesitantly in some parts of the Subcontinent in the 1990s but have picked up momentum. A review within their context will show how reproductive health care could be improved over the next ten years to meet South Asia's challenges.

How This Review was Done

The purpose of this review is to assist its five 'focus' countries to strengthen and expand interventions to improve the reproductive health of their poor women. It does so by:

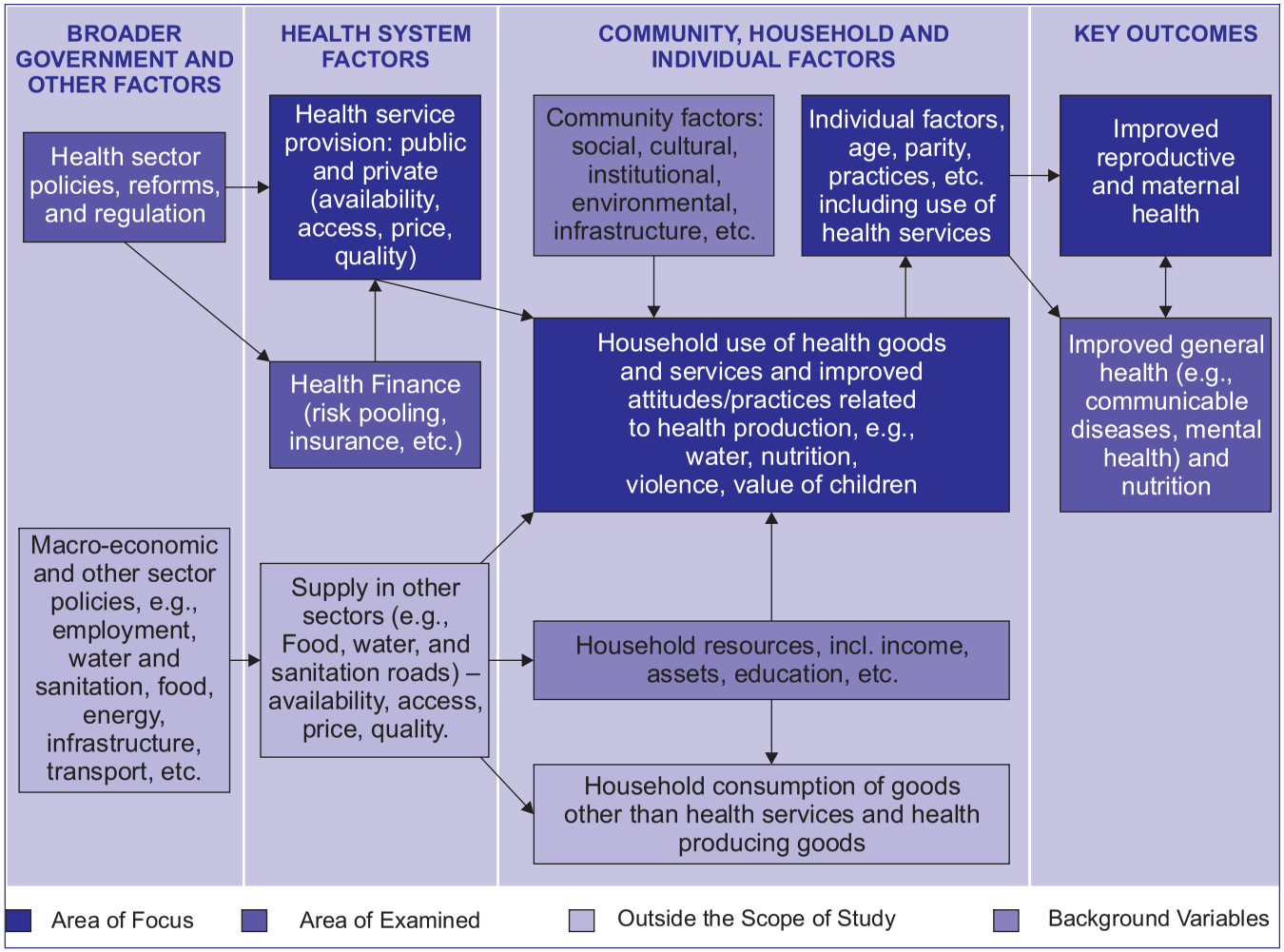
- providing a picture of the current status of women's reproductive health in each country and demonstrating the links between poverty, inequality and women's health;
- describing the use and quality of reproductive health services and barriers to use and supply, and identifying the improvements required;
- identifying the household and individual characteristics that affect reproductive health status and use of services so that the most important of these can be used to target women and households with the greatest need for reproductive health care;
- presenting a simple and effective method for decentralized action planning that can be used widely in the region to improve reproductive health services and outcomes;
- identifying some promising practices that provide models and lessons for improvement of reproductive health in South Asia; and
- discussing reproductive health spending and financing options in order to strengthen the case for investing in poor women's reproductive health.

The Analytical Framework

Reproductive health outcomes are the result of individual, household and community factors, health system factors, and other governmental and macro-economic factors (Figure 1.2). Health sector policies and regulatory mechanisms, along with the financing they cause, influence service provision in both the public and private spheres. Household use of health services depends on the resulting availability, price and quality of services, and on household resources and community characteristics. Household resources (obtained and consumed) are influenced by macro-economic and other sectoral policies, and the supply of goods such as food, water, transport, employment and so on. Individual factors come into play not only in affecting use of health services but, importantly, in producing desired health outcomes. The methodology and indicators used in the study are given in Annex 2.

Improved reproductive health can be brought about by a favorable interaction of these factors:

FIGURE 1.2 A Conceptual Framework: Factors Influencing Reproductive Health Outcomes



Adapted from Claeson et al. (2001).

policies, services, household resources, community institutions, and individual characteristics. These factors and their interactions are examined in this study, while others (for example, policies and services in sectors such as water supply or transport) are acknowledged to be important but outside its scope.[3] The focus on health services is based on the hypothesis that they have an important proximal role in improving reproductive health, and on the pragmatic consideration that the health sector is not meeting its potential to improve reproductive health in any of the countries under study, thus offering opportunities for action.

A Life-Cycle Approach to Reproductive Health

Reproductive health problems and solutions vary at different stages of the life cycle. As reproductive concerns begin earnestly in adolescence, this stage is considered first.[4] How ready, physically and psychologically, are South Asian adolescents for sex and reproduction? What do they *know* of these matters? What about their sexual behavior or practice of contraception? In South Asia, adolescent marriage and childbearing are widespread. What delays marriage, sex or pregnancy? Do adolescents have access to services? Do they use them? These are some issues discussed for this life-cycle group.

Most reproductive matters that arise in adolescence continue into maturity. What are the reproductive strategies and outcomes of sexually-active adults? Analysis of the reproductive health of adult women, including their wanted and unwanted fertility, practice of family planning, 'unmet need' for contraception, abortion, and reproductive morbidity (RTIs, STIs and HIV/AIDS) provides a fuller picture of sexual and reproductive health in South Asia.

Every year about 15 percent of South Asian women of reproductive age become pregnant and about 12 percent have a live birth. During this 'maternal stage' of the life cycle, the focus is on women's nutritional status, use of antenatal care, delivery practices, postnatal and infant care, and outcomes for mothers and children. The last stage of the reproductive life cycle concerns the winding down of reproductive capability. Health problems related to menopause, conditions such as uterine prolapse and diseases such as breast and cervical cancers are important during this period.

How This Report is Organized

This report discusses the conceptual framework from right to left! In the rest of Chapter 1 it presents reproductive health outcomes and their associated individual and household characteristics. It then examines the use and provision of health services, and constraints to these (Chapter 2). These two chapters focus on 'what' needs to be done to improve reproductive health, while the remaining chapters turn to the 'how' of doing so. Chapter 3 describes how improvements can be made in health services through decentralized action planning and use of promising practices from around the world, and Chapter 4 discusses how financing can be

increased and improved. The final Chapter 5 positions the improvement of reproductive health care within health sector reform in South Asia.

The South Asian Context

South Asian societies and demography have several special features that are critical to reproductive health outcomes. They include: a large population with sizeable cohorts of reproductive-age women and young people; continued high population growth, albeit with significant variations across the Subcontinent; high poverty and widespread inequality in all but a few areas; 'masculine' sex ratios in most parts that speak of the low status of women, which is also borne out by low female literacy, employment and empowerment; and wide regional variations in almost every parameter.

The five countries had a total estimated population of 1,362 million in 2001 – over one-fifth the world's total (Table 1.1). Together they account for 98 percent of South Asia's population.[5] Women of reproductive age (15-49 years) account for 23 to 27 percent of the country populations, while adolescents constitute one-fifth. People over 60 account for 10 percent of Sri Lanka's population and are expected to reach 25 percent by 2030. In India, eight percent, and, in the other three countries, five to six percent of the population is above this age.

One of the most unusual features of South Asia's population is the masculine sex ratio.[6] In the region, Sri Lanka and Nepal have female-favorable sex ratios, suggesting a better status of women.[7] India's ratio hides considerable geographic and social variations. In general, the North and West of the country have a greater bias against females than the South and East. Variations at the state level – from 861 to 1,058 – are related more to culture and social practices than to economic levels.[8] The sex ratios of Pakistan and Bangladesh are similar to those of the adjoining areas of India. All told, there are about 50 million 'missing' women in South Asia. Except in Sri Lanka, female mortality is considerably higher than that of males up to the age of 30 or 35 years, especially in the first five years of life. The male-female gaps in life expectancy in Nepal: six months *lower* for women, and Sri Lanka: 5.7 years *higher* for women, illustrate the need and potential to improve women's health in South Asia.

An important indicator of poverty and women's status, female literacy is dismally low in the region. Almost two-thirds of Nepalese and Pakistani women are unable to read and write. In Sri Lanka, on the other hand, more than 82 percent of women have had secondary or more education (2006-07). Poverty is both widespread and deep – between one-quarter and two-fifths of people in each country spend below a dollar a day. Inequality is further illustrated by the small share in national consumption of the poorest quintile of the population of each country (around 8 percent). All the countries have experienced moderate growth in GDP in the recent past except Nepal which has the lowest per capita GDP. In Pakistan and India, which have seen moderate levels of economic growth over the past decade, economic

TABLE 1.1 Demographic Indicators for the Five South Asian Countries, various years

	Bangladesh	India	Nepal	Pakistan	Sri Lanka
Population, 2001 (millions)					
Total	143.36	1028.61	25.88	148.72	18.73
Male	73.85	532.16	12.96	76.36	9.27
Female	69.51	496.45	12.92	72.36	9.46
Women aged 15-49 years (millions)	35.73	251.43	6.52	34.16	5.15
Sex ratio (Females/1000 Males), 2001	963	933	1002	922 (1998)	1018
Average Annual Population Growth Rate (1990-2001)	2.2	1.8	2.2	2.5	1.4
Population Density (people per sq. km.), 2002	1042	353	176	188	299
Urban Population (percent of total population), 2001	26	27.8	12.5	34	20.4
Crude Birth Rate, 2001	28.4	25.0	33.5	28.0	13.6
Life Expectancy at Birth, 2000					
Male	58.1	61.7	62.0	59.2	69.0
Female	58.8	62.5	61.9	58.9	74.7
Infant Mortality Rate, year between 2000 and 2002	71.5	63	64.4	77.1	19.2
Adult Female Literacy Rate, 2000	30	45	24	28	89
Poverty (Head Count percent)	49.8 (2000)	26.1 (2000)	38 (2001)	32 (2002-03)	28.1 (2001)
Share of the Poorest Quintile in National Consumption	9.0 (2000)	8.1 (1999-00)	6.2 (1995-96)	8.8 (1998-99)	8.0 (1995)

Note: Some data for 2006 are presented in Endnote 1. The sex ratio in Pakistan in 2006-07 was estimated as 980 females per 1000 males (NIPS and Macro International, 2008).

Sources: UNFPA and PRB, 2005; UNICEF, 2003; World Bank, 2004a; UN Statistical Division, 2004.

Country Specific Sources: *Bangladesh:* NIPORT et al., 2003; GOB-BBS, 2001; *India:* IIPS and ORC Macro, 2000; GOI-RGI, 2001; GOI-RGI, 2004; GOI-MOF, 2001; *Nepal:* GON-MOH et al., 2002; GON-MOF, 2003; GON-CBS, 2003; *Pakistan:* NIPS, 2001; GOP-FBS, 2003; GOP-PCO, 2001; GOP-MOF, 2003; *Sri Lanka:* GOSL-DCS, 2002a; GOSL-DCS, 2002b; GOSL-FHB, 2001; GOSL-DHS, 2001.

inequalities are believed to have widened. These issues have a bearing on health service development and financing and, critically, on the access of the poor to health care.

Comparing the five countries requires attention to their vast differences in size: India's population is about seven times those of Bangladesh and Pakistan, which in turn are seven times larger than Nepal and Sri Lanka![9] Comparisons are worthwhile because of the shared cultures, economic conditions and histories of the countries, including similarities in the

development of their health policies and services, and the potential for learning – even from differences. Among these differences are variations in how health policies are made, financed and implemented sub-nationally.[10]

There are also important differences *within* each country which are concealed by its national averages. Although all five countries have advanced significantly in reproductive health over the past several decades, progress has been spatially and socially uneven. Socio-economic differentials in reproductive health are a key focus of this report. Spatial differences are clearly also critical and are the reason for the report's key recommendation that decentralized action planning is the way to improve reproductive health. The other recommendations also need to be fine-tuned to different sub-units. Both intra-national and cross-national learning are important and made interesting by the spatial variations across the Subcontinent. For example, India borders on all the other countries and its contiguous areas 'behave' like the neighboring country (e.g., Kerala and Tamil Nadu like Sri Lanka; Bihar and parts of Uttar Pradesh like Nepal; Indian Punjab like Pakistan Punjab; and so on). There is much to exchange between neighbors.

Adolescent Reproductive Health

Almost one-quarter of the world's adolescents and youth, about 420 million, live in the five countries of South Asia. Approximately two of every ten people in the region are aged between 10 and 19 years, and another one is between 20 and 24 years (Annex 3 Table A3.1). In the absence of dramatic changes in fertility, mortality or migration, ten-year cohorts of adolescents or youth will continue to constitute over a fifth of the population of the region at least up to 2021. Their numbers – large and growing due to past high fertility – underlie the population momentum that the region will experience in the first half of the 21st century. To address both fertility and mortality challenges it is essential to address the reproductive health needs of adolescents. To do so for such large numbers will place increasing pressures on health services henceforth.

In South Asia, many girls are subordinated and subjected to discrimination within their families and communities – a process that begins in childhood. This is manifest in their poorer health and nutritional status compared with boys, lack of education and information, heavy domestic work burdens and constrained mobility – all of which have a bearing on their reproductive health at this stage as well as later in the life cycle. The practices of seclusion and *purdah,* which limit girls spatially and in social interactions, usually begin during puberty and have a serious impact on schooling. While educational attainments are high in Sri Lanka with equal access to schooling, and rising in the other four countries, gender gaps in schooling indicators are commonly about 20 percent. For example, in India, 86.7 percent of boys in the 15-19 year age-group are literate compared to 62.4 percent of girls.[11]

The low economic value of women due to their involvement predominantly in traditional work and unpaid domestic labor, and the practice of dowry that prevails in South Asia, fuel a vicious cycle of low investment in girls, early marriage and childbearing, and low access to resources and power. The subordinate position of women also exposes them to violence, including sexual abuse and violence within and outside the family. As in many other 'female' matters, secrecy shrouds the issue of gender-based violence, so that its actual extent is largely unknown. India's Third National Family Health Survey (NFHS-3, 2005-06) reports that one in five women aged 15-49 years experienced physical violence in the preceding year – more among poor and illiterate women (IIPS and Macro International, 2007).

Reproductive Knowledge and Sexual Behavior

In addition to the physical development that adolescents experience, they undergo emotional and psychological changes related to the development of sexuality and sexual behavior. As a consequence they are exposed to a wide range of sexual and reproductive health risks. Both sexes are vulnerable, but in South Asia girls face greater risks than boys.

Although there is a paucity of information in the region on sexual debut and behavior (whether marital or premarital) on account of the conservative attitudes that prevail (even among the young themselves), the vast majority of girls in South Asia begin sexual activity during adolescence, often within the context of marriage. Only a small proportion reports premarital sex, e.g., below 10 percent in India compared to about one-quarter to one-third of boys (Jejeebhoy, 2000).[12] Sexual encounters are most often unplanned and unsafe. Young men and women in low-income urban areas appear particularly vulnerable to sexual coercion, including physical force. While young girls tend to report a casual encounter or a steady partner, young men have multiple casual partners and almost always fail to use a condom.

There is increasing openness about sex and reproduction among the youth of South Asia thanks largely to the spread of television and other media in the past two decades. In Pakistan, almost 60 percent of adolescents had some awareness of reproductive health, including information about puberty, childbirth and pregnancy-related problems (NIPS, 2002). However, they also had many misconceptions, for example, about the fertile period during the menstrual cycle and about causes of infection. Underlying these was a lack of communication with parents and other responsible adults, e.g., only one-third of mothers had discussed puberty with their daughters. Reproductive health is not discussed in most families, and sex education is hardly provided in schools. The majority of adolescents felt that there was great need for reproductive health education, and that the most appropriate age for this was between 14 and 17 years, when most children should be (but in South Asia are not) in school.

The inadequacy of information about sexual and reproductive health is exacerbated by a lack of services for adolescents, particularly the unmarried. Girls are particularly disadvantaged because their access to formal institutions such as schools and health facilities is constrained.

As a result, they frequently experience reproductive health problems, including unplanned pregnancies and HIV/AIDS. Even adolescents whose sexual and reproductive health needs are different and 'legitimized' by marriage have inadequate access to services as their youth limits their autonomy to make decisions and move around freely.

Adolescents are, of course, a heterogeneous group, but while their situations vary markedly across and within the five countries, their needs are poorly served almost everywhere. Girls require emotional support and assurance that menstruation is normal and healthy, along with information that sex thereafter can lead to pregnancy or infections. They need information about sex, sexuality, and reproduction. Mothers are important communicators of these subjects, but are themselves in need of empowerment to carry out this role. Involving men in reproductive health must begin in adolescence when socialization determines sexual behaviors, gender ideologies, and social and familial roles. Schools, health services and other institutions need to provide information to young people in culturally-appropriate and effective ways to improve sexual behaviors and gender relations.

Reproductive Infections

A lack of knowledge about sexually-transmitted infections (STIs) and low use of condoms expose young men and women to reproductive tract infections (RTIs), STIs and HIV/AIDS. For example, in Nepal, about 22 percent of sexually-active young men said they were suffering from an STI, and a further 23 percent *were not sure* if they had an infection or not (UNICEF/UNAIDS, 2001). Among sexually-active girls, 13 percent had suffered from an STI at least once, and a further 16 percent were not sure. While inadequate knowledge of RTIs/STIs may lead to over-reporting of symptoms in studies and surveys, even when women know they have a problem they do not seek health care. For example, in Tamil Nadu, India, while 49 percent of young married women in a few communities experienced symptoms, and clinical and laboratory examinations diagnosed an STI in 18 percent, only 9 percent sought care because of 'shyness' and expectations that the condition would simply go away (Joseph et al., 2003). Awareness of STIs does not lead to care even in Sri Lanka where services are relatively accessible. Only five to six percent of people attending STD clinics in Sri Lanka are adolescents, a low proportion because many needy adolescents fear being 'found out' by their parents and do not seek care (Goonewardene, 2002).

Knowledge of HIV/AIDS appears to be relatively better. About 95 percent of adolescents in Nepal are aware of HIV/AIDS, and know its modes of transmission (VaRG, 1999). In India, 60 percent of urban and 54 percent of rural 15-19 year-old boys could identify two ways to prevent HIV infection (NACO and UNICEF, 2002). However, only 30 percent of urban and 22 percent of rural boys had correct information on how HIV is transmitted, and the proportion of girls with this knowledge was much lower. Awareness that STIs increase the risk of HIV infection was limited to 21 percent of young men and 18 percent of young women. There is

evidence from India that young women (15-24 year-olds) have a higher rate of HIV infection (0.96 percent) than young men (0.46 percent) and adults in general (0.8 percent) (UNICEF/UNAIDS/WHO, 2002). Both a feminization and declining age of HIV infection appear to be occurring.

Early Marriage and Childbearing

Marriage is almost universal throughout South Asia and early marriage continues to be the norm, especially among girls, leading to early sexual activity and exposure to pregnancy and infections, with their attendant consequences. Over the past 25 years, there has been only a marginal increase in the age at marriage in Nepal and Bangladesh, and in India the median age has increased only from 15.8 to 18.3 years. At present in these countries, one-quarter to one-half of adolescent girls are married. Among ever-married women in the 25- to 49-year age-group, well over half were married by the age of 18, i.e., below the legal age (see also Annex 3 Table A3.2). The median ages at marriage are higher in Pakistan (18 years; 19.1 in 2006-07) and Sri Lanka (23 years; 21.7 in 2006-07). Despite the recent increase in the age at marriage in Pakistan, however, about one in six girls aged 15-19 years are married, and this ratio is higher in rural areas and among the poor and less educated. Among 20-24 year-old women in Pakistan in 2000, 68 percent of the illiterate were married by the age of 20, compared to 13 percent of those with 10 or more years of education.

In India, there is considerable variation across states, communities, castes and economic strata in the age at marriage. On average, urban women marry two years later than rural women. Within urban or rural areas, women from the richest quintile marry two to three years later than those from the poorest quintile. Women belonging to the Scheduled Castes or Scheduled Tribes (SC/ST) have the lowest mean age at marriage among social groups, whether rural or urban (16.0 years and 17.0 years, respectively) (IIPS and ORC Macro, 2000). To increase the age at marriage, awareness generation, school enrolment and retention, and employment generation efforts must be directed specifically to these groups. Countries such as the Republic of Korea, Taiwan and Thailand have demonstrated the impacts of girls' schooling and employment on delaying age at marriage and, in the region, these have been seen in Sri Lanka and more recently in Bangladesh (Malhotra and Tsui, 1996; Amin and Sedgh, 1998; Amin et al., 1996; Arends-Kuenning and Amin, 2000).

Sri Lanka's high age at marriage is very positive from the point of view of adolescent growth, education, and maternal and child health outcomes. However, the unmarried who are sexually active are highly vulnerable to the health and social risks of STIs, including HIV/AIDS, unwanted pregnancy and unsafe abortion. These problems need to be addressed among adolescents in Sri Lanka, as elsewhere.

Early marriage is virtually synonymous with early childbearing in the South Asian context. In Bangladesh, India and Nepal, half to two-thirds of married women have either had a child

already or are pregnant by the age of 19. Too early, these births account for one-fifth of all in India. Even in lower fertility states such as Andhra Pradesh and Karnataka, a high proportion of all births occurs early (25 and 15 percent, respectively). In high fertility states such as Bihar and Rajasthan, the proportion is about 9 percent (Sharma, 2003). This information suggests that early childbearing is persisting despite fertility decline while births among older women and higher order births are reducing. This is due in some part to the lack of emphasis on delaying and spacing contraception in favor of terminal methods in India. Thus, even in low-fertility areas, greater attention is needed to adolescents to reduce their exposure to pregnancy and its sequelae. Births among adolescents can be reduced by delaying marriage or pregnancy through increased awareness and promotion of spacing contraceptives.

Adolescent fertility rates in Bangladesh (134), India (107) and Nepal (110) were around four times that of Sri Lanka (27) (in 1995-2000; GOSL-DCS, 2002b).[13] However, the majority of adolescent pregnancies in Sri Lanka are unwanted (more in urban than rural areas) as pregnancy out of wedlock remains culturally unacceptable. Hence a large number of adolescent pregnancies result in unsafe abortions and post-abortion complications (Soysa, 2000; UNICEF, 2001a). A meta-analysis of 27 urban hospital-based studies found that girls under 20 accounted for approximately 69 percent of women with abortion-related complications (Attapattu, 2000). As discussed in Chapter 2, the young are severely constrained in their access to services, whether for contraception or pregnancy care, and their multiple handicaps need to be addressed by aiming integrated services squarely at them.

Nutrition for Adolescent Growth

Adolescent girls are at high risk of simultaneous nutritional deficiency of iron, vitamins and energy which adversely affects their reproductive health and outcomes. Over half of all 15-19 year-old mothers in India, and one-third even in Sri Lanka, are anemic (IIPS and ORC Macro, 2000; IIPS and Macro International, 2007; USAID/OMNI, 2000).[14] Anemia is as prevalent among adolescents as among all reproductive women, demonstrating that it sets in early in reproductive life, as iron intakes (or absorption) fail to keep pace with increased requirements after menarche (Table 1.2).

In Nepal, about one-fourth of adolescent women are underweight (BMI<18.5 kg/m^2), and in India the proportion is even higher (42 percent in 1998-99 and 47 percent in 2005-06).[15] There are also important differences between the richest and poorest (Table 1.2). About one-fifth of girls also suffer from vitamin A deficiency. Iodine deficiency also occurs in this age-group – in some of Sri Lanka's south-central districts over 20 percent of girls suffer from goiter.

Bearing children in poor nutritional condition further depletes women's bodies, with far-reaching consequences for women *and* children's health. Maternal anemia and undernutrition are associated with a high incidence of fetal wastage, have a negative impact on the growth and

TABLE 1.2 Nutritional Status of 15-29 year-old Mothers, India, 1998-99, percent[16]

Age group	Rural			Urban		
	Poorest Quintile	Richest Quintile	All	Poorest Quintile	Richest Quintile	All
Anemic						
15-19 years	59.9	47.2	56.4	57.3	38.8	51.4
20-29 years	62.0	45.3	54.0	52.6	36.0	45.6
Underweight (Body Mass Index <18.5 kg/m^2)						
15-19 years	43.2	35.3	42.1	51.1	32.0	41.9
20-29 years	49.4	32.8	44.2	46.0	14.9	30.6

Computed using data from IIPS and ORC Macro, 2000.

development of the fetus (increasing the proportion of infants born underweight), and reduce infant survival. The second Indian National Family Health Survey (NFHS-2) established that neonatal mortality was three times higher among adolescent mothers (63) than among 20-29 year-old mothers (21) (IIPS and ORC Macro, 2000).[17]

A cohort of young women will have a larger number of pregnancies than more mature, healthy women to produce children that survive. Frequent pregnancies erode women's health and increase their risk of maternal death. A rural community-based study in India found that adolescents had twice the maternal mortality ratio of older women (25-39 year-olds). Additional negative consequences for mothers include permanent damage to the reproductive tract which can render them infertile or cause chronic ill-health. Teenage pregnancies also carry a higher risk of cervical cancer later in life (Goonewardene, 2002).

In addition to youth, poverty is an important determinant of adolescent reproductive health – poor young women have gender, age and socio-economic status against them. They have the least access to household health goods and services of all age-and-sex groups, and circumscribed mobility and interactions with formal structures such as health services. These result in poor nutrition and growth, low levels of education and poor reproductive health awareness, behaviors and outcomes. They are inducted early into 'maternal behaviors' as they are often the main care-givers to younger siblings, and they marry and bear children early themselves. The sex, infections, pregnancies, childbirths and deaths they experience often leave lasting physical and psychological effects. Prevention is better than cure.

Sexually-Active Adults

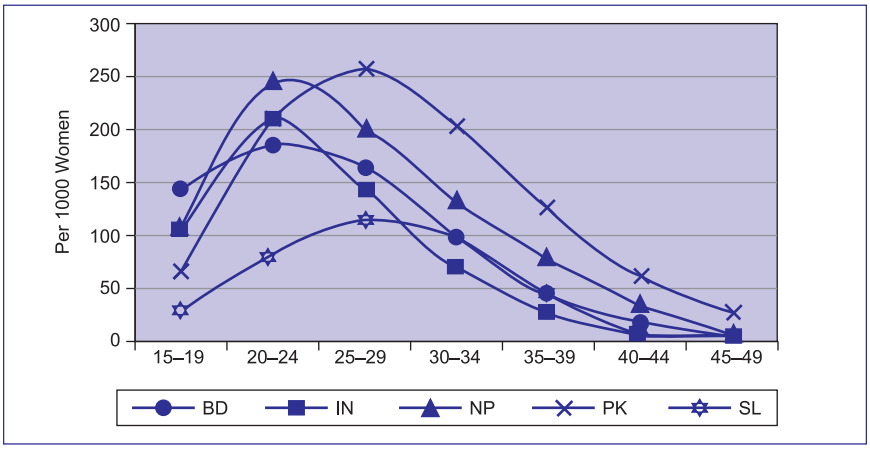
Fertility and RTIs/STIs (including HIV/AIDS) also take a heavy toll on the health of sexually-active reproductive-age women in South Asia as discussed below.

Fertility

Fertility is high in South Asia where women's 'value' continues to be associated with child-bearing. Among the five countries, fertility in 2000/2001 was highest in Pakistan (with a Total Fertility Rate of 4.1; this rate has been confirmed by the 2006-07 DHS) and Nepal (4.1) followed by Bangladesh (3.2) and India (2.8), and lowest in Sri Lanka (1.9) (Annex 3 Table A3.3). However, fertility is declining in many areas as 'desired fertility' is significantly lower than the prevailing TFRs (except in Sri Lanka). For example, in Bangladesh, desired family size is 2.2 while total fertility is 3.2. India, Nepal and Pakistan experienced fairly significant fertility declines during the 1990s, Sri Lanka a somewhat smaller decline at its already low level, and Bangladesh a very slight decline which has subsequently accelerated. The 2006/2007 DHS in Nepal and Bangladesh report TFRs of 3.1 and 2.7, respectively, reflecting remarkable fertility declines in the inter-survey period in each country. India's TFR declined only slightly to 2.7 by 2005-06. Several states, notably those in the south and west and a few in the north, have already achieved replacement level fertility or are close to attaining it. However, five states that account for nearly 40 percent of the country's population (Bihar, UP, MP, Rajasthan and Orissa) will contribute well over 50 percent of its population increase during the next decade. An increase in Sri Lanka's TFR – to 2.4 in 2006-07 – shows that fertility decline is not irreversible (GOSL-DCS, 2008).

Figure 1.3 shows the age-specific fertility rates of the five countries at the end of the 1990s. During that decade, fertility declined among all age-groups in all five countries. In Bangladesh, it fell most among women over 30 years of age, while in Pakistan an impressive decline occurred among 15-24 year-olds due to increased schooling among girls and changes in social awareness

FIGURE 1.3 Age-Specific Fertility Rates, Five Countries of South Asia

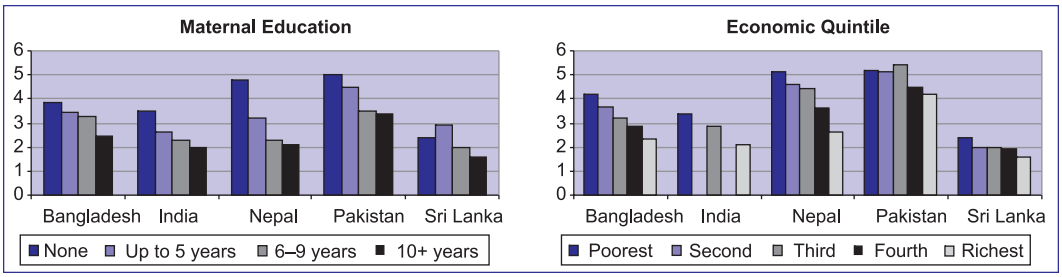


Sources: *Bangladesh:* NIPORT, 2001; *India:* IIPS and ORC Macro, 2000; *Nepal:* GON-MOH et al., 2002; *Pakistan:* NIPS, 2001; *Sri Lanka:* GOSL-DCS, 2002a.

and norms. In India, by contrast, fertility declined more dramatically among women over 20 than among 15-19 year-olds. More recently (i.e., between 2001 and 2007), substantial declines in fertility occurred among women over 29 years in Nepal, and in all age-groups in Bangladesh. The fertility of women over 40 years of age is significantly higher in Pakistan than in the other countries.[18]

Most of the socio-economic differentials in fertility in the five countries are 'expected' – with a few surprises (Annex 3 Table A3.4). Education and economic status have negative influences on the TFR (Figure 1.4).[19] In Bangladesh, Pakistan and Sri Lanka, the TFR of women with secondary schooling or more is about one-third lower than that of illiterate women, and the difference between these two groups is even more significant in Nepal (56 percent). However, even the richest and most educated groups in Bangladesh and Pakistan have fertility well above replacement level. In four countries (barring Sri Lanka), rural women have TFRs one to

FIGURE 1.4 Total Fertility Rate and Maternal Education and Economic Status, Five Countries



Note: For India, the economic categories in the TFR analysis are low, medium and high income-groups, not quintiles.

two children higher than urban women. In Sri Lanka, only the estate sector had not achieved replacement level fertility in 2000 (TFR 2.4). These differences show the importance of targeting family planning services geographically and socio-economically.

In several parts of the Subcontinent, notably India and Nepal, the strong preference for sons over daughters has an impact on fertility.[20] In their effort to bear sons, many couples continue to have children even after achieving their desired family size. If son preference were eliminated, India's fertility would decline by 8 percent (Mutharayappa et al., 1997).

RTIs, STIs and HIV/AIDS

Given socio-cultural sensitivities in South Asia, RTIs and STIs are most likely under-reported. Treatment of these infections has been neglected almost everywhere, so service statistics also are inadequate. Only a few small-scale studies provide useful information on the prevalence of these infections in the five countries.

In a rural *thana* of Bangladesh, 56 percent of married women reportedly suffered from an RTI

and 13 percent had confirmed STIs (Hussain et al., 1996). Among women seeking care for abnormal vaginal discharge, there was a 30 percent prevalence of endogenous infections (Hawkes et al., 1999). Among young married women in 13 South Indian villages, 53 percent had at least one symptom suggestive of an RTI (Joseph et al., 2003). In four Indian states, 13 percent of men aged 20-54 years and 30 percent of currently-married women (aged 15-44 years) suffered from a symptom of an RTI or STI in the three months preceding a survey (IIPS, 2002). The prevalence of RTIs is higher in rural than urban areas and among illiterate women compared with the educated (IIPS and ORC Macro, 2000). In general, these infections affect one-third to one-half of women and their prevalence is about one-third higher among poorer women than among the better-off.[21]

The Prevalence of HIV/AIDS. Over the past decade or so, there has been an increase in the collection of data on HIV/AIDS. However, the infection may still be underestimated in some areas, given the difficulty of measurement, under-reporting and limited surveillance systems. The serious nature of HIV/AIDS and heterogeneity of the epidemic call for more active assessment of its incidence and prevalence throughout the region.

In the region, the prevalence of HIV in the adult population is lowest in Pakistan and Sri Lanka (0.06 percent) followed by Bangladesh and India (0.3 percent) and Nepal (0.5 percent) (UNAIDS, 2004; IIPS and Macro International, 2007). In India, 2005-06 data have resulted in a dramatic revision of the prevalence rate for HIV in the country and put the total number of HIV-positive persons in the 15-49 year age-group at 1.7 million. Prevalence among women was 60 percent higher than among men, but in the 15-19 year age-group it was seven times higher among women than men, although the overall rate was low. Education has a positive impact on HIV prevalence but the effect of economic status is mixed. Five states were found to have higher prevalence than the rest of India – Andhra Pradesh, Karnataka, Maharashtra, Manipur and Tamil Nadu, which is consistent with the findings of the Sentinel Surveillance System of the National AIDS Control Organisation (NACO, 2005).

Overall, South Asia has a prevalence of 0.3 percent, and in most parts, the epidemic remains concentrated among high-risk groups (HRGs). In Bangladesh, although syphilis rates were high among HRGs in 2002 (e.g., 40 percent among brothel-based female sex workers (FSWs) and 11 percent among injecting drug users (IDUs)), HIV rates were less than one percent except among IDUs (4.0 percent). Male circumcision in Bangladesh and Pakistan is among the reasons for low prevalence of HIV/AIDS. Injecting drug use is thought to ignite transmission in these two countries and in the Northeast of India, while in the rest of India, transmission is largely fueled by sex work (Wilson, 2005). Intensive focus on IDUs and FSWs in these areas could contain further transmission significantly.

In Nepal, FSWs and IDUs are responsible for a significant proportion of HIV transmission (UNICEF, 2002). The prevalence rate among IDUs rose dramatically in the 1990s to about 50 percent, and is currently 67 percent in the Kathmandu Valley. The majority of IDUs are in

their early 20s and have risky sexual behavior (CREHPA and FHI, 2003; New Era, 2003; CREHPA and FHI, 2002). Sex workers in Kathmandu are estimated to have a prevalence rate of 15.7 percent. The prevalence of STIs and HIV is higher among FSWs who have returned from India (about 40 percent) and especially among those returning from Mumbai (71 percent) (GON-MOH, 2003). About 40 percent of Nepal's epidemic is linked to such migration (Wilson, 2005). Risky behavior and its consequences are also high among truckers and other migrants (CREHPA and FHI, 2002; GON-MOH, 2003; UNICEF, 2002).

Over a ten-year period, HIV prevalence climbed to 8 percent among high-risk groups in Sri Lanka (NSACP, 2002). In Colombo district, two-thirds to four-fifths of those in four high-risk groups (FSWs, their clients, men who have sex with men (MSM) and female migrant workers) were under 35 years, and nearly half of MSM were 15-24 year-olds, indicating the high vulnerability of youth (Saravanapavananthan, 2002). Consistent condom use was only 38 percent among FSWs and 19 percent among clients.

Separate data are not available on the poor, but 60 percent of HIV infections in India are in rural areas. In both rural and urban areas, many people among the high-risk groups are poor. The inability of poor and powerless women and youth to negotiate the use of protective measures during sex makes them exceedingly vulnerable.

Knowledge and Awareness of RTIs, STIs and HIV/AIDS. Complete information on people's knowledge of RTIs, STIs and HIV/AIDS is not available for the five countries, but such studies as exist suggest that awareness is much lower among women than men. In India and Nepal in 2000, only half of women surveyed were aware of HIV/AIDS compared to two-thirds of men. Knowledge of RTIs/STIs was even lower (NACO and UNICEF, 2002; GON-MOH et al., 2002). Two-fifths of Nepali women and two-thirds of men believed that AIDS could be avoided. In Pakistan, 42-44 percent of ever-married women had heard of HIV/AIDS, while in Sri Lanka 79-93 percent had (NIPS, 2001; NIPS and Macro International, 2008; GOSL-DCS, 2002a; 2008). Although awareness had increased by 2006 in Nepal (to 73 percent among women and 89 percent among men), Bangladesh (to 67 percent among women and 85 percent among men), and India (to 61 percent among women and 83 percent among men), gender gaps persist, and levels of awareness vary considerably with education (GON-MOHP et al., 2007; NIPORT et al., 2007; IIPS and Macro International, 2007). Awareness is severely limited among poor and illiterate women. In Pakistan, for example, only about one-fourth of women with no education were aware of AIDS compared to 98 percent of college-educated women. In Nepal and India, there is great variation in awareness across geographic areas. For example, in the 'backward' northern states of India less than 50 percent of women had heard of AIDS, while in Kerala and Tamil Nadu in the south, over 95 percent had.

Knowledge of correct preventive methods was found to be 55 percent among women and 75 percent among men in Nepal in 2006. However, even though awareness may be high, adequate precautions are often not taken (New Era, 2003; VaRG, 2001; CREHPA and FHI, 2002). The

lack of awareness of symptoms and modes of transmission of RTIs/STIs among clients and, in some instances, health care providers, and the low availability of female providers hinder use of services. In India, among women who had experienced one or more symptoms suggestive of an RTI or STI, over 50 percent considered the problem 'normal' and sought treatment only when they were not able to carry out their usual household chores. In Pakistan, women either did not seek care from male doctors or were too embarrassed to discuss their problems with the latter (Khanum et al., 2000). Symptoms of infection are often perceived to be due to eating 'hot foods,' and home remedies are believed to cure the problem. In Nepal, Village Health Workers were unsure if condoms were to be used only when men had sex with FSWs or with other women as well (Bhattarai, 2000). They also thought that HIV/AIDS could be transmitted through mosquitoes and that infected persons should live in isolated camps. This information points to the need for effective communication and behavioral change. Providing condoms widely could be a good preventive strategy and some successful efforts are discussed in Chapter 3.

The situation also points to the need to involve men in women's reproductive health (especially in decisions about contraception and health care) as well as to address men's reproductive issues, including their sexual health (sexual dysfunctions, infections, infertility and cancers), practice of contraception (including vasectomy), responsibility in conjugal and other sexual relations, and roles in family care. Men's sexual behaviors are more risky than women's (e.g., they have more partners and visit FSWs) and increase women's health risks. Their dominant role in reproductive health decisions means that communication and services need to be directed to them. For example, treating STIs in men could reduce the risk of infection and subsequent complications (HIV/AIDS, cervical cancer, infertility) among their women partners. Men can reduce unwanted pregnancies by practicing contraception or supporting its use by their partners. Indeed, the integrated approach to reproductive health focuses on *couples*.

Clearly, individual, household and community factors have a strong influence on women's fertility and most likely on their susceptibility to reproductive infections. The association of poverty and fertility is well established, and poverty exacerbates infections (including HIV/AIDS) through low awareness, lack of women's empowerment to seek care or negotiate safe sex, lack of access to services, and so on. The use of unqualified practitioners may be a poor woman's only resort, and may further worsen the situation, as in the tragic case of unsafe abortion. Thus there is great need to strengthen bona fide services for the treatment of RTIs and STIs.

The Maternal Stage

The third stage of the reproductive life cycle encompasses pregnancy and childbirth and our concern here is with mother and child health during and after these events. Only a few indicators of mothers' nutritional status and maternal and infant mortality are used to describe the

BOX 1.2 The Importance of Being Fertile

No discussion of women's fertility in South Asia is complete without attention to sub-fertility because of the importance of childbearing to the status of women in their families and communities. According to the WHO, between eight and 12 percent of couples worldwide experience some form of infertility during their reproductive lives. Applying this average, we get 25 to 40 million couples in South Asia but the issue has been largely neglected, beginning with very limited collection of information. In Pakistan and Sri Lanka, four to five percent of couples suffer from primary infertility, while 16 to 18 percent have secondary infertility (NIPS, 2001; Samarakoon et al., 2002). Secondary infertility is associated with a high male age at marriage and low socio-economic status in Sri Lanka.

Couples may be infertile on account of anatomical, genetic, endocrine or immunological problems. Other causes include environmental conditions (e.g., exposure to toxic substances), preventable situations such as STIs or parasitic diseases, and certain malpractices such as unhygienic obstetric interventions and abortions. In Sri Lanka, for example, about 12 percent of women with secondary infertility had a history suggestive of post-partum sepsis, and a further eight percent had had an abortion (Samarakoon et al., 2002).

Levels of sub-fertility vary across ethnic groups and regions. Knowledge and understanding of infertility also vary. In seven districts of Nepal, 73 percent of 20-24 year-olds knew about infertility, and a majority knew that either spouse could be responsible for a couple's infertility. Most had a negative attitude towards infertile people (FPAN, 2002). However, sub-fertility is generally perceived to be a female disorder and caused by 'evil spirits' (Bharadwaj, 2002; Papreen et al., 2000; Ali, 1999). Indeed, it has yet to be recognized by many as a malfunction of the reproductive system that is amenable to treatment. This is mirrored in its neglect by the health services of South Asia, including Sri Lanka. Treatment options such as *in vitro* fertilization are too costly and difficult to include in public health services. Due to a combination of the unavailability of treatment at public facilities, high costs in the private sector, and prevailing beliefs about the causes of infertility, most couples resort to traditional interventions, if any (NIPS, 2001; Bhatti et al., 1999; Sami et al., 2003). Other approaches to addressing childlessness, such as adoption, may be better options for poor families, but procedures are often cumbersome and need amending to help the poor. Improving people's understanding of infertility would seem to be the least that public health systems could do to alleviate the social burden on women.

situation of South Asian women. Information on maternal morbidity comes largely from service statistics or hospital-based studies which, in situations of unequal health care use, are unrepresentative of the population at large.

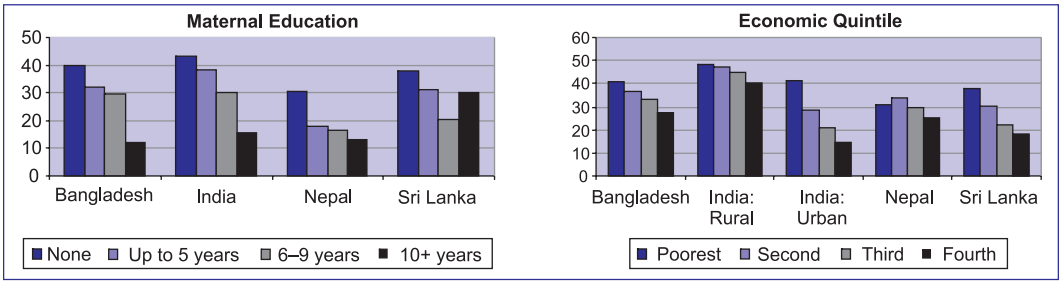
Nutrition during Pregnancy

Poor nutrition is a widespread problem among the women of South Asia, particularly during pregnancy and lactation. It begins in early childhood when girls may be underfed relative to their needs and compared with boys, and is manifest clearly in inadequate growth and development during adolescence. Early childbearing (discussed earlier) stops adolescent growth and adds to nutritional demands. Mothers who receive inadequate nutrition give birth to

underweight infants, among whom are girls who will remain small in stature and pelvic size. This vicious cycle is particularly devastating for poor women who have limited access to food throughout their lives.

Underweight Women. The proportion of women who are underweight varies from one in three in India and Bangladesh to one in four in Nepal and Sri Lanka, and is related clearly to poverty and its correlates. For example, among Indian women who are illiterate or have not completed primary school, 40 percent are underweight, while among those who have secondary or higher education, about 20 percent are underweight (Annex 3 Table A3.5 and Figure 1.5). The proportion underweight in the poorest quintile was two (in Bangladesh) to three times higher (in Sri Lanka and India) than in the richest quintile. In urban India, this proportion was five times higher. However, even among the richest, fairly high percentages of women are undernourished: from around 13 percent in Nepal and Sri Lanka to 23 percent in India.[22]

FIGURE 1.5 Undernutrition among Mothers, Four Countries (percent with BMI<18.5 kg/m^2)



Our multivariate analyses show that in Bangladesh, India and Sri Lanka, in addition to poverty and illiteracy, high parity and age increase the risk of being underweight (Annex 3 Table A3.6). While even primary education is associated with better nutrition in India, only higher levels of education make a difference in Bangladesh and Sri Lanka. Controlling other variables, SC/ST women in India are more likely to be underweight than other groups.

The far-reaching impact of poor nutrition is simply illustrated: in Bangladesh short stature among mothers increased the odds of a child death almost two-fold (Baqui et al., 1994). This goes beyond correlation to causation as the stunting and small pelvic size brought about by poor nutrition during childhood and adolescence increase the obstetric risks to both mother and child during delivery.

Anemia. Diets that do not provide enough iron, vitamin B_{12} or other vitamins and minerals may result in iron-deficiency anemia. Anemia during pregnancy exacerbates problems such as infection and hemorrhage and is associated with increased fetal loss, perinatal death and a several-fold increase in the risk of a mother dying in childbirth; severe anemia even more so.

The prevalence of anemia among 15-49 year-old women is highest in Nepal (67.7 percent in 2000, while in 2006 it was reported to be 36 percent) but the majority of women in Sri Lanka

(58.0 percent), India (51.8 percent) and Pakistan (49.7 percent) also are anemic. In India (1998-99), 55 percent of women who were illiterate were anemic but the problem was still widespread among those who had secondary and higher education (38 percent).[23] Although socio-economic differences (e.g., rural/urban, economic quintile and social group) are apparent in India and elsewhere, levels of anemia are so high even among the best-off that a summary conclusion is that most South Asian women require prevention or treatment for this problem.[24] Taking iron and folic acid supplements during pregnancy is a medically-proven intervention to reduce anemia and its negative outcomes, but delivery systems need vast improvement.

Maternal Mortality

Maternal mortality is an important indicator of the status of women in a society – a maternal death often represents the endpoint of a life of gender discrimination and deprivation 'inside' the household, and failure of the 'outside' (e.g., health system) to provide timely and effective care. Chronic conditions such as undernutrition, anemia, diabetes and hypertension make women more susceptible to maternal death, but even healthy women can succumb to an unexpected complication during pregnancy or childbirth. Only use of good health care can make maternal death a rarity, as it has in the developed world. Indeed, a striking feature of maternal health in the world today is the vast difference in maternal mortality in developed and developing countries, the latter still alarmingly high. In 2000, 13 developing countries accounted for 70 percent of maternal deaths worldwide, and South Asia for one-third. The country with the single largest number of deaths was India, where an estimated 136,000 women died (Annex 3 Table A3.7).

Among our five focus countries, the maternal mortality ratio (MMR) around 2000 was highest in India (540), Nepal (539), and Pakistan (500), and 25 to 30 percent lower in Bangladesh (380). New DHS estimates for Nepal (2006) and Pakistan (2006-07) are 281 and 276, respectively and the GoI estimate for India is 301 (GON-MOPH et al., 2007; NIPS and Macro International, 2008; GoI-RGI, 2006). Sri Lanka clearly shows what can be achieved in the region – its MMR was 92 in 2000. Box 3.3 in Chapter 3 describes how Sri Lanka achieved this. In brief, two sets of factors are believed to have reduced maternal mortality in Sri Lanka after 1940. The first includes general interventions made between 1930 and 1950 such as malaria control, deworming, improvements in sanitation, and the spread of infrastructure such as roads, hospitals and schools. These assisted the MMR to decline from around 2,000 to about 500. The second set, which caused the decline to below 100, consisted of specific obstetric interventions that were practiced widely after 1950. Modern obstetric techniques and antibiotics were extended to the majority of the population. Well-trained public health midwives provided antenatal care at both the domiciliary and institutional levels, ensured skilled attendance at delivery, and encouraged institutional deliveries. The establishment of more sophisticated obstetric services and of a national blood transfusion service throughout the country has contributed to further reductions in maternal mortality more recently (Gunathilake, 2000).

There are important geographic differentials in all the countries (NIPORT et al., 2003; GOI-RGI, 2000; WHO, 2004) as well as serious concerns that maternal mortality has not been declining sufficiently in recent years (e.g., Fikree, 2000). According to the 2006 DHS in Pakistan, about one-third of deaths among women between 20 and 39 years are due to pregnancy-related causes (NIPS and Macro International, 2008). A number of individual and household factors put women at high risk of death during pregnancy and delivery. These include age (too young or too old), high parity, poor nutritional status, low access to health services, low social status, illiteracy and poverty. As with other indicators of reproductive health, maternal mortality is higher in rural areas, among the economically worse-off, and those with little or no education.[25] Women who have received no antenatal care appear to be at greater risk of death (a cause or correlate), and those with unmet need for contraception are clearly at higher risk than they would be if they could avoid pregnancy. However, the lower MMR in Bangladesh compared with India, Nepal and Pakistan around 2000 gives pause, as it was achieved even while coverage with antenatal and postnatal care and skilled attendance at delivery were the lowest in Bangladesh of all five countries (see Chapter 2). This suggests that factors within the household that directly affect women's health and nutrition play an important role in reducing maternal mortality. Most likely these include actions that reduce the 'three delays' in obtaining obstetric care (discussed later).

Data on the causes of the most intractable maternal deaths in Sri Lanka, where rigorous audits are carried out, are instructive. During 1995-2001, direct obstetric causes accounted for two-thirds to three-quarters of deaths, and among these ante- and post-partum hemorrhage and pregnancy-induced hypertension (eclampsia) accounted for about half (GOSL-FHB, 2001). Among indirect causes, which accounted for about 30 percent of deaths, cardiovascular diseases, pneumonia (including tuberculosis pneumonia) and bronchial asthma were the most important. In the other countries, in addition to these, puerperal sepsis (13 percent in Pakistan) and post-abortion complications (11 percent in Pakistan and 20 percent in India) are still significant causes of death that need to be addressed vigorously (NIPORT et al., 2003; Bhutta et al., 2003; Anandalakshmy and Buckshee, 1997).

Child Survival

Good reproductive health outcomes include the health of very young children. Beginning in the intra-uterine period, a child's development and survival are a function of her mother's nutrition, health and access to care. Child survival in turn influences mothers' health and subsequent fertility. Some key indicators of the health of the mother-child dyad are birth weight, breastfeeding, child growth and early child mortality.

Birth Weight. More than 20 million infants are born low birth weight (LBW) annually across the world – over 95 percent of them in developing countries and about 55 percent in South Asia (UNICEF and WHO, 2004). LBW is one of the most serious public health challenges as

it has multiple underlying causes and several associated risks including substantially increased child mortality. In India, nearly 50 percent of neonatal deaths are of LBW babies. Survivors grow poorly and risk death later in infancy or childhood due to inadequate feeding, susceptibility to infections or impaired neurological development.

Despite existing policies, weighing infants at birth is not common practice in South Asia. However, direct and indirect estimates indicate that one-fourth to one-third of newborn are underweight, except in Sri Lanka where this proportion is 17 percent (Annex 3 Table A3.8). Analysis of data from India and Sri Lanka showed that maternal education, nutritional status and the length of the previous birth interval were influential factors. For example, in Sri Lanka, 27 percent of the neonates of illiterate mothers were LBW compared with 11 percent of those born to mothers with A-level education or more. However, LBW is not readily reduced by wealth or education, a finding that is consistent with the wide prevalence of poor maternal nutrition.

Breastfeeding. Breastfeeding practices have an important effect on infant health and survival. Malnutrition is directly or indirectly responsible for 60 percent of the deaths that occur among children under five years of age in developing countries, and two-thirds of these occur in the first year of life, many associated with inappropriate feeding practices (WHO, 2003). Fortunately, breastfeeding is practiced widely in South Asia – over 95 percent of infants in the national surveys of all five countries were breastfed.[26] However, despite this beneficial situation, a number of unhealthy practices exist that jeopardize infant health, growth or survival. These include late initiation of breastfeeding, discarding of colostrum, lack of exclusive breastfeeding, and introduction of weaning foods too early or too late. In Bangladesh, for example, only 16 percent of children below two had been exclusively breastfed up to four months of age (NIPORT, 2001). In Sri Lanka, a lower proportion of infants was exclusively breastfed during the first month of life than in the second to fourth months because of the use of traditional preparations believed to be good for infants or to be necessary because their mothers' milk is considered inadequate (Jayathilake and Fernando, 2002).

In Bangladesh, maternal education had a positive influence on breastfeeding: mothers who had completed primary school were 1.6 to 1.8 times more likely to breastfeed their infants exclusively for six months than those who had not received any formal education. Similarly, children born to the richest quintile of mothers had a three-fold greater chance of being exclusively breastfed for the first six months than children of the poorest mothers. In addition to a lack of awareness, these situations may be due to poor women being separated from their infants while at work.

Young Child Malnutrition. South Asia is characterized by high protein-energy malnutrition among children under five. Almost half the children assessed in Bangladesh, India and Nepal, and around one-third in Pakistan and Sri Lanka were underweight (Table 1.3). The high levels

of underweight and stunting and relatively lower levels of wasting signify chronic undernutrition. The 6- to 23-month period is critical for establishing children's nutritional status (Annex 3 Table A3.9). The fast growth and high nutritional needs of these children create the opportunity for growth retardation, underscoring the importance of timely and adequate complementary feeding and the need to protect them from infections.

As expected, children of poor illiterate women living in rural areas (and the estate sector in Sri Lanka) are more likely to be underweight. In Bangladesh, India and Nepal, over 50 percent of the children of illiterate women were underweight, compared to about 20 percent of those of women with secondary education or more. The proportion of children in the poorest quintile who are underweight is clearly much higher than that in the other quintiles. Even among the richest quintile of children, however, about a quarter are underweight in India and Nepal.[27] This indicates that even in better-off households some child feeding and care practices are sufficiently detrimental to produce undernutrition. Mothers' nutritional status (assessed by a BMI<18.5kg/m^2) also has a bearing on the nutritional status of children. These findings are consistent with those discussed earlier on mothers' nutritional status and low birth weight among infants.[28]

Three-fourths of young children in India and Nepal are anemic and one-third in Pakistan (IIPS and ORC Macro, 2000; GON-MOH et al., 2002; PIDE, 2002). By 2006, India had reduced anemia to 70 percent among children, but Nepal had reduced it more effectively to 48.4 percent among children and 36.2 percent among women (IIPS and Macro International, 2007; GON-MOPH et al., 2007). Anemia among children does not differ significantly by sex but appears to decline with age. It is higher among rural than urban children. Overall, the situation warrants strenuous efforts to improve the iron status of mothers during pregnancy and of children. The persistence of the impact of poor nutrition across socio-economic groups underscores the need for attention to it in women's reproductive health.

TABLE 1.3 Nutritional Status of Children in Five Countries of South Asia, various years, percent

	Bangladesh 1999-2000	India 1998-99	Nepal 2001	Pakistan 2001-02	Sri Lanka 2000
Age-group	**Under 5**	**Under 3**	**Under 5**	**Under 5**	**Under 5**
Underweight	47.7	47.0	48.3	37.4	29.0
Stunted	44.7	45.5	50.5	40.0	13.5
Wasted	10.3	15.5	9.6	14.9	14.0

Note: More recent (2006/2007) data for Bangladesh, India and Nepal are presented in the endnotes but are not (yet) available for Pakistan and Sri Lanka.[29]

Sources: *Bangladesh:* NIPORT, 2001; *India:* IIPS and ORC Macro, 2000; *Nepal:* GON-MOH et al., 2002; *Pakistan:* PIDE, 2002; *Sri Lanka:* GOSL-DCS, 2002a.

Neonatal and Infant Mortality. Neonatal and infant deaths are of central concern in reproductive health.[30] They reflect the level of development of a population (including the status of women) and of health services. The wide gap between developed and developing countries in infant mortality demonstrates that the majority of these deaths are preventable – most with relatively simple interventions such as immunization of mothers during pregnancy to prevent neonatal tetanus, aseptic delivery, maternal nutrition and infection control and care of the newborn. As infectious diseases that affect infants (such as diarrheas) are brought under control, post-neonatal deaths decline and deaths in the neonatal period which have non-infectious causes loom larger. These require more specialized health interventions including emergency obstetric care.

Despite sustained declines, infant and child mortality remain high in four of the five South Asian countries (excluding Sri Lanka). Due to its large population, India alone accounts for one-fifth of all under-five deaths in the world. The levels of neonatal and infant mortality before and after 2000 are shown in Table 1.4. Steep declines occurred in Bangladesh and Nepal, and a lesser one in India, during this period. Sri Lanka's mortality rates are one-third to one-fifth those in the other countries, showing what can be achieved in the Subcontinent. The residual situation is instructive. The major causes of neonatal deaths are related to pre-term birth and low birth weight, infections, birth asphyxia and other respiratory conditions of the newborn (GOSL-RGD, 1998a, b, c; GOSL-DHS, 2001). Deaths within the first week of life account for one-third of neonatal deaths. Neonatal sepsis, congenital malformation and birth trauma are among the identified causes of these early neonatal deaths. Some infections such as neonatal tetanus and sepsis that contribute substantially to neonatal deaths in the rest of South Asia are quite amenable to health service interventions.

As in the case of other reproductive health indicators, infant and neonatal mortality decline with increases in maternal education (Annex 3 Tables A3.10 and A3.11 and Figures 1.6 and 1.7). In Pakistan, Bangladesh, Nepal and India the mortality rate exceeds 50 among neonates

TABLE 1.4 Infant and Neonatal Mortality Rates in the Five Countries, various years

	Bangladesh 1996-00	India 1993-99	Nepal 1996-01	Pakistan 1996-01	Sri Lanka 1995-00
Infant Mortality Rate	71.5	67.6	64.4	77.1	13.6
Neonatal Mortality Rate	47.2	43.4	38.8	46.8	8.3
	2002-06	2001-05	2001-05	2002-06	2002-06
Infant Mortality Rate	52	57	48	78	15
Neonatal Mortality Rate	37	39	33	54	10

Sources: *Bangladesh:* NIPORT et al., 2003; 2007; *India:* IIPS and ORC Macro, 2000; IIPS and Macro International, 2007; *Nepal:* GON-MOH et al., 2002; GON-MOPH et al., 2007; *Pakistan:* GOP-FBS, 2003; NIPS and Macro International, 2008; *Sri Lanka:* GOSL-DCS, 2002a; 2008.

FIGURE 1.6 Neonatal Mortality Rates and Maternal Education, Four Countries

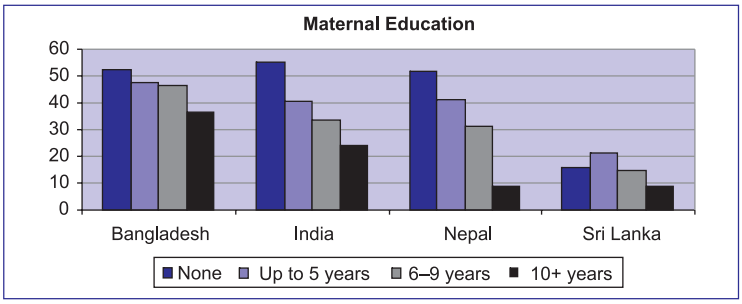
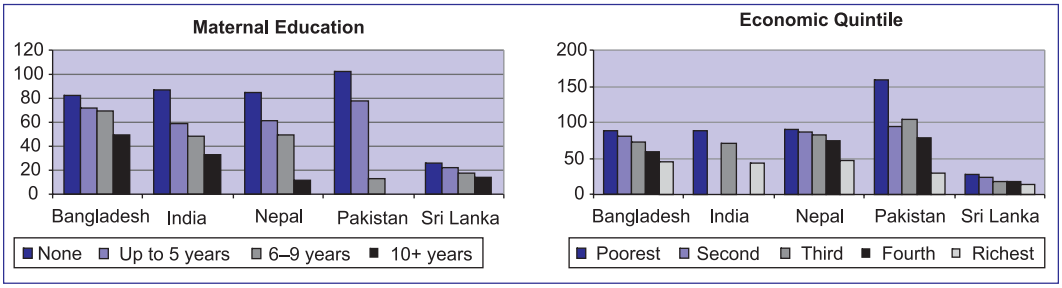


FIGURE 1.7 Infant Mortality Rates by Maternal Education and Economic Status, Five Countries



of women who are illiterate, but is 37, 36, 24 and 9, respectively, among those born to women who are educated to secondary or higher levels.[31] The IMR even of the richest quintiles in Nepal, Bangladesh and India is higher than the overall IMR of Sri Lanka. This suggests that better access to health goods and services among the well-off in these countries is 'bested' in Sri Lanka by other conditions that reduce infant mortality, such as environmental sanitation and hygiene.

Disparities between rural and urban areas in neonatal and infant mortality are also large – more so than the disparities in most other reproductive health indicators. In India, religion and SC/ST status also have effects on neonatal, infant and child mortality.[32] Gender discrimination removes the initial biological survival advantage of females, resulting in excess female mortality over the age of one, especially in India and Nepal (Annex 3 Table A3.12). Demographic factors such as birth order, maternal age and birth interval also affect mortality rates significantly in South Asia. In India, newborn of women who had even one ANC visit had a lower likelihood of death. However, institutional delivery had a negative relationship with neonatal survival because women who seek care from institutions often do so only when they are in critical condition.

The links between maternal health and early child mortality are profound, and point to the need for maternal care during pregnancy, including improved nutrition, iron-folate

supplementation, tetanus toxoid immunization, and treatment of maternal infections such as STIs and malaria. Proper care during labor and delivery is also important to manage obstetric complications, reduce maternal and neonatal sepsis, and resuscitate newborn. In the postnatal period, the umbilical cord, breastfeeding, hypothermia, low birth weight, and infections require attention. Antenatal care, skilled attendance at delivery, and ensuring the attention of a trained provider within the first few days of birth (when most maternal and neonatal deaths occur) are the appropriate service provision strategies. In poor settings, local midwives or community health workers can be trained to provide basic care and link needy households to higher-level services, greatly improving maternal and infant survival.

There is scope for involving men also to improve maternal and child health and survival. Increasing their knowledge of maternal and child nutrition, of the needs of pregnancy (including the importance of ANC and of identifying pregnancy and post-partum complications) and of family planning can improve household practices during this life-cycle stage. Men can play important roles in enabling women to deliver in institutions, seeking trained assistance in time, providing transportation and funds, and sharing in the care of children.

The need to address the most proximate causes of maternal and infant deaths (anemia, infections, pregnancy-related problems, septic deliveries, infant feeding and illnesses) arises from the magnitude of deaths still occurring in South Asia and the urgency to reduce them. Underlying factors such as poverty and illiteracy and other individual or household factors have a profound influence on maternal and child nutrition, health and survival. Community factors such as unhealthy environments, inadequate institutions and infrastructural constraints need to be addressed to consolidate individual gains and widen impacts.

Older Women's Health

The focus of reproductive health in South Asia to date has been on women who are capable of bearing children – those beyond this stage have been neglected, although many of their concerns are within the reproductive health agenda. Women over 45 years comprise seven to nine percent of the populations of Bangladesh, India, Nepal and Pakistan, and 13 percent in Sri Lanka. With increases in life expectancy, these proportions will rise, and governments will need to take serious steps to ensure that services are available to address their health needs.

Unfortunately, information on menopause and on the reproductive morbidities of older women are deficient, so only a few threads are drawn together here. The main problems are the morbidities associated with menopause and reproductive tract cancers. Cancers of the breast and uterine cervix account for the majority of malignancies among older women. For example, in Bangladesh, although the incidence and prevalence of cervical cancer in the population at large are unknown, this was the most common cancer among women in a hospital (Akhter, 1998).[33] In Sri Lanka, the five leading sites of cancer in females include the breast (22.5 percent), cervix (15.2 percent), and ovaries (8.4 percent).[34] India alone bears a quarter of the world's

burden of cervical cancer, which accounts for at least 20 percent of all cancers among Indian women. Among important risk factors for cervical cancer (which follows persistent genital infection with human papilloma virus) are some that are common among South Asian women: early onset of sexual activity and a history of STIs. Most reproductive cancers are curable if diagnosed early but screening (which should begin when women are in their 30s or 40s) is largely unavailable to poor rural women.[35]

Another problem with a high incidence (e.g., in Nepal) is uterine prolapse. This is associated with multiple pregnancies, unskilled birth attendance and heavy physical work, and is hence more likely among poor women in South Asia. Although some other health problems of older women such as cardiovascular disease and osteoporosis are not reproductive in nature, they are linked to post-menopausal changes and can result in disability, reduction or loss of mobility, disfigurement, lower self-esteem, increased dependence and a lower quality of life.

Improving Reproductive Outcomes

This chapter focused on reproductive health outcomes and their community, household and individual influences, as suggested by the conceptual framework (Figure 1.2). Several factors are amenable to health sector intervention to improve outcomes, particularly those related to knowledge of reproductive health, behavior and the availability and use of household resources and services. Impacts can be enhanced by improving community characteristics that support the use of health care, such as facilities for adolescents or women's groups. Other important individual and household factors such as education and economic status are crucial to achieving and sustaining reproductive health improvements and require interventions in other sectors.

Focusing on the Poor

Poor women in South Asia clearly have a disproportionate burden of reproductive ill-health. Hence, socio-economic and geographic targeting of health services to poor households and the poorest areas is essential if the bulk of health needs are to be addressed and reproductive health goals met. The social context of most poor women in the Subcontinent calls for services to be provided 'at the doorstep' by well-qualified providers (especially in areas where topography or socio-political problems are further impediments to women reaching health centers). The public health systems in all five countries need to be socialized into serving the poor and excluded. As discussed in Chapter 2, health providers must improve and be held accountable for their behavior towards *poor* and *female* patients – particularly those from stigmatized communities such as Scheduled Castes or sex workers.

A focus on the poor is also needed to address the related problem of malnutrition. Although prevalent among rich and poor mothers and children, its impact on the poor is greater. Health services need to integrate nutrition counseling and monitoring and care of the undernourished squarely into their efforts. Attention to nutrition should start with mothers who are at the

greatest risk of bearing low birth weight infants, and include the care and survival of young children. This is currently done poorly in all five countries and improvements are essential if the MDGs for health, poverty and hunger are to be met.

Actively Seeking Adolescents

Adolescents are the most neglected biological target-group in all five countries, and the most important to improve overall reproductive health outcomes. South Asia's health systems need to cater to their reproductive health needs in a concerted way. Several interventions constitute a well-designed adolescent reproductive health program, including:

- IEC/BCC, covering sex and sexuality, reproductive health and contraception, and including sensitization to engender positive attitudes and behaviors;[36]
- sensitization of parents, teachers and service providers to adolescent health issues;
- youth-friendly services for contraception and diagnosis and management of RTIs/STIs;
- iron-folate supplementation, treatment of hookworm, and education about nutrition to prevent and manage anemia;
- recognizing and addressing gender issues to enhance safe and consensual sex, childbearing and rearing; and
- enforcement of the legal minimum age of marriage.

Most of these services are needed for adults as well and so are not 'add-ons' to health services, but they must be focused on adolescents. Programs in other sectors that target young women are also important. Increasing girls' education, skills and job opportunities would help to raise their age at marriage. There is need to enhance the status of women through programs that increase their economic productivity and control over resources, including micro-credit and employment-generation schemes, equal inheritance laws and their enforcement.

Meeting the Needs of Sexually-Active Adults

Among sexually-active adults, the most critical reproductive health issues are unwanted fertility and widespread prevalence of RTIs/STIs including HIV/AIDS. Even among adolescents, a high proportion of births is unwanted. There is need to expand family planning through community-based mechanisms, targeting couples to delay and space pregnancies and to stop childbearing when they achieve their desired family size. Social marketing is a promising approach to providing contraceptives, and social franchising has worked for clinic-based services. A series of articles on sexual and reproductive health in *The Lancet* in 2006 discussed effective strategies to increase family planning and safe abortion, and to control STIs (Cleland et al., 2006; Grimes et al., 2006; Low et al., 2006).

Disseminating accurate information through a variety of channels could help to enhance

awareness of RTIs/STIs/HIV/AIDS, promote the use of condoms and increase treatment of RTIs/STIs. Targeting high-risk groups is essential but the time has come to extend these interventions to a wider public. Male condoms offer the best protection against STIs and HIV, and female condoms, diaphragms and cervical caps also provide barrier protection against infections. Despite some limitations, the syndromic approach provides an option to manage RTIs/STIs in poor settings without laboratory facilities, and updating the skills of workers in this method could help. Providing voluntary HIV testing and counseling is also necessary. Most importantly, these services need to be integrated with other reproductive health activities so that women – especially the poor – can be served effectively and the efficiency of health services increased.

Integrating Services

The majority of maternal deaths can be prevented using available knowledge and technology, as demonstrated in Sri Lanka. *The Lancet* has described strategies for reducing maternal mortality and what it would take to implement the most important globally (Campbell et al., 2006; Koblinsky et al., 2006; Borghi et al., 2006). Similarly, evidence-based cost-effective interventions to address neonatal and child mortality have also been elucidated (Darmstadt et al., 2005; Knippenberg et al., 2005; Jones et al., 2003; Bryce et al., 2003; Victora et al., 2003; Bellagio Study Group, 2003). Specific interventions, such as skilled attendance at delivery and emergency obstetric care including blood transfusion services, need to be increased substantially in South Asia. Many mothers could be saved by reducing the 'three delays' in identifying danger signs and deciding to seek care, reaching an appropriate facility and receiving care at the facility (Thaddeus and Maine, 1994).[37] Family and community awareness and access to transport are critical to reduce the first two delays. Where trained health professionals are scarce, community-based efforts, such as training village women to provide clean delivery and advise mothers when to go to a health facility, could substantially reduce mortality. In Nepal, a maternity incentive scheme introduced in 2005 under the Support to Safe Motherhood program has increased assisted childbirth, with two-thirds of the women who use the scheme delivering at institutions.

The postnatal period is another critical time for action. If trained female workers were to visit women within a day or two of their deliveries to detect and treat hemorrhage, and make an additional visit within the first week, much postnatal morbidity and mortality could be prevented. Arrangements for emergency transport should be extended to postnatal mothers and newborn. In Sri Lanka, where infant mortality is low, focusing attention on two neonatal conditions, birth asphyxia and low birth weight, could further reduce deaths.

Some proven and cost-effective interventions for child survival are: management of hypothermia, exclusive breastfeeding, adequate and appropriate complementary feeding, immunization, and management of pneumonia, diarrhea, malaria and malnutrition. These

interventions could prevent more than half of all under-five deaths. As many children suffer from more than one problem at a time, Integrated Management of Neonatal and Childhood Illness provides better outcomes. Given the importance to child health of six months of exclusive breastfeeding, Baby-Friendly Hospitals which have shown positive results, for example, in Bangladesh, could encourage this. Current constraints in the public health systems of Bangladesh, India, Nepal and Pakistan to providing these services to poor women could be eased by enabling them to use private facilities. It is also necessary to address constraints to demand by increasing awareness and reducing out-of-pocket costs. Other interventions such as family planning, maternal nutrition, women's education and employment also contribute significantly to child survival. The impact of birth spacing on newborn, infant, child and maternal health is profound as seen in South Asia (and described by Norton (2005), Conde-Agudelo et al. (2006) and several others).

The inter-relationships among the various problems and needs make a powerful case for maternal and child health care, nutrition, family planning and infection control services to be fully integrated to improve poor women's reproductive health.

Help for Older Women

Depending on the resources available, appropriate services for older women include counseling on menopause, diet, exercise and other elements of a healthy lifestyle to prevent cardiovascular disease and osteoporosis; treatment of reproductive tract and urinary infections, uterine prolapse, fistulas and other gynecological disorders; screening and treatment of cervical and breast cancer; and medical management of women at high risk for fractures and cardiovascular disease. Well Women Clinics introduced in Sri Lanka in 1996 to screen for cervical and breast cancers, test for diabetes and hypertension, and treat common health problems among women over 35 years provide a model in the region.

NOTES

1. In 2006, the total population of the five countries was 1451 million. About one-third lived below $1 a day, and almost four-fifths below $2 a day. See Annex 1 Table A1.1 for further details based on earlier data.

	Bangladesh	India	Nepal	Pakistan	Sri Lanka
Population, 2006 (millions)	144	1100	28	159	20
Poverty (percent below $1 a day)	41.3	34.3	24.1	17.0	5.6
Poverty (percent below $2 a day)	84.0	80.4	68.5	73.6	41.6
Crude Birth Rate, 2006/2007	26.1	23.1	28.4	30.7	18.7
Under-five Mortality Rate 2006/2007	65	74	61	94	21

Source (population and poverty figures): World Bank, 2008.

Country-specific Sources (CBR and U5MR): *Bangladesh:* NIPORT et al., 2007; *India:* IIPS and Macro International, 2007; *Nepal:* GON-MOHP et al., 2007; *Pakistan:* NIPS and Macro International, 2008; *Sri Lanka:* GOSL-DCS, 2008.

2. While the ICPD set a direction for reproductive health, the MDGs provide specific targets. Between 1990 and 2015 it is expected that under-five mortality rates would be brought down by two-thirds, and maternal mortality ratios would be reduced by three-quarters. The spread of HIV/AIDS is to be stopped and reversed. Progress in achieving the goals is to be monitored on the basis of the proportion of deliveries attended by trained health personnel, contraceptive prevalence, and HIV prevalence among adults (15-49 years). The specific data are given in Annex 1 Table A1.2.
3. Where the data permit, the impact of other sectors (e.g., education) on reproductive health outcomes, use of services, etc. is pointed out. In addition, experiences in other sectors that have succeeded in improving reproductive health are discussed, especially in the section on 'promising practices.'
4. Although women's reproductive health is in fact determined earlier (as nutrition and health in childhood have a bearing on physical growth), this issue is discussed in the maternal and child stage.
5. The remaining two percent live in Afghanistan, Bhutan and the Maldives.
6. While the sex ratio in most parts of the world is expressed as the number of males per 1000 females, India and other parts of South Asia report the number of females per 1000 males.
7. Nepal's sex ratio may reflect some under-counting of males in the 2001 Census due to the on-going ethnic conflict and considerable male out-migration in recent decades. Life expectancy, mortality rates and other indicators are still unfavorable to women.
8. The states of Kerala and Goa have feminine sex ratios and are much like Sri Lanka in terms of their spatial, social and cultural characteristics. They are also the most advanced areas of India in terms of health and demographic transitions.
9. Several states of India and provinces of Pakistan are larger than Nepal and Sri Lanka as a whole. There are significant geographic differences within countries on many reproductive health indicators but space limitations constrain analyses of these in this report.
10. For example, states in India and provinces in Pakistan have important roles in decision-making and financing of health care, while the sub-national units of Sri Lanka, Nepal and Bangladesh have lower levels of 'autonomy'.
11. In 2005-06, 85.7 percent of male respondents in the Indian NFHS-3 had over five years of schooling compared with 70.6 percent of females.
12. Higher rates are reported in Sri Lanka and Nepal.
13. In 2006/2007, age-specific fertility rates (births per 1000 women in the age-group) for 15-19 year-olds were: Bangladesh: 127; India: 90; Nepal: 98; Pakistan: 51; and Sri Lanka: 28.
14. A woman is anemic if her hemoglobin level is less than 11.9 grams per decilitre in the non-pregnant state or 10.9 gm/dl during pregnancy. In the DHS, only ever-married women aged 15-49 years are assessed. Anemia here refers only to iron-deficiency anemia.
15. 'Underweight' is defined by the Body Mass Index (BMI), a person's weight in kilograms divided by height in square meters. A BMI of less than 18.5 kg/m^2 indicates underweight or undernutrition. The BMI data discussed here are for married non-pregnant women between 15 and 49 years of age.

16. Anemia remained widespread in India in 2005-06. The following table presents recent data on the nutritional status of 15-49 year-old women from India (2005-06) and Nepal (2006).

	Anemia (percent)		Underweight (percent with BMI<18.5 kg/m^2)	
	India 2005-06	Nepal 2006	India 2005-06	Nepal 2006
All Women (15-49 years)	55.3	36.2	35.6	24.4
15-19 years	55.8	39.0	46.8	26.3
20-24 years	56.1	37.4	38.1	23.3
Rural	57.4	37.5	40.6	25.9
Urban	50.9	29.0	25.0	16.6
Poorest Quintile	64.3	31.0	51.5	25.1
Richest Quintile	46.1	30.9	18.2	12.7

Sources: *India:* IIPS and Macro International, 2007; *Nepal:* GON-MOPH et al., 2007.

17. The NFHS-3 found neonatal mortality to be 54 among adolescent mothers (a decrease) and 34 among 20-29 year-olds (an increase) (IIPS and Macro International, 2007).

18. The table below shows age-specific fertility rates, TFR and Mean number of Children Ever Born (CEB) in the five countries in 2006/2007.

Age-group	Bangladesh 2007	India 2005-06	Nepal 2006	Pakistan 2006-07	Sri Lanka 2006-07
15-19 years	127	90	98	51	28
20-24 years	173	209	234	178	103
25-29 years	127	139	144	237	147
30-34 years	70	62	84	182	122
35-39 years	34	25	48	106	57
40-44 years	9	7	16	44	14
45-49 years	1	3	2	18	1
Total Fertility Rate	2.7	2.7	3.1	4.1	2.4
Mean CEB	na	2.9	3.0	3.9	na

Sources: *Bangladesh:* NIPORT et al., 2007; *India:* IIPS and Macro International, 2007; *Nepal:* GON-MOHP et al., 2007; *Pakistan:* NIPS and Macro International, 2008; *Sri Lanka:* GOSL-DCS, 2008.

19. The TFR in India in 1998-99 varied among Scheduled Castes (3.2), Scheduled Tribes (3.1) and those not belonging to these groups (2.7), and by religion: Christians (2.4), Hindus (2.8) and Muslims (3.6). However, these differences encompass variations within these groups in education and economic status. By 2005-06 the TFRs had declined slightly to 2.7 overall, 2.9 among SCs, 2.7 among Hindus and 3.1 among Muslims. The sources of data for Figures 1.4 to 1.7 are the same as for Figure 1.3.

20. See also the sections in Chapter 2 on the Contraceptive Prevalence Rate and unmet need for family planning.

21. Studies on RTI/STI prevalence in Nepal, Sri Lanka and Pakistan are limited. Ministry of Health figures in Nepal suggest that the STI prevalence rate is approximately 4.7 percent (GON-MOH, 2003). In Sri Lanka in 2002, there were about as many men as women with STIs registered at government clinics, but it was estimated that only 10 to 15 percent of STI cases presented at these clinics.

22. Indian data for 2005-06 show only slight improvements in the situation, notably among the richest women (18 percent). Other differentials remain the same.

23. Anemia levels in 2005-06 were: overall rate, 55 percent; among illiterate women, 60 percent; among women with 12 or more years of education, 45 percent. Scheduled tribe women had the worst level of anemia among socio-economic groups – 68.5 percent.
24. For example, over 56 percent of SC/ST women, over 47 percent of Hindu and Muslim women, and about 45 percent of women among Christians and other religious groups in India were anemic. The levels in 2005-06 were: 58 percent among SC women, 69 percent among ST women, 56 and 55 among Hindu and Muslim women, respectively, and 50 percent among Christian women.
25. The data on maternal mortality do not permit multivariate analysis to determine the specific influence of different factors.
26. The country-specific rates were: India – 96 percent of children under 3 years (NFHS2, 1998-99); Nepal – 98 percent of 'babies' (NDHS, 2001); Pakistan – 96 percent of 'last babies' (PRHFPS, 2000-01); Sri Lanka – 98 percent of 0-4 year-olds (DHS, 2000).
27. This has declined slightly to one-fifth in India in 2005-06.
28. The nutrition gap between SC/ST children and others grows over time. About 26 percent of SC/ST infants are low birth weight compared to 22 percent of others, while the extent of undernutrition among children under 3 years is 56 percent among STs, 52 percent among SCs and 43 percent among others. The same trend is observed in the 2005-06 NFHS (which, however, reports nutritional status for children under five).
29. The nutritional status of children in four countries in 2006/2007 is shown in the table below. Comparable data are not available for Pakistan.

	Bangladesh	India	Nepal	Sri Lanka
Underweight	41.0	42.5	38.6	21.6
Stunted	43.2	48.0	49.3	18.0
Wasted	17.4	19.8	12.6	15.0

Sources: *Bangladesh:* NIPORT et al., 2007; *India:* IIPS and Macro International, 2007; *Nepal:* GON-MOHP, 2007; *Sri Lanka:* GOSL-DCS, 2008.

30. The neonatal period is the first month of life, and infancy the first year. 'Post-neonatal' refers to the period between one month and one year of life.
31. In India in 2005-06, neonatal mortality was 46 among illiterate women (an improvement) but 20 among women with 12 years or more of education (a worsening). The IMR among the richest quintile of women was 29, still higher than Sri Lanka. In Nepal in 2006, the IMR and NMR in the poorest quintile were twice those of the richest, and there was a five-fold difference between women who had no education and those with secondary schooling or more.
32. Neonatal mortality was around 53 among SC/STs and 41 among others; infant mortality: 83 among SC/STs and 62 among others; and child mortality: 42 among SC/STs and 22 among others. In 2005-06, the rates had declined as follows: neonatal mortality – SCs 46, STs 40, others 35; infant mortality – SCs 66, STs 62, others 49; child mortality – SCs 23, STs 36, others 11; total under-five mortality – SCs 88, STs 96 and others 59.
33. The study covered 10,095 cancer patients in Dhaka.
34. Since 1990 a Cancer Registry has been maintained by the National Cancer Control Programme in Sri Lanka. The registry receives data from the central Cancer Institute, as well as from Cancer Units attached to two urban hospitals. It is estimated that these data cover about 80-90 percent of the annual incidence of cancers in the country.
35. The pre-cancerous stage of cervical cancer, when screening is critical, often occurs within the reproductive period.

36. 'IEC/BCC' is Information, Education and Communication/Behavior Change Communication.
37. Delays in deciding to seek care are due to a lack of understanding of complications, acceptance of maternal death, the low status of women, and socio-cultural barriers to seeking health care. Delays in reaching care are caused by physical barriers and/or poor availability (or unaffordability) of transport. Delays in receiving care at institutions may be due to shortages of personnel, supplies or equipment, poor training or attitudes of personnel (especially toward the poor), and the family's inability to pay for services.

Health workers in Bangladesh provide services 'at the doorstep' to the poorest women.

CHAPTER 2

REPRODUCTIVE HEALTH SERVICES

INADEQUATE *AND* UNUSED

Despite available knowledge and technology to ensure effective reproductive health services, their provision and use in South Asia remain far short of need. Around 2000, contraceptive use ranged from 32 percent of eligible couples in Pakistan to 70 percent in Sri Lanka. It is low among poor illiterate women in rural areas. While this is partially because their desired fertility is high, even their expressed needs are not met. Married adolescents are another group with high unmet need. Well-off educated women in urban areas are better served but still not fully so. Terminal methods predominate in Nepal and India and temporary methods in Pakistan and Bangladesh. Immediate attention is required to women's unmet need for contraception and promotion of spacing methods, including condoms that protect against pregnancy as well as STIs and HIV/AIDS. The best strategies would be to increase contraceptive distribution through public and private channels using social marketing and private-public partnerships, and to actively increase male involvement in family planning and responsible sexual behavior.

Given high unmet need, it is not surprising that the region has a high incidence of abortion – an estimated eight million every year. Adverse social attitudes (among providers as well) and low access to safe and confidential services force women to approach unqualified practitioners in at least half of all cases. There is need to crack down on 'quack' abortionists and unhygienic facilities. Where legal, the availability of safe abortion services in the public and private sectors averts much abortion-related morbidity and mortality. Restrictive laws tend to impact poor women more negatively than others. A related concern, particularly in India, is sex-selective abortion, which is increasing despite the existence of punitive legislation because this is difficult to enforce.

The utilization of maternal health services shows great variation: high in Sri Lanka and lowest in Nepal and Bangladesh. In four countries (excluding Sri Lanka), large proportions of women do not receive even one antenatal check-up despite the presence of outreach staff for the purpose and the private health sector. While Sri Lankan women had almost universal skilled birth attendance, less than one-eighth did in Bangladesh and one-sixth in Nepal around 2000. Poor uneducated young rural mothers, trapped in repeated pregnancies, are most in need of maternal and child health services. Ensuring that women who deliver at home are visited by a qualified provider within 24 hours could help reduce

maternal and neonatal mortality, but such postnatal care is hardly provided. Skilled birth attendance and antenatal and postnatal care 'in the village' must be improved while efforts to increase the availability of essential obstetric facilities continue. Transport vouchers or funds could be provided to all women for institutional deliveries, and to those women and newborn who need medical attention after a home-based birth.

There are several supply- and demand-side constraints to the use of reproductive health services. Awareness of the need for care and its availability is low. Cultural norms and social stigma prevent women from seeking services even for problems they recognize, such as RTIs/STIs, or result in their approaching the wrong providers. These hurdles must be addressed through enhanced behavior change communication (BCC) for reproductive health. BCC should also focus on improving nutrition, hygiene and health practices in homes. Besides knowledge, the costs of care are an important constraint to demand among poor households. Hence, demand-side financing for the poor could achieve much-needed increases in service utilization.

Supply needs to catch up with demand for some services (such as family planning), and addressing supply-side problems would enhance demand for others. Both physical access and quality of care raise serious concerns. Access to first-level care remains limited in many 'underdeveloped' areas where public and private facilities are often both in short supply. At existing public facilities, quality issues that constrain reproductive health service provision and utilization include: inadequate staff, particularly women providers; inadequate supplies, equipment and basic amenities; bad behavior of service providers; overcrowding and a lack of privacy; inadequate or inappropriate information; poor technical competence; lack of follow-up; and demands for informal payments. Lack of supportive supervision and monitoring add to these problems.

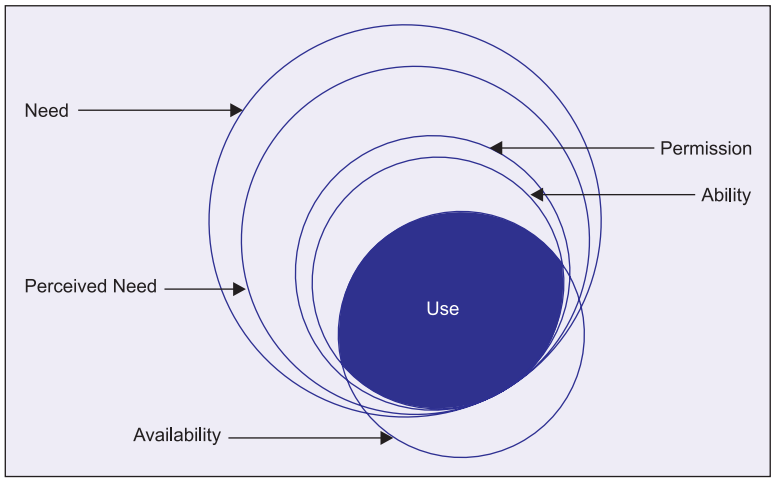
Targeting poor areas and poor people, strengthening primary facilities and outreach services, improving provider behavior and skills, and integrating services (to improve efficiencies for clients as well as the health system) are some critical improvements needed in reproductive health care in South Asia. To achieve better outcomes, the essential package of reproductive health services – importantly including maternal and young child nutrition – must be delivered with 'quality.' Outreach services must be improved by ensuring proper deployment of frontline female health workers who are skilled and fully equipped. The longer-term strategic plan should be to provide more highly skilled care at the frontline. Enhancing the status of women providers themselves is a critical element of reform, related closely to improving provider behavior towards women and the poor.

Understanding Use of Health Care

Most reproductive health problems are amenable to prevention or cure through health service interventions. But what determines whether women actually use reproductive health services? This chapter addresses this question, focusing on the key services needed at the four stages of the reproductive life cycle, and on how these must be improved in order to achieve reproductive health goals.

In addition to *need* (to prevent or cure a reproductive health problem), other factors determine the use of health services by women (Chatterjee, 1990). In South Asia, need is qualified greatly by knowledge and perceptions – for example, women are unaware of the benefits of antenatal care so their *perceived need* for it is low; or they consider the symptoms of RTIs to be normal and so do not feel the need for treatment. A lack of *permission* further limits use of services. This encompasses the set of socio-cultural factors that determines whether a woman can seek health care outside her home, from male providers, and so on, including women's conditioning to 'suffer in silence', their status and autonomy, and family decision-making processes. *Ability* comprises the economic factors that decide whether – or which – health services are used. Women's ability to obtain health care depends on its direct costs as well as transaction and opportunity costs, and the extent to which families agree to invest in their health. As Figure 2.1 shows, the *use* of services occurs when need, unconstrained by these 'demand-side' factors, coincides with the *availability* (i.e., supply) of services. Availability is a function of access and appropriateness.

FIGURE 2.1 Factors Determining Use of Health Services



An effective health system provides the range and quantity of services required to address the health needs of the population being served. To ensure that services are used and not wasted by disuse or misuse, it would also address the societal constraints inherent in perceived need, permission and ability. To begin with, perceptions and knowledge of the need for care and the benefits, e.g., of preventive services, must be addressed through information and communication. In the reproductive health arena in South Asia this is particularly germane to ANC, skilled attendance at delivery, nutrition and most aspects of child health. Educating communities about the risks of maternal death would increase perceived need for institutional delivery. To enhance permission, strategies such as informing and involving men, employing

female health workers where women are not permitted to consult male providers, outreach, and developing channels to reach adolescents are needed. Efforts to increase ability include emergency transport vouchers and funds, insurance schemes, and user incentives which reduce the direct costs of services. Indirect costs can also be reduced by improving access, reducing waiting time, using regimens that reduce the required frequency of visits, and more effective treatment.[1] Ultimately, an efficient health system is one that fosters health-seeking behaviors that are commensurate with need, and supplies the services required, i.e., where all the circles in the diagram are completely congruent.

Use of Reproductive Health Services

Interventions to improve reproductive health have been examined closely across the world and this has led to the formulation of an essential package of services (Annex 4). The key elements of this widely-accepted package are family planning, safe abortion, treatment of RTIs/STIs, antenatal, natal and postnatal services, child health care, and the treatment of post-menopausal problems. To achieve reproductive health goals, this package must be delivered to the majority of those in need. This section examines the actual use in South Asia of the services for which data are available.[2]

Family Planning

Fertility rates in the five countries (Chapter 1) are mirrored in levels of contraceptive use (Table 2.1).[3] Sri Lanka has a high overall level of use, Bangladesh and India moderate levels, and Nepal and Pakistan lower levels. Between 2001 and 2006 Nepal increased contraceptive use to 48 percent (44.2 percent with modern methods, including increases in temporary methods and female sterilization). In 2005-06, use in India was 56 percent (48.5 percent modern methods). Progress in the first half of this decade has been mixed in Pakistan and Sri Lanka.[4]

Use of Different Contraceptive Methods. The five countries have three distinct – albeit changing – patterns of contraceptive use. Permanent methods predominate in India and Nepal, temporary methods in Bangladesh and Pakistan, and there is a more balanced distribution in Sri Lanka. In India, women who chose sterilization already have four children on average (Pathak et al., 1998), more than their desired number, but they delay contraception because terminal methods are irreversible. In effect, poor availability of temporary methods results in excess fertility and unmet need. Although women who use spacing methods generally have lower parity, discontinuation of contraception among them is an important concern. In Bangladesh and Nepal, for example, temporary methods are discontinued by almost 50 percent of women in the first year of use. This demonstrates the need to manage perceptions as well as side effects among women.

The public sector is the major source of contraceptives in all countries, particularly for the poorest women. The private sector contributes significantly to use of temporary methods in

TABLE 2.1 Use of Contraceptives in Five Countries, various years, percent

Method	Bangladesh		India		Nepal	Pakistan	Sri Lanka
	'99-00	'03-04	'98-99	'05-06	2001	2003	2000
Any Method	**53.8**	**55.8**	**48.2**	**56.3**	**39.3**	**32.1**	**70.0**
Any Modern Method	**43.4**	**47.5**	**42.8**	**48.5**	**35.4**	**25.2**	**49.5**
Pill	23.0	28.5	2.1	3.1	1.6	3.1	6.7
Injectables	7.2	7.0	–	0.1	8.4	3.4	10.8
IUD	1.2	0.9	1.6	1.7	0.4	4.4	5.1
Norplant	0.5	0.7	–	–	0.6	0.3	0.1
Condom	4.3	4.5	3.1	5.2	2.9	6.4	3.7
Temporary Methods	**36.2**	**41.6**	**6.8**	**10.1**	**13.9**	**17.6**	**26.4**
Sterilization Female	6.7	5.0	21.0	37.3	15.0	7.5	21.0
Male	0.5	0.7	2.1	1.0	6.3	0.2	2.1
Traditional method	**10.4**	**8.3**	**5.0**	**7.8**	**3.9***	**6.9**	**20.5**

Note: *Men – 5.1, Women – 3.9.

Sources: *Bangladesh:* NIPORT, 2001; NIPORT et al., 2007; *India:* IIPS and ORC Macro, 2000; IIPS and Macro International, 2007; *Nepal:* GON-MOH et al., 2002; *Pakistan:* NIPS, 2003; *Sri Lanka:* GOSL-DCS, 2002a.

India, and in Nepal and Bangladesh, especially to pill and condom use. Condoms are used *as contraceptives* by only three to six percent of couples in the region. Injectables are hardly used in Pakistan and the use of IUDs and implants is low almost everywhere. In sum, all countries need to expand the choice of contraceptives available, especially temporary methods in India, Nepal and Pakistan, terminal methods in Pakistan and Bangladesh, and male methods everywhere!

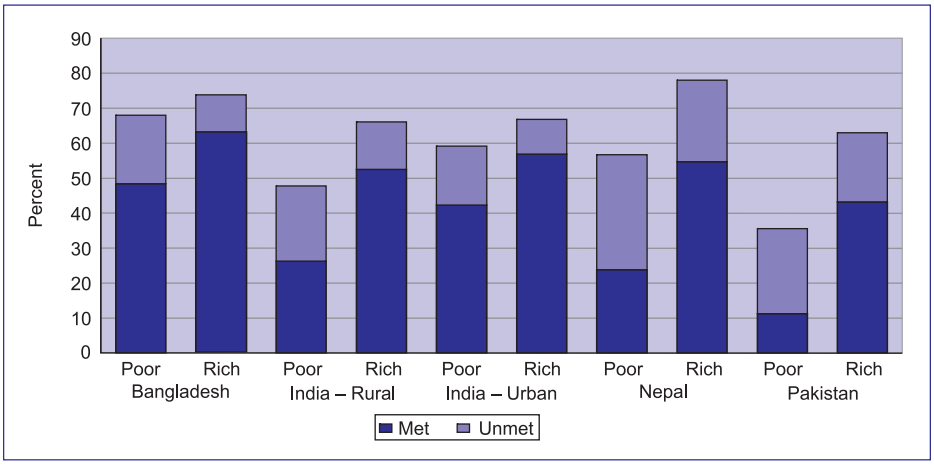
Determinants of Contraceptive Use. Contraceptive use depends on awareness of different methods, access to them, perceptions of their side effects, and desired fertility. Knowledge of contraception is generally high in all five countries. Almost all 15-49 year-old women interviewed in the latest DHS in each country knew of at least one method. However, they knew much less about the range of options available, their correct use, side effects, or sources of different contraceptives. Although 'lack of knowledge' was a reason for not using contraception among five percent of women in Nepal, fear of side-effects was reported by 25 percent. Service providers also have misconceptions. Health staff in Nepal, for example, thought that women needed at least one child to be permitted to use condoms and two children to use IUDs (VaRG, 2003). In India, low awareness of the ease and benefits of vasectomy, and misconceptions (e.g., that it leads to impotence) are responsible for current low use of this method, in addition to program constraints. A more gender-sensitive and equitable program would promote male methods as well.

Use of different methods is influenced strongly by social norms. The key obstacles to

contraceptive use in Pakistan Punjab are perceptions that it is culturally or religiously unacceptable, and wives' beliefs that their husbands are opposed to it (Casterline et al., 2001). However, recent research is positive about male support to contraception. For example, in Bangladesh, almost all men are able to name modern contraceptives and, more importantly, almost all agree with their wives on the desired number of children.

Contraceptive use increases with education and economic status (Annex 5 Table A5.1). The gap between rich and poor is particularly striking in Pakistan: use is four times higher in the richest quintile compared to the poorest (Figure 2.2).[5] The situation in Sri Lanka is the *reverse*: women in the poorest quintile have higher use (80.3 percent) than those in the richest (69.5 percent); and those with primary schooling or less have higher use of contraception (88 percent) than those who have completed secondary education or more (67 percent). Use of modern methods is lower, and of traditional methods higher, among the richest women compared to the poorest, and among the most educated compared with the least educated. As more-educated and better-off women have fewer children 'ever born' than the less educated or poorer, it appears that they are more able to control their fertility through means other than contraception – for example, by "saying 'no' to sex". Abortion, which is more easily accessible to the better-off, may also play a role in establishing smaller family size. Further investigation is needed to unravel this conundrum. Of interest also are the latest data from Bangladesh and Nepal that show that differences in contraceptive use by education are no longer very pronounced, and that in Nepal even the rich:poor gap is closing (NIPORT et al., 2007; GON-MOHP et al., 2007).

FIGURE 2.2 Met and Unmet Need for Contraception in Four Countries, Poorest and Richest Quintiles



Sources: *Bangladesh:* NIPORT, 2001; *India:* IIPS and ORC Macro, 2000; *Nepal:* GON-MOH et al., 2002; *Pakistan:* NIPS, 2001; *Sri Lanka:* GOSL-DCS, 2002a.

Contraception is higher in urban than rural areas in all countries. In Sri Lanka, use was lowest in the estate sector earlier; but in 2006-07, it was lowest in urban areas – even lower than in rural areas. Among different age-groups, while use is lowest among 15-19 year-olds, the variation across countries in this age-group is revealing: it ranges from a low seven percent in India to 50 percent in Sri Lanka (53 percent in 2006-07). Other important social differences occur in India: use in 2005-06 was higher among Hindus (50 percent) and Christians (49 percent) than among Scheduled Castes (47 percent), Scheduled Tribes (43 percent) and Muslims (36 percent) (IIPS and Macro International, 2007).[6]

The effects of various socio-economic and demographic variables in determining contraceptive use are similar in four of the five countries, excluding Sri Lanka as discussed above (Annex 5 Table A5.2).[7] Maternal education, economic status and urban residence have independent positive influences on use. In Bangladesh, the impact of education is significant only among those with secondary or higher education when compared with illiterate women (Odds Ratio, OR = 1.44). The difference in use between the richest and poorest quintiles is lowest in Bangladesh (OR = 0.65 for the poorest compared with the richest) and highest in Nepal (OR = 0.31). Women's age and son preference also play important roles.

The desire to end childbearing among women in all five countries is influenced greatly by education and economic status, particularly in India.[8] Illiterate and poor women are more likely to have a desire for more children. Despite this, the poorest still have the highest unmet need, indicating that even the low demand of illiterate and poor women living in rural areas is not met. Ubiquitously, low use among adolescents and young women arises from their poor knowledge of reproduction (i.e., low perceived risk of pregnancy), lack of information about contraception, inability to express their wish to delay conception and/or to interact with service providers. Among older women, unmet need is related more closely to the methods available, their perceptions of the quality of services, fear of the side effects of contraception, and/or inadequate access to providers. For example, much unmet need in India is due to the inadequacy of spacing methods in the government family planning program and wrong beliefs about those methods that are sparingly available (such as IUDs and oral pills). Social barriers to contraception (e.g., low spousal, familial or societal acceptance) are also important determinants of use. In Sri Lanka, unmet need (8 percent) is concentrated among women in plantations, factories, displaced populations, urban slums and underserved rural areas and, along with contraceptive failure, underlies much abortion, because emergency contraception is less known or not readily available. Recent data from Pakistan put unmet need at 25 percent, higher than the use of modern methods (22 percent); and a similar level of unmet need in Nepal amounts to over one-third of demand not being satisfied (NIPS and Macro International, 2008; and GON-MOPH et al., 2007).

Thus, family planning programs need to take a two-pronged approach – immediately redressing unmet need, and increasing demand by addressing both the demand- and supply-side constraints

that are discussed below in the section on quality of services. The most effective action would be to expand contraceptive supply through providers (public and private) who have good counseling skills and make home visits so that they can meet husbands and wives together to discuss family planning and better reproductive health.

Unwanted Pregnancies and Abortion Services. One outcome of 'unmet need' is unwanted births – nearly one-fifth of births in the region are unwanted or mistimed. At the individual and family levels, preventing unwanted births could enhance the well-being of women and children, and at the societal level it could reduce mortality, fertility and population growth substantially. For example, if the unmet need in Pakistan were satisfied, and women were able to have only the births they want, the country's TFR would fall to 3.1 from the current 4.1. A drastic consequence of unwanted pregnancies is abortion. The legal environment and attitudes of service providers determine how women end unwanted pregnancies and how safe the procedures will be, but have little effect on the incidence of abortion (Rahman et al., 1998; Cook et al., 1999). Abortion laws vary across the five South Asian countries. Nepal's law, enacted in 2002, allows any woman to terminate her pregnancy up to 12 weeks, up to 18 weeks if the pregnancy resulted from rape or incest, and at any time if recommended by a qualified medical practitioner. India legalized abortion in 1971 through its Medical Termination of Pregnancy (MTP) Act. Under this, clinical abortion can be performed if a pregnancy carries the risk of grave physical harm to a woman or endangers her mental health, and when conception results from contraceptive failure or rape, or is likely to result in a physically or mentally abnormal child. Bangladesh allows menstrual regulation up to eight weeks of pregnancy and abortion by qualified physicians in hospitals only, if approved by two physicians and necessary to save a woman's life. Sri Lankan law prohibits abortion except when needed to save a woman's life, while in Pakistan, preserving physical and mental health are also valid reasons. Sri Lanka's law could result in an important difference between poor and non-poor women although almost all other reproductive health services are equitable. Women from higher-income households may be able to obtain abortions at private clinics or government hospitals, while lower-income women may resort more to backdoor abortion and suffer its negative consequences.

Cultural norms and attitudes play a strong role in decisions about abortion. In all five countries, abortion is not socially acceptable among unmarried women and to some extent among married women also. Thus, the primary criterion that women use to choose an abortion provider is confidentiality, which is usually lacking at public facilities. In Bangladesh, menstrual regulation is conducted on an out-patient basis free of cost at Family Welfare Centers by trained Family Welfare Volunteers. There may be large numbers of clients waiting at a center and women are unable to get the privacy they want. Consequently, they may prefer to use private services if they can afford them or, if not, to try home remedies or approach unqualified practitioners. Moral stances of health providers may also obstruct some women's access to services. A study in India, where medical termination of pregnancy is legal, found that many qualified providers

felt that unmarried women and sex workers had no right to abortion (Bandewar, 2003). As a result, they devised punitive measures for these women, such as exorbitant charges, ill-treatment or ignoring complaints. The outcome was that many clients resorted to unqualified providers whom they believed were more sympathetic. Hence, both provider attitudes and the organization of health facilities need to be improved for better care.

Although illegal under the Pre-Conception and Pre-Natal Diagnostic Technologies (PCPNDT) Act of 1994, the practice of selectively aborting female fetuses is on the increase in India because of continued strong son preference in the face of declining 'desired family size' and increased availability of sex-determination techniques. This issue needs to be addressed by increasing awareness, enforcing the PCPNDT Act, providing social security, and increasing measures to improve the status of girls and women. Safe abortion services can reduce abortion-related morbidity and mortality, and there is need for emergency care of complications, post-abortion counseling, and non-physician care (Ganatra and Johnston, 2003). A client-centered approach to promoting contraception would reduce the need for abortion services.

Antenatal Care

There is substantial variation among and within the five South Asian countries in coverage of pregnant women with even one antenatal care (ANC) visit. While this ranged from 83 percent in Sri Lanka to 37 percent in Bangladesh around the year 2000 (Annex 5 Table A5.3), some improvements had occurred by 2006/2007. The range was 99 percent in Sri Lanka to 44 percent in Nepal, and in Bangladesh, Pakistan and India, 52, 61 and 74 percent of women, respectively, received care from a qualified provider (NIPORT et al., 2007; NIPS and Macro International, 2008; IIPS and Macro International, 2007). The majority of women are registered in the second or third trimester. The value of one or two visits is questionable, especially as the quality of care also requires vast improvement – for example, blood pressure is often not measured in India. In four countries, coverage with tetanus toxoid (TT) has remained higher than with antenatal check-ups, but again there is wide inter- and intra-country variation. Sri Lanka has a high level of coverage (96 percent; 91 percent in 2006-07), followed by Bangladesh (81 percent), India (75 percent in 1998-99 and 78 percent in 2005-06), Nepal (55 percent in 2001 and 63 percent in 2006), and Pakistan (51 percent in 2000 and 53 percent in 2006-07). Opportunities to provide antenatal check-ups at the time of TT immunization are clearly missed. While health workers have a strong mandate and supplies to carry out tetanus immunization, they apparently lack the skills, time, equipment, incentive and/or household 'permission' to perform antenatal check-ups.

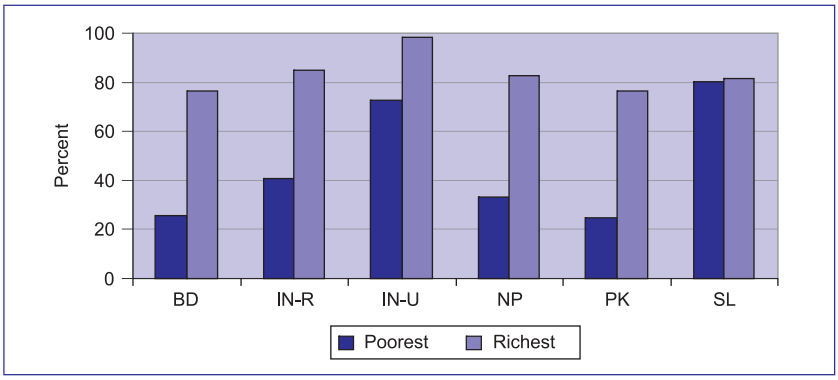
Despite the high prevalence of anemia in South Asia and uniform policy to treat this, only one-fourth to half of pregnant women in four countries (excluding Sri Lanka) received iron folic acid (IFA) supplements, and fewer consumed them. Inadequate knowledge among health workers of 'nutrition' – even of this simple micro-nutrient supplementation action – is a major contributory factor. For example, in three districts of Nepal, only 13 to 44 percent of

Maternal and Child Health Workers knew the appropriate dose of IFA (Bhattarai, 2000). Another issue is inadequate knowledge among pregnant women and their families of the importance of IFA and consequent 'non-compliance' with supplementation. Nepal is making significant strides in improving this service: in 2006, 60 percent of pregnant women reported receiving IFA supplements. Some improvement has also occurred in India – to 65 percent obtaining IFA; but only 23 percent of women took it for the recommended 90 days.

Antenatal care among illiterate women is half to one-fourth that of women with secondary or higher education in four countries (except Sri Lanka) (Annex 5 Table A5.3). Even in Sri Lanka, only two-thirds of illiterate women received ANC compared with three-fourths or more of literate women. (This gap was minimized by 2006-07.) In Bangladesh, rural India, Nepal and Pakistan, only the richest economic quintiles have coverage levels comparable to Sri Lanka's overall level (Figure 2.3). In urban India, coverage in the richest quintile is universal, and the gap between rich and poor is somewhat lower. Only one out of three or four women from the poorest quintiles were checked in Bangladesh, Nepal and Pakistan compared with over three out of four in the richest quintiles. There are wide differences in ANC coverage among women of different religions in India, with 84 percent of Christians obtaining ANC services compared with less than 65 percent of Hindus and Muslims (Annex 5 Table A5.4).[9] Of Scheduled Tribe women, 43 percent had not received even one antenatal check-up. In 2005-06 in India, the poorest women received about half as much ANC as the richest and uneducated women three-fifths as much as those with secondary education or more. While coverage had increased in all groups, the gaps among social and religious groups persisted (IIPS and Macro International, 2007).

Low coverage with ANC can be attributed partially to the prevailing belief that pregnancy and childbirth are natural processes that do not require medical attention. During a focus group

FIGURE 2.3 Antenatal Care in South Asia, Poorest and Richest Quintiles, Percent



Computed using data from the following sources: *Bangladesh:* NIPORT, 2001; *India:* IIPS and ORC Macro, 2000; *Nepal:* GON-MOH et al., 2002; *Pakistan:* NIPS, 2001; *Sri Lanka:* GOSL-DCS, 2002a.

discussion in Bangladesh, a participant declared: *"Why should I go for antenatal care? I didn't have any problem during the births of my last two children, so I don't think it is necessary to go."* A similar lack of interest in or understanding of preventive care affects other aspects of reproductive health. A wide range of misconceptions also exists. For example, many South Asian women believe that if a pregnant woman eats too much, the fetus will be too large and painful to deliver, or will be crushed in the birth canal. Consequently, pregnant women 'eat down' to keep a fetus small, a practice that contributes to low birth weight. There is some evidence of change in India and Bangladesh (e.g., ICRW, 2006), particularly where fertility is declining, suggesting greater awareness and a desire to bear healthy children who will survive. Nevertheless, such beliefs and practices need to be addressed more actively to tackle the serious problem of undernutrition among pregnant women and children.

Maternal education, economic status and husband's education play strong positive and independent roles in determining the use of ANC (Annex 5 Table A5.5). The exception is Sri Lanka, where none of these factors play a role *because services reach all women*. Young maternal age is a strongly negative factor. Adolescent girls are thus doubly disadvantaged: not only do they face higher biological risks, but they also receive less ANC. Clearly, both coverage and quality of ANC, including counseling, which is almost absent, need vast improvement, especially in rural areas where the majority of poor and illiterate women live. Socio-economic targeting is necessary to deliver services to these needy groups.

Care during Delivery

In general, about 85 percent of births are expected to be normal and 15 percent complicated (WHO, 1996). While the first group may not need obstetric intervention (and hence, could occur at home), the latter require assistance at adequately-equipped facilities. The problem is that *all women are at risk* of complications and it is not possible to predict into which group a woman would fall. Untreated or improperly treated complications of pregnancy or delivery can lead to maternal or perinatal death. Hence, the current recommendation is to ensure skilled attendance at delivery whether at home or at a health facility, and back this up with a system that refers and manages complications. Skilled attendants include doctors, nurses and midwives trained to conduct normal deliveries and to diagnose and manage or refer obstetric problems.

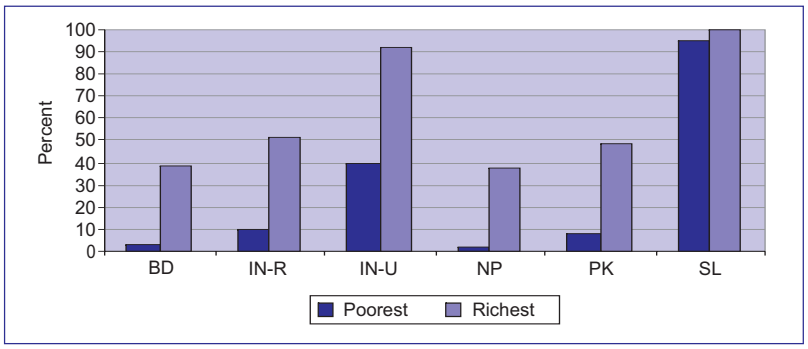
Differences in reproductive health care among the countries of the region are widest in care during delivery. Almost all births in Sri Lanka occur in an institution and the use of government facilities is widespread (93 percent; 98 percent in 2006-07). A lower proportion of women in the estate sector delivered in institutions (87 percent), but this increased to 96 percent by 2006-07. Institutional delivery in Bangladesh and Nepal is strikingly low (under 15 percent; 15 and 18 percent, respectively, in 2006/2007). In Pakistan it is 23 percent (34 percent in 2006-07) and in India, 34 percent (39 percent in 2005-06). Rich-poor and education gaps are

significant – and highest for institutional delivery among all reproductive health services. In Bangladesh and Nepal, three to seven percent of uneducated women deliver in institutions, compared to around half of those with secondary education or more. In India and Pakistan, about 15 percent of uneducated women deliver in institutions (this increased to 18 percent in India in 2005-06, and 22 percent in Pakistan in 2006-07). The situation is similar among the poorest women. In Bangladesh, rural India, Nepal and Pakistan, even among the richest quintile of women, half or less delivered in institutions (Figure 2.4). However, some positive trends are evident. In India in 2005-06, while only 13 percent of women from the poorest quintile delivered in an institution, the percentage of those from the richest quintile (rural and urban combined) who did had gone up to 84, and similar levels were found in Pakistan in 2006-07 (IIPS and Macro International, 2007; NIPS and Macro International, 2008).[10]

In Sri Lanka, most socio-economic and demographic variables (except birth order) have no influence on institutional delivery as this is near universal, while in the other countries, education and economic status have independent effects (Annex 5 Table A5.5). As in the case of some health outcomes and knowledge (e.g., of AIDS and contraception, discussed in Chapter 1), caste affects care during delivery, possibly because beliefs about purity and pollution closely surround childbirth. Indeed, the 'distance' between health providers and women clients may be exacerbated by 'untouchability' at this time.

The role of antenatal care in influencing institutional delivery is strong. In Bangladesh and India, the odds of women who had more than three antenatal check-ups delivering in an institution were 15 and 9, respectively, over those who had none. In Nepal, even one ANC visit led to odds of 4.6. The chances of an institutional delivery were lower in the youngest age-group than among older women (odds between 0.3 in Bangladesh and 0.6 in India).

FIGURE 2.4 Institutional Delivery in South Asia, Poorest and Richest Quintiles



Computed using data from the following sources: *Bangladesh:* NIPORT, 2001; *India:* IIPS and Macro, 2000; *Nepal:* GON-MOH et al., 2002; *Pakistan:* NIPS, 2001; *Sri Lanka:* GOSL-DCS, 2002a.

Many women fear going to hospitals to deliver, believing that they would not have a normal delivery there. As a poor woman in one country put it: '*For money, they (doctors) are ready with*

knives for surgery.' In Bangladesh, more than maternal education and antenatal care, identification of potential delivery complications was the most significant factor determining use of modern health facilities for childbirth (Paul and Rumsey, 2002). Very few home-based births are conducted by skilled attendants: less than five percent in Bangladesh, Nepal and Pakistan, and ten percent in India (around 13 percent in 2005-06). The determinants of skilled attendance are broadly similar to those of institutional delivery. Power dynamics within households determine the use of health facilities as well as of skilled providers. Most often, South Asian women get low priority in household resource allocations, and decisions about contact with outsiders are made by husbands or mothers-in-law. Such dependence and deprivation can have serious repercussions. At a large public hospital in Karachi, Pakistan, about a third of obstetric cases were dead on arrival. Delays were often due to husbands' absences from home and women's lack of autonomy to approach health providers or facilities on their own (Jafarey and Korejo, 1995). Inadequately skilled service providers can aggravate the situation. An evaluation of the Lady Health Worker (LHW) program in Pakistan found that nearly 40 percent of LHWs failed to recognize the need to refer cases of pre-eclampsia; and in three districts of Nepal, less than one-fourth of Village Health Workers recognized convulsions as dangerous (Oxford Policy Management, 2002; Bhattarai, 2000). Improving the reach and quality of skilled birth attendance is clearly of critical importance for South Asian women.

Postnatal Care

The postnatal period is critical for both mothers and infants – the majority of maternal deaths occur at this time, e.g., two-thirds of all in Bangladesh (NIPORT et al., 2003). About four of every ten infant deaths occur in the first week of life. Most of these deaths could be prevented by timely medical attention, but few women obtain care during this period. In India, for example, although 65 percent of women received some antenatal care and 53 percent received intra-natal care, only 30 percent received any attention post-partum (Mathai, 1999).

There are different norms in the five South Asian countries for postnatal care (PNC). In Nepal, the Ministry of Health recommends that all women receive a postnatal visit within two days of delivery, while in Sri Lanka, the policy is to ensure at least two visits to women who had institutional deliveries and three within ten days to those who delivered at home. India recommends three visits during the first six weeks, the first of which should be within a week of delivery. Thus, comparisons of postnatal coverage across the five countries must be made cautiously. More importantly, appropriate standards need to be adopted and implemented, keeping in mind that most women in South Asia deliver at home.

As in the case of other maternal services, postnatal care is highest in Sri Lanka (75.5 percent of women are visited), low in India (36 percent; 42 percent in 2005-06) and Pakistan (23 percent; 42 percent in 2006-07), and lowest in Nepal and Bangladesh (17 and 11 percent, respectively; both had increased to about 21 percent by 2006/2007). Coverage is two to three

times higher among those with secondary or higher education compared to illiterate women in Bangladesh, India and Pakistan. However, even among well-educated women, levels of postnatal care are substantially lower than those of skilled birth attendance and institutional delivery. For example, in Bangladesh, only 28 percent of women with higher secondary education and above received postnatal care, compared with 66 percent who delivered in institutions and 77 percent who had skilled assistance. These gaps show that even follow-up of women who have been in contact with the health system is poor. In four countries (excluding Sri Lanka), while postnatal coverage of women in the richest economic quintiles was very low, it was two to three times higher than that of the poorest quintiles of women.[11] Antenatal care has a strong positive impact on PNC (Annex 5 Table A5.6). A continuum of care from ANC to delivery to PNC would help prevent much maternal and child morbidity and mortality but coordination is often lacking, and the poor quality of individual services reduces effectiveness. Exit interviews following antenatal, delivery or postnatal visits to secondary and tertiary hospitals in Multan, Pakistan, revealed that counseling for iron supplementation, breastfeeding, family planning and child immunization was uncommon (Fikree et al., 2003). Good protocols, training and support of health workers are needed to improve these services (including check-ups, referral and nutrition) and 'integrated targets' could help to improve reach and effectiveness.

Immunization of Children

In South Asia, childhood immunization is provided through Reproductive or Maternal and Child Health programs, hence its consideration here. Child immunization coverage is an indication of continued contact between mothers and health services, and is less affected by the taboos that keep post-partum women away from service providers. In the region, Sri Lanka has the highest child immunization coverage (94 percent; 97 percent in 2006-07) followed by Nepal (66 percent in 2001 and 80 percent in 2006) and Bangladesh (65 percent in 2004 and 82 percent in 2007). Full immunization among 12-23 month-olds in Pakistan was 47 percent in 2006-07. Despite continuous and strong emphasis on this service in India, only 43.5 percent of children were found to be fully immunized in 2005-06 (IIPS and Macro International, 2007). Data on dropouts indicate a lack of tracking mechanisms and follow-up. For example, in Bangladesh, although 95 percent of infants received the first vaccination (BCG), only 70 percent obtained three doses each of DPT and OPV and only 65 percent received one dose of measles vaccine.

Immunization coverage of children increases substantially with maternal education and economic status. Although levels among the richest quintiles in Nepal and Pakistan are similar to those in Sri Lanka (around 90 percent), in India, even in the richest urban quintile, coverage is 76 percent (71 percent in 2005-06). One reason for India's current low coverage is the decline of routine immunization activities due in part to the pressure of 'crash' programs such as the Pulse Polio program. On the demand side there continues to be resistance among families who are not adequately reached by information efforts. Substantial differences are

seen between children of women who are illiterate and those who have had at least some primary schooling (e.g., in Nepal, coverage in these two groups was 57 and 83 percent in 2001, and 74 and 88 percent in 2006). Although immunization increases further with more education, differences are not as large. In India in 2005-06, one in four children of uneducated mothers was fully immunized, compared with three in four of those of mothers with 12 or more years of education (IIPS and Macro International, 2007). In Sri Lanka, over 80 percent of the children of illiterate women are immunized.

Other factors constant, maternal age, birth order and religion influence immunization. In Pakistan, a strong positive influence is seen when mothers are educated to secondary level or above (OR = 6 compared to illiterate women). In India, there is no significant difference in child immunization among children of the richest rural and urban quintiles, although the former had lower chances of using health services compared to the latter. ANC visits also influenced child immunization coverage. Surprisingly, children belonging to Scheduled Castes in India were more likely to be immunized than those of other caste or religious groups.

In Sri Lanka, immunization is provided largely through government health services. Similarly, in Nepal, most children are immunized at public health facilities or outreach clinics. In India also, the public sector is the major source of immunization, accounting for 36 percent while overall coverage is 43 percent. NGOs provide 16 percent coverage in urban areas and three percent in rural areas, and other private providers less than one percent in each area.

Reproductive Health Service Systems

Having examined the use of health care, and some constraints related to 'permission' and 'ability' that limit demand, we turn to 'availability' (Figure 2.1). This section first briefly describes the government health systems that provide reproductive health services in the five countries, and then discusses private services. Both the public and private sectors are extensive in all five countries. Their relative use varies, as discussed here and in Chapter 4 on the basis of reproductive health expenditure. This section also describes the 'system constraints' faced by poor women who want reproductive health care.

The Public Sector

The broad nature of reproductive health services calls for a look, first, at the structures that make policy decisions, plans and intra-sectoral financial allocations in the five countries. In Nepal, India and Sri Lanka, health and family planning services are under one Ministry at the national level.[12] Even so, different departments are involved in reproductive health, and coordination between them tends to be weak. For example, in India, both the Health and Family Welfare departments have roles in reproductive health as well as a department in charge of women and child nutrition in a separate ministry. In Bangladesh, family planning is under the Director General of Family Planning (DGFP) and health services under the Director

General of Health Services (DGHS). In Pakistan, a decision was taken in 2003 to integrate the Ministry of Population Welfare (responsible for Family Planning) and the Ministry of Health (responsible for Maternal and Child Health). Integration of the outreach workers of the two programs was accomplished successfully but remains a challenge at the facility level and above. Thus, functional as well as managerial integration, accompanied by a rationalization of structures at the national and sub-national (state/province/etc.) levels, is an important reform to improve reproductive health services.

In all countries, reproductive health care is provided largely through primary and secondary facilities (Table 2.2; Annex 6 provides a fuller description, including the current status of the

TABLE 2.2 Norms for the Public Health Systems in the Five Countries*[13]

Bangladesh	India	Nepal	Pakistan	Sri Lanka
Village-based Workers				
• Traditional Birth Attendant (TBA): 1 per village • Village Health Volunteer: 1 per village	• Anganwadi Worker: 1 per 1,000 (or fewer) people • Accredited Social Health Activist: 1 per village (in select backward areas)	• Female Community Health Volunteer • Trained Birth Attendants • Village Health Worker (VHW)	• Lady Health Worker (LHW): 1 per 1000 households • Trained Midwife • TBA as available • Male Family Planning Worker (MFPW) • 1 LHW Supervisor per 30 LHWs	• Public Health Midwife (PHM): 1 per 2,000-4,000 people • Public Health Nursing Sister
Primary Health Extension Centers				
• **Community Clinic:** 1 per ward, usually 6,000-7,000 people, with 1 Health Assistant (DHGS) and 1 Family Welfare Assistant (FWA) (DGFP)	• **Sub Health Centers:** 1 per 5,000/3,000** with 1 ANM/Female Multi-Purpose Health Worker (MPWF) and 1 Male MPW	• **Sub-Health Post:** 1 per 2,500-5,000 with 1 MCHW, 1 VHW, 1 Auxiliary Health Worker (AHW)/Nurse/ ANM • **Health Post:** 1 per 5,000-17,000 with 1 Health Assistant, 1-2 AHWs, 1-2 ANMs, 1 VHW, 1 MCHW	• **Maternal and Child Health Centers** with 1 Lady Health Visitor (LHV) • **Family Welfare Center:** 1 per 5,000-7000 with 1 Female Paramedic, 2 Family Welfare Workers (1 M, 1 F), Family Welfare Assistants • **Mobile Service Units:** 1 Female Doctor or Paramedic	• Supervising PHM • Public Health Inspector (PHI): 1 per 8,000-12,000 • **Maternal and Child Health/ Family Planning Clinics** • **Well Woman Clinics**

Bangladesh	India	Nepal	Pakistan	Sri Lanka
Primary Health Centers				
• **Union Health and Family Welfare Center:***** with 3 paramedical staff, Sub-Assistant Community Medical Officer, Family Welfare Visitor, and Pharmacist	• **Primary Health Center:** 1 per 30,000/20,000** with 1-2 Medical Officers (MO), 1-2 Lady Health Visitors (LHV) or Health Assistant Female (HAF), 1 Nurse Midwife, 1 Health Assistant Male, 1 Lab Technician	• **Primary Health Care Center:** 1 per 100,000 with 1 MO, 1 Staff Nurse, 2 ANMs, 1 Lab Assistant, and other staff	• **Basic Health Unit** per 10,000-20,000 with 1 MO, 1 LHV or Female Med. Tech, 1 Male Health Tech. 1 Trained/Untrained TBA • **Rural Health Center** per 25,000-50,000 with 2 male MO, 1 female MO, 1 Nurse, 1 LHV, 1 Trained BA	• **Central Dispensaries, Maternity Homes and Rural Hospitals** with Assistant/ Registered MO, several paramedical staff and midwives
Secondary Facilities				
• ***Upazilla* Health Complex:***** 1 per 200,000-450,000 with 9 Doctors incl. 3 Specialists, 5 nurses, etc. • **District Hospital***** 1 per 2 million with 50-250 beds and several Specialists	• **Community Health Center (CHC):** 1 per 120,000/80,000** with 4 Specialists, 7 Nurse Midwives • **Sub-divisional/ District Hospital:** 1 per 1.5-2 million with several Specialists***	• **District Hospital:** 1 per 100,000-700,000 with several Specialists • CEmOC at District, Zonal or Regional Hospitals (76 in country)	• **Taluka/Tehsil HQ Hospitals:** 1 per 100,000-300,000 with 40-60 beds, Specialists; FRU with CEmOC (906 in country) • **District HQ Hospitals:** 1 per 1-2 million with several Specialists	• **Peripheral Units/District Hospitals** with several Medical Officers, Specialists, Nurses, Attendants, Midwives (BEmOC) • **Base Hospitals and Provincial Hospitals** with several Specialists (CEmOC)
Tertiary Facilities				
National hospitals and institutions	**Regional and Central Institutions**	**Central Hospitals**	**Teaching Hospitals**	**Specialized/ Teaching Hospitals**

Notes: * This is not an exhaustive list of all staff at facilities but a list of key reproductive health staff to show the expertise available at each level. The focus is on the rural health system and facilities included are illustrative. ** The lower figure is for difficult (e.g., hilly or tribal) areas. ***Based on administrative unit, regardless of population.

systems). While the service structures are broadly similar, worker- and facility-population norms and skill levels differ. Two differences are immediately apparent between Sri Lanka and the other countries, which may partly explain the former's better performance. At the primary level in Sri Lanka, a well-functioning preventive health network gets most reproductive health

services actively out to women, rationalizing their use of curative facilities, while in the other countries primary preventive outreach activities are limited so that health centers receive a mix of preventive and curative demands.

Second, the technical expertise available at each service level in Sri Lanka is generally higher, and the quality of similar cadres of service providers may be better than elsewhere. For example, the Public Health Midwife in Sri Lanka is better trained, skilled and focussed on reproductive health care than her counterparts in the other countries. She also has clear responsibility for counseling and serving pregnant (even unmarried) adolescents, which is not the case elsewhere. A thorough review of job descriptions, needed and actual skills, training and performance of these workers would help to identify bottlenecks in their ability to meet the reproductive health needs of their assigned populations.

Utilization of the Public Sector. Despite extensive governmental health systems in all five countries, coverage and quality of care are of grave concern. Each country has set norms in terms of worker-population and facility-population ratios, but in many areas these ratios have not been achieved. This is especially true in 'backward' areas where infrastructure is generally poor, and it results in a vicious cycle of ill-health and underdevelopment. Sparse, distant and poorly-connected facilities constrain use and reduce outreach. In Sri Lanka, this concern is strong in the North and East, where the ethnic conflict has led to non-functioning facilities, and in the estate sector, where the normal pattern of health facilities was not established earlier. In the other countries, the problem is more widespread, though variable. Even the Indian states that have better health outcomes, such as Kerala and Tamil Nadu, have areas that remain underserved. Further, the use of population norms has resulted in the public systems 'running to stay in place' as populations continue to grow. In most cases, staffing is inadequate or imbalanced. Reproductive health services suffer particularly from vacancies in female paramedical positions, nurses and women doctors. The neediest populations often have the poorest worker-population ratios. Existing staff are allocated larger areas; overstretched and faced with geographic and/or social obstacles, they provide poor coverage and quality. Absenteeism is high at primary and secondary health facilities, affecting both ambulatory and in-patient services.

Both clients and providers perceive the inadequacy of staff to be a key problem in service delivery. In Pakistan, providers mentioned that at outlets of the Population Welfare Department the lack of trained staff results in a concentration on family planning services, although their mandate is to deliver maternal and child health care. In India, Primary Health Centers (PHC) often do not conduct deliveries because of the absence of female doctors or indoor staff (Murthy and Barua, 1998; Tata Institute of Social Sciences, 2003; Kavitha and Audinarayana, 1997; Rana and Johnson, 2003). Both vacancies and absenteeism are caused by unwillingness among trained professionals to work in rural areas with poor infrastructure, inadequate 'compensation,' and limited opportunities for professional growth. Female doctors and

paramedics are reluctant to live in isolated places with inadequate security. The conflicts in Nepal and Sri Lanka have severely depleted staff in the affected areas.

In addition to staffing-up (through hiring or contracting, as discussed below), greater attention is needed to provider skills, motivation and efficiency. Technical knowledge needs to be improved at all levels. Even simple procedures may be poorly performed. For example, a study of hygiene in Nepal observed that hands were not washed routinely before and after treating patients (Friedman, 1996). Workers are poorly motivated as (in addition to their heavy workloads, poor skills and inadequate supplies) supervision tends to be punitive rather than supportive or capacity-enhancing, and there are few incentives. Many doctors and nurses engage in dual practice (whether permitted or not), often referring patients from public facilities to their private clinics and cutting corners in their public efforts. Among the most important needs of public reproductive health care (which is highly dependent on motivated workers to reach out, especially to poor women) are strategies and plans to improve worker performance.

Basic amenities and maintenance are often poor at health facilities. Inadequate water and toilets deter clients and hamper service delivery. For example, an assessment of 40 facilities in Pakistan found that only 13 percent of Basic Health Units and 62 percent of Rural Health Centers had 'good' basic infrastructure (Fikree et al., 2003). Problems are often found in the availability/functioning of equipment, from the simple to the sophisticated. As a Senior Staff Nurse at an *Upazilla* Health Center (UHC) in Bangladesh said: '*We have only one labor table and one set of instruments. Sometimes we have to conduct labor on the floor or on a trolley.'* The lack of one item can render an entire system dysfunctional: another UHC in Bangladesh had blood grouping and storage facilities, but the absence of a blood-bank nearby led to patients who needed blood transfusions being referred to a higher-level facility. Failure to supply medicines is a major cause of client dissatisfaction. A doctor at a primary health facility in Pakistan summed up the situation: '*Why would others come when we have very little to offer those who do come?'* (Khan et al., 2000). These problems are also common in India and Nepal.

Referral and follow-up also need to be strengthened. For example, in Nepal, clinic staff seldom provided referrals to clients with medical problems, and they often did not even mention that a client should seek medical advice (New ERA, 2004). Almost everywhere, visits to secondary or tertiary hospitals are direct, without prior consultation at primary facilities. Providers in Pakistan highlighted the need for greater coordination between community-based workers and health facilities so that the fieldworkers could refer clients properly. None of the countries has a well-established system of fixing dates or reminding patients to pay follow-up visits for antenatal or postnatal care, family planning, and so on.

Lack of privacy and rude or insensitive behavior among public service providers are among the important reasons why women prefer to stay away. In India, women complained that government doctors dismissed their complaints about the side effects of contraceptives or post-abortion complications (Murthy et al., 2002). Consequently, they either did not seek

treatment (30 percent) or sought it from private providers (50 percent) who were often unqualified. Personnel at public facilities give a number of explanations for poor provider behaviors, ranging from high patient loads to clients' 'ignorance' – particularly among the poor or uneducated. Serious social biases are evident – clients belonging to lower castes in India and Nepal often feel discriminated against. A participant in a focus group discussion in Pakistan said: '*We are poor and so the female doctor at the hospital does not even talk to us properly. She is very rude…on the other hand, her behavior is impeccable when she talks to well-dressed women*' (Pakistan Participatory Poverty Assessment (2003) cited in Population Council, 2004). In Sri Lanka, where the use of public health facilities is very high (85 percent of in-patient care is provided by the government), the majority of clients are satisfied with the way they are treated.

In sum, there is clearly still a need in all countries to invest in the physical facilities of public health centers, and equipment, supplies and maintenance. The deployment and performance of staff are crucial areas for improvement. Accountability among providers must be increased – they must be held responsible for coverage, quality, continuity of care, and health outcomes. The vicious cycle between inadequate facilities, skills and poor performance must be broken. This could be done through efforts to identify and solve problems locally – for example, through decentralized action planning, which is the subject of Chapter 3. Regular monitoring and evaluation are the corollaries of good planning and problem solving. In Sri Lanka, several mechanisms are used to monitor quality, and are credited with achieving results: a routine management information system, district reviews, special reviews (e.g., for Well Women Clinics) and maternal death audits (which are considered 'best practice'). While these measures need to be implemented more vigorously in Sri Lanka, they also provide examples for other countries.

Private Services

Private reproductive health services in South Asia are provided by both the commercial and not-for-profit sectors. Commercial providers include individual medical practitioners, clinics, dispensaries, nursing homes and hospitals following allopathic ('Western'), homeopathic or indigenous systems of medicine. There are also registered pharmacies, laboratories and formally-trained paramedics. An informal sector includes 'less-than-fully-qualified' practitioners, faith healers and traditional midwives (*dais*). In the five countries, the formal private sector is concentrated largely in urban areas and spread thinly in rural areas, while the informal sector is predominantly, though not solely, rural. For example, in Pakistan, rural areas with almost 70 percent of the country's population have 30 percent of the country's private health facilities. This pattern is repeated in Bangladesh, India and Nepal. Incomplete data indicate that in these countries there may be three to four times as many formally-qualified practitioners in the private sector as in the public sector, and up to twice again as many 'less-than-qualified' private providers. In Sri Lanka, there appears to be a more even distribution of qualified practitioners between the public and private sectors, the ratio of trained to untrained practitioners is higher, and there is a better spatial distribution of trained providers.

The private sector provides care to the majority in all countries except Sri Lanka. In Pakistan, for example, it serves 60 to 70 percent of the population (Haq, 2001). Even poor people use private care to a greater extent than public services. Ease of access importantly determines use of private facilities but women seeking reproductive health care also feel that they receive more attention and better quality services, and appreciate the greater confidentiality, better behavior and flexible payment arrangements of private providers. In India, the private sector bears 60 percent of the case load of maternal and child services (Kavitha and Audinarayana, 1997; IIPS and ORC Macro, 2000). In Bangladesh, the proportion of households using government health services for treatment was estimated as 10 percent, while 60 percent of clients consulted unqualified practitioners (CIET, 2003). In reproductive health, the poor qualifications of private practitioners are clearly evident in the high proportion of abortions that are botched. Using spending is a yardstick to compare the use of private and public services, one-half (in Sri Lanka) to over three-quarters (in the other countries) of health care is provided by the private sector (see Chapter 4). This heavy use of private care places an undue financial burden on the poor.

Non-Governmental Organizations. There is also a wide range of non-profit organizations in the reproductive health sector in South Asia. In Bangladesh, non-governmental organizations (NGOs) provide as much as 40 percent of all reproductive health care, in contrast with the other four countries, where their coverage is limited to a few percent. They provide both curative and preventive care, the latter including contraceptive services and health education, especially for family planning, STIs (including HIV/AIDS) and safe motherhood. In curative care, their main focus is maternal and child health. While some NGOs are localized, others have extensive networks across their country of operation. For example, in Pakistan, the Family Planning Association of Pakistan, Marie Stopes Society and Aga Khan Health Services, and in Bangladesh, BRAC and the Marie Stopes Society have a wide presence. The Family Planning Association of Sri Lanka and Population Services Lanka Limited have a large network of associated sub-national organizations. The Family Planning Association of Nepal is involved in the full range of reproductive health services, having gradually shifted its focus from family planning to comprehensive sexual and reproductive health. In Sri Lanka, in recent years, NGOs have increased their care (and legal assistance) to victims of gender violence. On balance, the non-profit sector in South Asia leans toward preventive and promotive health, providing less curative and clinical care.

In India, the NGO sector covers an estimated four percent of the population and is diverse in capacity and performance. An evaluation of a USAID-supported program that involved 131 small and large NGOs providing primary health care in remote villages in 13 states found, on the whole, that the NGOs performed rather poorly, particularly in ensuring community participation and the sustainability of their efforts (Ved, 1997). Generally, however, NGOs in the health sector are believed to be pro-poor, client-friendly and more 'rational' in their use of medicine than the public sector, thereby achieving greater efficiencies and reputations for

more sensitive and better managed care. These attributes along with their preventive and promotive orientation and willingness to work in backward or remote areas make them useful partners to meet reproductive health goals.

Public/Private Shares of Reproductive Health Services

Few data are available for the five countries (particularly Nepal and Pakistan) on the private and public shares of reproductive health care, and comparability is a moot issue. In general, and in some contrast with 'general' health care, public sources tend to outstrip private services for immunization, family planning and antenatal care. On the other hand, private sources (particularly if traditional providers are included) surpass public providers for treatment of RTIs/STIs, abortion and 'home deliveries.' There are some exceptions to these generalizations. For example, greater availability of medical abortion in the public system in Bangladesh is encouraging a shift to it, while community-based distribution and social marketing are increasing private provision of birth spacing. As institutional deliveries in India increase under the *Janani Suraksha Yojana*, a new incentive scheme, a greater share may be provided by the public sector; and the private market share of condom distribution has increased not only because of higher over-the-counter sales, but also because of social marketing (some of which is through public-private partnerships). In Sri Lanka, provision of reproductive health care is overwhelmingly public.

In addition to differences by type of service, use of public/private providers varies by socio-economic status. In Kerala, the Indian state with the most favorable reproductive health indicators and good services in both the private and public sectors, there are wide variations by service and level of household wealth (Table 2.3). The poorest people obtain a greater share of services from the public sector, while the richest and middle-income groups use more private services (Mahal et al., 2001). In other states where services and health indicators among the poorest are not as favorable, hospitalization at public facilities is roughly the same among the poorest (57 percent in Kerala and 55 percent in UP) but higher among the richest (29 percent in Kerala and 39 percent in UP). Furthermore, while women from the richest

TABLE 2.3 Private and Public Shares of Health Services in Kerala, 1995-96

	Institutional Deliveries (number)		Immunizations (percent of total)		Hospitalization (per 100,000 population)	
	Private	Public	Private	Public	Private	Public
Poorest Quintile	759	231	55	45	2778	3667
Middle Quintile	537	454	68	32	4778	2778
Richest Quintile	574	343	82	18	7000	2889

Source: Adapted from Mahal et al. (2001).

quintile of households in Kerala had about 1.5 times the hospitalization rate of the poorest, in Uttar Pradesh this ratio was 5. In Orissa, another poorly performing state, the private sector accounted for less than 15 percent of hospitalizations among the richest quintile, and only eight percent of those among the poorest quintile. Contrary to the belief that public services of low quality are used largely by the poor, these data suggest that even such services are used disproportionately by the rich. This is possibly because private services in the same 'poor' areas are also of low quality and more expensive. The poor also use private services. Since the 1990s, the private share of out-patient and hospitalization services in India has been growing in both urban and rural areas and among the poor.

However, some private care may be detrimental to health and survival. In Bangladesh, 36 percent of institutional deliveries took place in private (including NGO) facilities, and the rest at government health facilities (NIPORT et al., 2003). Of 62 percent of pregnant women who sought care for a life-threatening condition, almost as many went to an *unqualified* private doctor as to a qualified doctor (private or public) (Table 2.4). Among 42 percent who sought treatment for non-life-threatening conditions, again almost equal shares went to unqualified and qualified doctors. The poorest quintile used more unqualified doctors than the richest quintile for both types of conditions. When facilities are compared, however, the poorest used government facilities proportionately more than private facilities especially for life-threatening conditions. A study in Gujarat, India, is germane to this issue. It suggests that women's education, income and family structure are important predictors of the use of private/government/NGO/traditional services, and that women are more sensitive to the social and indirect costs of services (travel time, transport costs) than to direct costs (Vissandjee et al., 1997). Thus the poor are quite discriminating in their choice of provider, using social, economic and 'technical' information to make their decisions.

TABLE 2.4 Public and Private Shares of Consultations by Pregnant Women in Bangladesh, 2001

	Life-Threatening Conditions				Non-Life-Threatening Conditions			
	Qual. Doctors	Unqual. Doctors	Govt. Facils.	Pvt. Facils.	Qual. Doctors	Unqual. Doctors	Govt. Facils.	Pvt. Facils.
Poorest	15.1	27.3	17.9	22.9	7.2	18.2	14.5	28.9
Middle	24.8	27.6	21.9	22.7	15.2	17.8	17.2	33.9
Richest	53.5	16.3	30.1	38.3	45.0	10.6	27.0	51.3
All	27.5	25.3	23.6	25.9	19.0	16.9	20.8	35.9

Note: Columns 2 and 3, 4 and 5, 6 and 7, and 8 and 9 can be compared. Those who did not seek assistance or who approached paramedics or TBAs are excluded from columns 2 and 3, and 6 and 7; and those who underwent treatment at home are excluded in columns 4 and 5, and 8 and 9.

Source: NIPORT et al., 2003.

Public-Private Partnerships

There have been many and various types of public-private partnerships (PPP) in the reproductive health sector in South Asia. In a unique example from Sri Lanka, the services of doctors (particularly specialists) from the government sector are available to the private sector through 'channelling centers.' Doctors officially provide services during their free time and charge consultation fees. This arrangement helps the private sector to cater to the demands of those who are well-off and able to afford paid services. Further, there is cooperation in emergency care. Government specialists who are Visiting Consultants in the private sector have the option of referring patients in emergencies to government hospitals where better facilities exist.[14] These arrangements exemplify public-to-private human resource flows in Sri Lanka and contrast with PPPs in the other four countries. The latter usually involve contracting in of private providers or contracting out of public services because staff and infrastructure are short in the public systems.

In Bangladesh, the Government's Health and Population Sector Program (HPSP) includes an initiative to support NGOs to deliver MCH and FP services to poor and underserved communities. Essential health care services have been implemented through this PPP model in two *upazillas*. While successful, it will be challenging to scale this up to the national level (about 460 *upazillas*). In India's Child Survival and Safe Motherhood Program and its successor, the Reproductive and Child Health Program, a large number of NGOs have received support for service delivery, and many have been involved in health communications and training. Although useful to extend coverage, the reach of these efforts has been short of expectations, and the adoption of their innovative or improved practices by the public sector has been slow.

In Pakistan, the Ministry of Population Welfare has located Reproductive Health Centers within larger public and private health facilities to provide a range of family planning services. A bold initiative taken in the mid-1980s was the social marketing of condoms through private channels to expand information and services to a larger clientele. This PPP has been quite successful (see Chapter 3). Another type of partnership involves public facilities being run by private agencies such as the Punjab Rural Support Program. If current examples work well, the government aims to turn over other poorly-functioning health centers to private managers. A similar strategy has been successful in some states of India (e.g., Maharashtra and Gujarat), but there have been few 'takers.' Not only are there a limited number of suitable applicants, but many consider the government's terms and conditions too rigid and unworkable.

Other forms of partnership have also been tried in India in addition to social marketing and franchising of family planning services and contracting out of government health facilities. Private service providers from anesthetists to laundries and security-guards have been contracted in. NGOs have been involved extensively in community mobilization, Information, Education and Communication (IEC), HIV/AIDS counseling and care, training and advocacy in reproductive health. In the RCH program, CHCs with functioning operation facilities can hire

private gynecologists and anesthetists to perform Cesarean sections. However, implementation is scanty due to a lack of interest among private practitioners (who have their own practices) as well as government staff (who may not want the additional workload). Clearly, there is scope for more and better PPP arrangements to enhance reproductive health care coverage and quality.

The government ministries responsible for reproductive health in all five countries have sufficient experience of the potential and pitfalls of PPPs to develop a more systematic approach to these to meet desired objectives. The objectives encompass: providing more and better services, reaching more poor women, developing innovative strategies, and improving public system performance. The pitfalls include private entities feeling that they are treated shoddily by the government personnel with whom they interact, that they are inadequately remunerated, and/or that they do not have the flexibility they need to provide better care, and government officials believing the opposite! Such problems need to be addressed when developing PPPs in the future.

Increasing Use of Services

Despite extensive services, public and private, in all the five South Asian countries studied, the access of poor women to reproductive health care remains limited. In Sri Lanka, reproductive health care coverage is high and quite equitable. Using its achievements as a yardstick, we find that even family planning coverage in the other four countries falls short by 25 to 60 percent. Despite long-standing family planning programs in all the countries, even *low demand* from the poor is not met. Given high unmet need for contraception, the significant use of abortion is not surprising. A substantial proportion of poor women do not receive any care during pregnancy. Although anemia (an easily preventable and treatable condition) is widely prevalent and has serious consequences, only one-fourth to one-half of all women receive iron supplements. Differences in reproductive health services among and within the four countries are most evident in care during delivery. Rich women are five to ten times more likely to deliver in an institution than poor women. Postnatal care falls far short of its potential to avert maternal and neonatal deaths. Immunization (except tetanus toxoid in Pakistan) is the most equitable service, followed by contraception.

Both demand- and supply-side constraints are responsible for low use of services. The supply of services is limited by the unavailability of facilities, staff or medicines 'at the right place and time.' Supply-side problems that inhibit demand include: perceived low efficacy of treatment (read: inadequate technical skills), poor state of facilities (managerial standards), bad behavior of staff and culturally-unacceptable care. Demand-side constraints encompass: low knowledge of the need for and availability of services; cultural barriers to women approaching appropriate service providers on their own; and high formal and informal costs of care (even at public facilities, and including indirect costs such as transportation or wages foregone).

Health sector reforms must focus on increasing the supply of services to poor women, and on enhancing demand and quality, so that services are *used* and improve health. On the supply side, there is a need to ensure *fully-functional facilities* and increase their numbers in underserved areas, as well as to improve *outreach* by service providers. Both these needs could be partially met through greater participation of private providers under various forms of public-private partnerships. In addition to improving availability, *targeting* the poor and *integrating* reproductive health services would achieve greater efficiencies for providers and users, and improving *management* and *skills* would enhance quality. Interventions that would enhance demand include: more information, incentives to use services in time, and financing mechanisms that reduce the burden on poor households.

The most important functional improvements are: ensuring the availability of doctors (especially women) and nurses at health facilities; adequate drugs and supplies; better amenities (especially water and toilets); better behavior of staff toward poor and female patients; and reduced waiting times. As physical distance is a significant constraint, this must be addressed by better location of facilities and/or outreach mechanisms, including fieldworkers and mobile service teams. Outreach workers can also help to increase demand, for which their counseling and communication skills and technical knowledge must be improved. Their mandate to serve adolescents and poor women must be strengthened and their demand-creation efforts must be reinforced through other means of public education – mass media, campaigns, school and youth programs, and so on. Integrating the essential package of reproductive health services at the frontline, including RTI/STI care, safe abortion (where legal) and nutrition, would increase access, improve quality and optimize the use of available resources. To achieve this, it would help to integrate the departments of family planning, health and nutrition where these are still separate.

Most of these improvements (with the possible exception of increased numbers of facilities and staff) can be brought about with available resources, through better planning and management (including logistics). Better management of workers and incentives are necessary to improve delivery. The availability of services could be increased by developing functional synergies between the public and private sectors through PPPs. For example, the public sector could contract out services that are currently in short supply, and contract in others, such as anesthetists for First Referral Units (FRU). The success of social marketing contraceptives could be extended to other services.

Human resource development is perhaps the most critical ingredient to improve the quality of reproductive health care in the five countries. It includes ensuring that staff are available (i.e., positions adequate and filled), working (not absent), up-to-date in knowledge and skills, and able to interact and communicate sensitively and effectively with clients. Quality assessment and improvement must encompass health facilities (buildings, amenities, equipment and supplies), human resources, and service delivery processes (e.g., provider behavior, information

provision, and privacy), and take into account individual/household knowledge, behavior and satisfaction. Achieving quality entails specification of what is to be done and how, standard-setting and commensurate monitoring. Some strategies to improve the quality of specific services are discussed below.

Contraception. Expanding the menu of contraceptives (especially to include spacing methods where these are currently limited), providing informed choice, strengthening follow-up, managing side-effects, and actively promoting male methods and involvement are needed in all countries. A broad method mix would increase overall use and continuation, and reduce failure rates, abortion and coercive sterilization. The difficulties of providing services to adolescents and secluded women and the burden of RTIs/STIs/HIV/AIDS call for condoms and 'dual protection' to be promoted actively. It is particularly challenging to provide contraception in a 'user-friendly' manner and address women's specific needs. Sound programs require strong technical and counseling skills and social and gender sensitivity among providers. Ensuring home visits to advise husbands and wives together to discuss their family planning objectives and preferences would be an effective strategy to address unmet need and increase demand. Family planning education through mass media, based on accurate social and cultural understanding (especially of the problems faced by poor young women), could create an enabling environment for services. Public education is also important to dispel the many 'misconceptions' that exist about matters of sex, pregnancy, birth and child care.

Abortion. The large number of abortions, complications and deaths reflect a serious failure of reproductive health policies in the region. Access to safe and confidential abortion is a critical need where women are resorting to unsafe methods, a process that is not discouraged by restrictive laws or poor availability of safe services. All five countries need to enforce safety laws, regulate clinics and penalize providers of unsafe abortion. In countries where abortion is legal, qualified providers have access to safe methods such as manual or electrical vacuum aspiration. Mifepristone is a safe and effective option if providers are adequately informed. Importantly in South Asia, where women's decisions about abortion are often taken jointly with their husbands, mothers-in-law or other family members, communication and counseling programs that include these groups would ensure 'safe' decisions, post-abortion care (PAC) and contraception. PAC is essential to reduce mortality due to abortion, and includes emergency treatment of complications, family planning to prevent repeat abortions, and links to other reproductive health services, such as diagnosis and treatment of RTIs. The experience in Bangladesh of providing menstrual regulation through trained providers such as nurses and midwives could be extended through appropriate training to providing PAC.

Skilled Birth Attendance. Given the positive association between antenatal care and use of skilled birth attendance, expanding ANC could increase women's chances of safe delivery and survival. This is particularly important given the socio-cultural and physical barriers to institutional delivery in South Asia. Demand-side financing mechanisms, such as vouchers for

pregnant women to use safe delivery facilities in the public or private sectors, and/or reimbursing transportation and other costs, could reduce economic constraints. Although traditional birth attendants (TBAs) are not classified as skilled, they could be given incentives to refer pregnant women to qualified birth attendants or facilities. Safe motherhood demonstration projects in Ghana and elsewhere have shown that a brief course in obstetric life-saving skills given to staff at primary and secondary health facilities can be effective in detecting life-threatening obstetric conditions (Osei et al., 2005). Improving maternal health through ANC and safe delivery will also enhance neonatal and infant survival, as Sri Lanka's experience shows clearly.

Postnatal Care. Strengthening outreach to ensure that every mother who has delivered at home receives a check-up and care within 24 hours of delivery could help to reduce maternal and neonatal deaths. Financial support (vouchers or refunds) to use medical facilities in case of complications would be helpful at this time. As many home-based births are conducted by TBAs, they must be trained to refer women with postpartum complications. Counseling women and informing the public at large about danger signs would also be helpful.

In the context of South Asia's tenacious patriarchy, addressing gender issues is essential to improve both supply and demand for reproductive health care. Unfortunately, gender equality is still poorly understood and practiced by the health sector in most areas of the Subcontinent, but some bias can be reduced through better design of facilities and programs (e.g., providing privacy, involving men in maternal care, nutrition, RTI/STI treatment, etc.), availability of services (e.g., male contraceptive methods), and provider status and behavior (e.g., proper remuneration and support of women workers, sensitive treatment of women clients). Indeed, male involvement in reproductive health is a promising area of action to promote demand for and utilization of services by women.

NOTES

1. Actions to improve permission and ability can also be taken outside the health sector. For example, schools could educate youth and provide services, and women's programs could facilitate micro-credit or micro-insurance for health care.
2. On account of data limitations, RTI/STI services and the care of older women are not discussed in this chapter.
3. Current use of contraception is defined as the percentage of currently married women aged 15-49 years who are currently using any modern method of family planning (oral pills, IUDs, condoms, female sterilization, male sterilization, injectables, implants or others).
4. By 2006-07 in Sri Lanka, the use of all temporary methods had increased to 35 percent, with each method increasing by between 1 and 4 percent. Sterilization had fallen to 17 percent of women surveyed. Overall use of modern methods was 52 percent, and of any methods, 68 percent, the gap being filled by temporary methods (GOSL-DCS, 2008). The 2006-07 Pakistan DHS suggests a decline in coverage in most individual temporary methods, and overall (e.g., to 29.6 percent for any method and 21.7 percent for a modern method) but the data are not strictly comparable to those in Table 2.1 (NIPS and Macro International, 2008).

5. This gap had closed to three times higher among the richest compared with the poorest in 2006-07 in Pakistan (NIPS and Macro International, 2008). The 2006 DHS in Nepal reports a 'U-shaped' impact of education on contraceptive use. Use is high among women with little or no education as many are sterilized.
6. By 2005-06, use (of any method) among 15-19 year olds was 13 percent, and that among social groups as follows: Hindus, 50.5 percent; SCs, 49 percent; STs, 40 percent; and Muslims, 46 percent.
7. The variables are: mother's education, husband's education, economic status, woman's employment, place of residence, autonomy, exposure to mass media, maternal age, number and sex of children, socio-religious group, and desire for more children.
8. In India in 2005-06, unmet need was estimated to be 18.2 percent among the poorest quintile of married women, and 8.1 percent among the richest quintile (IIPS and Macro International, 2007).
9. In 2005-06 in India, ANC coverage was 74.5 percent among Hindus, 71.7 among Muslims, 80.8 among Christians, 70.8 among SCs and 62.1 among STs.
10. In India in 2005-06, only 8.4 percent of live births to the poorest mothers took place in public institutions, compared with 24 percent of those to the richest quintile of mothers. The percentages in private institutions were 4.4 and 60, respectively.
11. In India, the gaps had widened in 2005-06 to four times among the most educated women compared with the illiterate, and among the richest (79 percent) compared with the poorest (19 percent) (IIPS and Macro International, 2007).
12. These are the Ministry of Health and Population (MOHP) in Nepal, the Ministry of Health and Family Welfare (MOHFW) in India, and the Ministry of Health Care and Nutrition in Sri Lanka. In Nepal, the Population Division of the MOHP is responsible for other aspects of population policy and activities other than service delivery.
13. **Bangladesh:** There are 250 posts for Union-level Medical Officers (Family Welfare), and 1275 MO posts for the upgraded HFWCs. 64 Maternal and Child Welfare Centres (MCWCs) under the DGFP are staffed and equipped to provide CEmOC. **India:** A strength of 250,000 ASHAs is planned between 2005-09 in 18 states. The table below provides data on normative needs, availability and shortfalls of other key staff and facilities for reproductive health in India in September 2005, as reported by the MOHFW (GOI, 2006). The notes that follow give some additional information.

Staff/Facility	Number Required per Norm	Number Actually Available	Shortfall in Posts	Vacancy Rate
ANM/MPWF	169,262	133,194	19,311	6,640 (4.7%)
Male MPW	146,026	61,907	64,211	19,678 (24%)
SHCs	158,792 (2001 R and T pops.)	146,026	19,269	a
PHCs	26,022 (2001 R and T pops.)	23,236	4,337	b
Nurse Midwives	46,658	28,930	13,352	5,280 (11.5%)
LHV/HA-F	23,236	17,371	4,214	2,602 (13.1%)
HA-M	23,236	20,181	5,290	6,880 (25.4%)
CHCs	6,491	3,346	3,206	c
FRUs (CEmOC)			1,926	d

(a) Of existing sub-centers, 5,769 (4.8%) were without ANMs, 44,766 (39.2%) without MPWMs, and 2,522 (2.8%) without both workers. In addition, populations would have increased by at least 10 percent between 2001 and 2006. The states of Bihar, Haryana, Madhya Pradesh, Maharashtra, Orissa, Punjab, UP and West Bengal are particularly short of ANMs. (b) There was a vacancy rate of 17.4% in sanctioned posts for PHC doctors. Of existing PHCs, 1,130 (6.5%) had no doctor, 3,478 (15%) had no lady doctor, 6,822 (39%) had no Lab Technician, and 2,343 (13.7%) had no Pharmacist. An additional 10% of all may be called for by the population increase between 2001 and 2006. Fourteen states had serious shortages of PHCs. (c) There was a shortfall of 6,110 specialist posts at CHCs, and about 52% of Surgeon posts, 44% of Obgyn specialists, 57% of Physicians and 56% of Pediatrician posts, amounting to about 50% of posts overall, were vacant. There were serious shortages of CHCs in 24 states. (d) There were 89 FRUs at Block PHCs, 992 at CHCs, 311 at Sub-district and 24 at District Hospitals. Many FRUs were not functioning due to the absence of doctors (e.g., anesthetists, gynecologists) or lack of infrastructure such as operation theaters or blood-banking facilities. **Nepal:** In 2001-02 there were 48,047 FCHVs in the country; 15,603 Trained BAs; 4,015 VHWs (1 per 6,000 people); 3,190 Sub-Health Posts; 5,295 paramedical Health Assistants (1/4,500); 6,216 nurses (1/4,000); and 711 Health Posts. **Pakistan:** There were 100,000 LHWs in 2007 of a planned strength of 110,000 to cater to 30 percent of the urban and 90 percent of the rural population. The numbers of other staff in 2001-02 were: LHW Supervisors: 3,071; Male Population Community Workers: 819 of a 2002-03 target of 7,000. The target for MFPWs was 2,280. There were 907 MCH Centers; 1,688 FW Centers (of a target of 2,300); 131/175 Mobile Service units (to provide services to 30,000 people at the *tehsil* level); and 106/145 'A' centers providing surgical reproductive health services. There were 4,582 Dispensaries; 5,334 Basic Health Units, and 556 Rural Health Centers in 2005. **Sri Lanka:** There were 25 PHMs, 1.4 PHNS, 45 Doctors and 84 Nurses per 100,000 people in 2001.

14. In contrast, in Bangladesh and some Indian states, private practice by government staff is permitted after working hours but there are no formal arrangements, while in Nepal, Pakistan and other Indian states, such dual practice is not permitted.

Decentralized action planning in Nepal involves a range of stakeholders.

Chapter 3

Planning and Practicing Better Reproductive Health

Although the five South Asian countries studied have had programs in place for several decades to address aspects of reproductive health, their outcomes have not been commensurate with expectations for a variety of reasons. Many socio-cultural, political, institutional and technical factors have caused the inequalities in service utilization and reproductive health status discussed in the previous chapters. The inequalities can be attributed also to normative planning and supply-driven implementation of health programs, without adequate attention to local needs, conditions or demand. In all five countries, the most backward areas and worst-affected people require urgent attention if disparities are to be reduced and the MDGs achieved. This can be done through decentralized planning, with appropriate resource allocations to correct inadequacies.

This chapter recommends a practical and simple method to plan actions to address local needs and inequalities and use available resources optimally. The method involves managers, providers, clients, local government representatives, and other important stakeholders. The planning can be done at the district level or below. Actions are developed on the basis of local analysis of needs and promising approaches, and a cyclical process of planning, implementation and monitoring builds the capacities of the health services and communities to improve health care. Good use of resources and demonstrated ability to get results could help decentralized units get the additional resources they need.

Decentralized action planning can be used to increase the supply of services, including outreach, to poor women by targeting geographic areas, villages and households for attention. It can also enhance demand where needed by targeting BCC and demand-side financing; identify supply-side improvements to address local constraints; and ensure that programs for sensitive groups such as adolescents or tribal people are appropriately delivered. It can foster the integration of services, strengthening those in the essential package that are especially needed or weak locally; provide the necessary tools and training to implement a client-centered approach; and measure performance.

To energize preparation of effective action plans for reproductive health in South Asia, the chapter identifies and presents some 'promising practices.' These focus on 'how' more and better reproductive health services can be delivered. They include demand- and supply-side efforts and address access, quality

of care and program management. Some focus on creating enabling environments to improve women's health. The practices were selected after a thorough search for field-tested efforts that have had measurable impacts. To bring a fillip to local praxis, particular attention was paid to practices that are innovative and represent 'out-of-the-box' thinking, and could be implemented, scaled up and sustained in South Asia.

Decentralization to Bridge Inequalities

Decentralized health planning has been and is being carried out in various ways in each of the five countries. In 1994, Bangladesh devolved the planning and financial management of family planning services to the sub-district level. It allowed local governments to allocate locally-generated funds to implement the program. In 1998, the Local Initiative Program started 'bottom-up' input planning to promote community-based action and ensure more equitable, pro-poor allocations of health resources. However, the approach is considered complex and time-consuming as it involves formulation of logistic and procurement plans among other things (Cooper-Stephens, 2001).

In India, decentralized planning has been practiced for some decades in the form of sectoral and multi-sectoral district and state plans. These have established the bases for programs, activities and resource allocations, being funded largely on the basis of 'past actual expenditure plus' per capita or per facility. In 1993, the adoption of the 73rd and 74th Constitutional Amendments provided for elected local governments to manage some aspects of health services, a new framework for planning and implementation. The introduction of a Community Needs Assessment approach in the Family Welfare program in 1998 was intended to produce quality improvements from the Sub-Center level upward, but 'top-down' introduction of formats and poor preparation stymied its success (Policy Project, 2000). This experience resulted in recognition of the importance of decentralized service delivery and integration of reproductive health services, and various approaches to decentralized planning are being tested in different programs or parts of the country. In 2005, the National Rural Health Mission mandated district planning widely.

In Pakistan, devolution was introduced through a Presidential Ordinance in 2001, and the roles of district and provincial governments in planning, personnel management and procurement are evolving. Nepal's Local Self-Government Act of 1999 devolved management of health care from the central and regional directorates to lower levels. The first major step of transferring the property, equipment and staff of all Health Posts and Sub-Health Posts to Village Development Committees is unfolding. Beginning in 2004, Pro-Poor District Health Investment Plans have been prepared as part of the Second Long-Term Health Plan (1997-2017), which is expected to accelerate the decentralization process. In Sri Lanka, health administration was decentralized in 1987 with the passage of the 13th Amendment to the Constitution, and planning is decentralized.

In essence, although decentralized planning is recognized in all five countries as a way to address local variations in health needs, the appropriate methods for such planning are still evolving. Current approaches fall mainly into three categories: (i) need-based planning, (ii) resource-based planning and (iii) norm-based planning. *Need-based planning* involves assessing local health needs using data on the disease burden, demographic information, and people's responses to questions about health care. The approaches in the GOI's RCH Program and Sri Lanka's District Health Planning initiative are examples of need-based planning. Eliciting people's health needs is important but not fully reliable because respondents usually describe their needs on the basis of recent efforts to obtain curative care. They rarely perceive the need for preventive care which encompasses many reproductive health services.

Resource-based planning accepts general health objectives as a given and focuses on allocating uncommitted resources to activities that are under-funded or flagging. It can improve the utilization of resources but usually does not address major gaps or inequalities in health. *Norm-based planning* assumes certain input norms and estimates the resources required to fulfill these. Its weakness lies in the poor fit between norms and local situations, particularly in the most backward areas. India's family planning program was an example of norm-based planning – considerable resources have been allocated over a long period of time to develop a delivery system based on norms, but poor outcomes and inequalities were not addressed adequately. Bangladesh's local-level planning is another example.

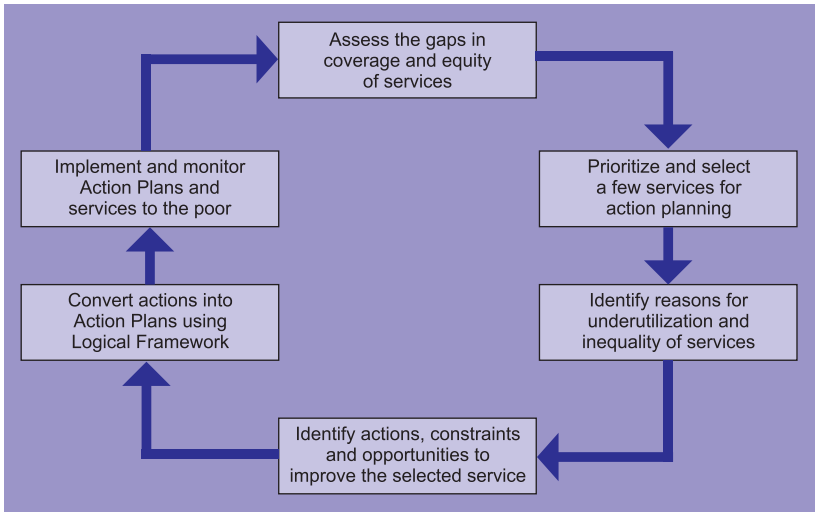
Decentralized Action Planning

Although decentralizing health services is national policy in all five countries, and large units such as provinces and states enjoy some autonomy, below this level 'decentralization' is largely restricted to the devolution of certain tasks. Generally, district health organizations plan and finance activities within norms, targets and budget envelops specified by higher-level authorities, manage and supervise the delivery of services, oversee in-service training and coordinate with other government departments. They have little choice between priorities or even activities, and can usually modify resource allocations only on the margin. Planning focuses largely on inputs and on the allocation of resources to specific activities. Local *action* plans are prepared rarely and usually do not address inequalities.

Our review of the quality of reproductive health care in the five South Asian countries identified many weaknesses in program implementation. All the countries are interested in accelerating effective implementation through local-level planning in keeping with their decentralization policies. As capacities in the field are limited, they need a simple and practical approach that can be implemented with available knowledge and skills. Consequently, during this study, local managers and researchers developed a decentralized action planning (DAP) method, keeping local limitations in mind and aiming to build capacities over time. The participatory nature of the method harnesses local human resources and can lead to the garnering of other local resources also.

On account of size and the availability of a range of human and material resources, the district is the most appropriate unit for planning in all countries. The DAP method was developed simultaneously in 12 districts in South Asia: four in India (two in Karnataka and two in Rajasthan) and two each in Bangladesh, Nepal, Pakistan and Sri Lanka. The method combines concepts from Total Quality Management and the Problem-Solving Approach to address three key questions: (i) How well is the district doing in terms of coverage and equity in reproductive health service delivery? (ii) Which essential services are underutilized, especially by the poor, and why? (iii) How can the utilization of these services and their quality be improved? The planning initiates a cyclical process including implementation and monitoring, as shown in Figure 3.1 and described briefly below.

FIGURE 3.1 Decentralized Action Planning and Implementation: A Cyclical Process



Assessing the Local Situation

In order to assess the gaps between actual and expected levels of reproductive health service coverage and equity in the district, information was compiled on the district's demographic profile, health infrastructure, staff, reproductive health indices, government-sponsored reproductive health schemes, and private and NGO resources. Information on private/NGO providers included the types of services they provide and their areas of operation. All the information was presented simply in the local language in consultative workshops at the district level. Information on good practices in reproductive health (some of which are discussed below) was also made available to those involved in the planning effort.

Participatory Action Planning

The district workshops typically brought together 20 to 25 persons, about equal numbers

from each of three key stakeholder groups: health program administrators (District Health Officers and those dealing with family planning, reproductive health, health education, and mother and child nutrition), service providers (doctors, nurses, supervisors and workers), and private sector, NGO, local government and community representatives. All members of the planning teams were selected using two criteria: (i) they had a role in the delivery of reproductive health services, and (ii) they were capable of analyzing program constraints and suggesting solutions.

Each workshop consisted of five sessions, following the first five steps in the DAP process in Figure 3.1. In the first session, the information on the district was discussed and validated. Team members provided additional or alternative information. Next, reproductive health services were broadly categorized into three groups – Maternal and Neonatal Health, Reproductive Health of Sexually-Active Adults, and Adolescent Health – and participants discussed service provision in their district. They identified one service in each of these three categories that required priority attention using 'inadequacy' and 'inequality' indicators:

$$\text{Inadequacy Ratio} = \frac{\text{Performance of Best District in the State/Province/Region}}{\text{Performance of the District}}$$

$$\text{Inequality Ratio} = \frac{\text{Coverage among the Non-poor}}{\text{Coverage among the Poor}}$$

This exercise attracted a lot of discussion. For example, a District Health Officer in India was in favor of giving priority to Safe Delivery because it was the most inequitable service. Service providers, however, felt that attention to Full Antenatal Care would ensure Safe Delivery. After a lengthy discussion, the team selected Full ANC and Safe Delivery for action planning. Similar discussions occurred in other districts. In Pakistan, in the absence of district-level data, the teams used a method developed by the Ministry of Health and the Multi-Donor Support Unit to calculate inadequacy and inequality. They scored services on the:

- magnitude of the problem addressed by the service,
- severity of consequences if the problem went unattended,
- availability of feasible interventions,
- cost-effectiveness of the intervention, and
- public and political demand for the service.

In the third session, participants were divided into the three stakeholder groups to discuss why the services they had selected were underutilized, inadequate and inequitable in their district. Both demand- and supply-side constraints were identified. For example, in Mysore district of Karnataka, India, participants identified a lack of awareness, cost and poor quality as the reasons for low RTI/STI treatment. Using ranking or voting techniques, one or two of

the most important problems that are amenable to action for each of the services were selected to be addressed in the action plans. This exercise showed that different problems were perceived to affect the utilization of the same service in different districts. For example, the prime obstacle identified to utilization of maternal care in Karnataka was cost, while in Rajasthan, India, it was poor access, and in Nepal it was lack of awareness.

For each problem selected, the planning team identified actions to improve utilization and equity, and some potential opportunities for and constraints to implementation. In the next session, the team converted their ideas into action plans using a logical framework. Each Action Plan contains the actions, opportunities and constraints identified. The plans were completed by assigning responsibilities, goals and time frames, and discussed to check whether any aspects had been ignored or unrealistic assumptions made, to ensure final *practical* Action Plans. Finally, the members of each stakeholder group assessed the Action Plan on the basis of several criteria: innovation, potential effectiveness, practicality, sustainability, effective resource utilization, and community participation. This final step gave all a sense of the challenges that lay ahead and the impetus to make their 'own' plan work.

The decentralized Action Plans had several important features including meaningful roles for communities in their implementation, and redeployment of existing human resources for more effective service delivery. The activities proposed were practical and within the district's control, features which were particularly encouraging to those involved. The participants also realized that they could tackle other problems over time because planning and implementation would be repeated in cycles, and they could take on more difficult issues as they gained in experience and confidence. Although it was not possible to do so in the first round of planning, participatory local-level planning has the potential to identify and utilize a range of local public and private resources (e.g., service providers, facilities, donations in cash or kind) and to develop meaningful local partnerships.

Key Lessons for Decentralized Planning

The pilots in the five countries suggested that the following are important to support a decentralized planning process:

- Concise and clear information on the district's reproductive health status, service utilization, health resources and policy mandate;
- A manageable number of participants with different backgrounds who can make positive contributions;
- A skilled facilitator who appreciates community participation, understands the local health system and its management practices, knows national reproductive health programs and strategies, and has critical thinking faculties;

- A set of locally-appropriate 'promising practices,' including information on their implementation process;
- Community views on how to make plans more pro-poor;
- Methods to assess the services for which data are not available;
- Proper monitoring and supervision of implementation, including communities in monitoring, in order to improve the next cycle of planning;
- An efficient Management Information System and use of the data for decision making;
- Functional inter-sectoral planning and management teams in the districts.

The DAP process brings about change through understanding (the situation), agreeing (on goals), adapting (practices), improving skills, expanding efforts, and empowering providers and clients. It is similar to the SEED-SCALE model as it involves 'Self-Evaluation for Effective Decision-making' (SEED) and is a 'System for the Community (of practitioners) to Adapt, Learn and Expand' (SCALE) (Ide-Taylor and Taylor, 2002). The health system catalyses change within itself first and then in its community of clients. Several of the principles of the SEED-SCALE model are integral to DAP. It builds on the existing capacities and strengths of those involved in health care, and can increase confidence with each round. It focuses on available resources and assets, and plans actions to address needs, based on what is possible. Decisions are made and actions planned on the basis of objective local data (evidence). The health managers and providers may need guidance from outside experts to interpret and use the data. Local expertise can also be used to introduce appropriate up-to-date ideas and build capacity, and to gather better data for the next round of planning, helping the process develop from simple to sophisticated. However, DAP uses fewer resources from outside than working directly with communities, which would require a lot of facilitation. Such resources cannot always be obtained where they are needed or because of the expense involved. Scaling up the use of NGOs or private professionals would simply take too long, given the sizes of South Asian countries. In effect, DAP eliminates intermediaries except as facilitators and as decided by the local planning/implementation teams.

Promising Global Practices

As discussed in Chapter 2, operational and contextual factors play vital roles in determining the outcomes of reproductive health services (beyond the technical effectiveness of interventions). It is usually not possible to optimize these factors within short periods or all at the same time. Hence local program managers need to identify and adopt approaches that are most likely to succeed in their specific contexts. The DAP process includes brainstorming about 'what may work', which can be facilitated by examples of 'what has worked.' Many efforts within and outside South Asia have succeeded in enhancing reproductive health in resource-constrained settings.[1] This section discusses some field-tested practices that could

be adapted and/or adopted more widely in the region to address the key problems in reproductive health outcomes and service delivery that were identified in the previous chapters. To facilitate their use in decentralized action planning, they are grouped into approaches that address demand for, access to and quality of reproductive health care. While some practices focus on one stage of the reproductive life cycle, others can be applied to any stage or to reproductive health more generally, as shown in Annex 7 Table A7.1.

Operational approaches cannot be tested as rigorously as can technical interventions through, say, randomized controlled trials.[2] However, they can be – and many have been – evaluated for effectiveness. Others may be untested but show promise because they have worked in several settings or are simple enough to be adapted readily to different situations. 'Best' or 'promising' practices range from specific tools or techniques to 'packages of interventions' or programs. Clearly, the more complex the intervention, the more likely it is to require adaptation to local contexts and the more challenging it would be to make it succeed.

The discussion of promising practices and their use in decentralized action planning is not intended to suggest (top-down) that they be replicated or scaled up, but to illustrate the potential of using good practices to enrich DAP and improve implementation. It is difficult to take local successes to regional or national scale as contextual factors are highly variable and administrative units very large. Even districts are geographically varied, covering several hundreds of villages and large numbers of people from many different communities (with different needs, beliefs, behaviors, practices, etc.). Thus 'scaling up' can at best be done gradually by local teams exposed to ideas that they can adopt or adapt to their contexts. Local NGOs may partner with government (and enter into formal PPPs) to introduce innovations into the public system as a logical follow-up of their participation in DAP efforts where experience, expertise and insights are shared. The prime purpose of discussing promising practices here is to share some useful ideas that could be infused through DAP into the public health systems of South Asia to improve their effectiveness.

Enhancing Demand for Services

Generally, health service interventions have focused on improving aspects of supply to enhance the availability and quality of services. These have been supported by efforts to implement 'information, education and communication' (IEC) or 'behavior change communication' (BCC) activities to increase awareness, either to reduce the need for medical care by improving lifestyles and preventive health actions or to generate demand for and appropriate use of services. 'Two-way communication' encompassing efforts to solicit users' perspectives on service delivery has been undertaken in order to design solutions that are more acceptable to clients. However, as discussed in previous chapters, knowledge about health or illness care, and awareness of services continue to be quite low in South Asia, particularly among poor women and adolescents, and much more needs to be done to improve them. It is important to focus on them in

decentralized action planning because of the localized nature of health beliefs and practices, socio-economic determinants of health and, of course, health service availability.

Critical questions concerning adolescents include *how* and *where* to reach them, in addition to *what* information and contraceptive and RTI/STI services to provide. Successful approaches include providing information on gender roles and responsibilities, sexuality, safe sexual behavior and reproductive health, and focus on ensuring contraceptive services and counseling, particularly about pregnancy and family planning. These cover the main needs of adolescents in South Asia that were discussed in Chapters 1 and 2. Particularly promising initiatives use peer educators ('animators') or motivators to reach out to adolescents in schools, community organizations, homes or clinics, or a variety of media to deliver simple, appropriate and accurate health messages and promote utilization of services. Some establish special youth centers, use 'edutainment' approaches, and/or broaden content to include social skills or 'lifeskills.' Involving adolescents themselves in planning strategies, designing activities and materials, and allowing them to voice their concerns have been key aspects of these programs. The recognition among staff that reaching adolescents is important and possible is an important ingredient in the success of these efforts.

While societal changes that enhance the status of women – including increased education – raise demand for services sustainably, as they have in Sri Lanka, Kerala and Tamil Nadu, a number of shorter-term approaches have been used to enhance demand among poor women. IEC/BCC strategies are used widely and appear to have variable chances of success as they depend heavily not only on content and mode of delivery but on the local social, economic and political situations of poor women. As in the case of adolescents, creative efforts such as the '3W Safe Motherhood Game' in Senegal build on local context, generating interest among clients and providers (Spadacini, 2001). In this example, women's awareness of maternal and child health risks is heightened through association with local cultural images, beliefs and proverbs. Evaluation showed increased knowledge of risk factors among the women who participated, and an increase in the number of women who completed three antenatal visits. The interest created within the communities is believed to be spreading the message of safe motherhood even further. Also widely practiced are participatory approaches to delivering or managing services that are similarly sensitive to context – unless poor women are targeted specifically, they are often crowded out by the better-off; and unless they perceive the activities in which they are involved as having high returns to their scarce resources of time and energy the efforts are ineffective or unsustainable. Many initiatives have used community-based women's groups to raise awareness of reproductive health needs and rights, mobilize women's participation and enhance use of services.

Involving men in reproductive health programs has also shown a potential to achieve better outcomes for women and reproductive health (Anon, 2003c). Successful efforts in India include PRIME II and Shramik Bharti's 'Community Partnerships for Safe Motherhood' in Uttar

Pradesh and *Pati Sampark* in Gujarat. The latter program engaged men in monitoring their wives' clinic attendance and consumption of nutritional supplements during pregnancy. Evaluation found that women whose husbands participated in the program attended clinics six to seven times, compared with two or three times among others; and men's awareness of family planning was also increased. Another NGO in Gujarat, Sewa Rural, organizes health workers' visits according to men's schedules so that husbands can be involved in discussions and actions for Safe Motherhood. This has led to a 40 percent increase in men seeking out health workers to register their wives early for antenatal care, one-third of men accompanying their wives to hospital, and a significant increase in the number of fathers bringing their infants for immunization. In Pakistan Punjab, a project set up demonstration sites for men's reproductive health services, with each site developing its own strategies to promote services. At one site, community religious leaders became very involved; at another, rickshaw drivers were trained to answer basic questions about the clinic and men's services. Vasectomies increased four-fold as a result of these innovations (EngenderHealth, 2003). Such location-specific action makes programs work on the ground and calls for health managers to be flexible in allowing and financing different approaches rather than prescribing the 'how' of implementation from above and afar.[3]

In addition to improving awareness, protecting the poor from the adverse financial consequences of illness can increase demand for services. Karnataka's Yeshasvini Scheme is among programs that have devised mechanisms to assist the poor to meet the costs of health care (Box 3.1). Health insurance for the poor will be discussed further in Chapter 4.

Increasing Access to Services

Successful efforts to increase access to services may, once again, focus on supply- or demand-led interventions. As noted in Chapter 2, supply-side improvements encompass the establishment of health centers in previously underserved areas; enhancements in facilities, equipment, drug supplies, etc.; extension, camp or mobile services; better management and training of workers; community-based mechanisms such as 'depot holders' and health groups; and several others. These improvements can be brought about through top-down policies, financing and instructions, or through decentralized action planning that concentrates on improving the use of available resources and also helps to secure additional resources either locally or from higher authorities. Given the large needs and current limitations in public sector service delivery, it is necessary to mobilize all available resources to enlarge the pie of services available to achieve better health outcomes in poor settings.

Involving community members in the DAP process can give participants a better understanding of health needs, and build commitment and support for health care in the community. Establishing facilities beyond public hospitals and clinics, such as birthing homes and maternity waiting centers, to improve geographic access to EOC, especially for women living in remote

BOX 3.1 Insuring Good Health: A Community-based Scheme in India

The **Yeshasvini scheme** is a successful public-private partnership that was designed for the rural poor. It provides health insurance to about 1.87 million farm households, members of some 30,000 cooperative societies in Karnataka. Using the cooperative network enabled the scheme to reach out and build a large membership in just three years and aim to insure all members of cooperative societies. Coverage was extended to women's self-help groups that are linked to cooperative banks, and to poor urban slum-dwellers who wish to register. The insurer is the Yeshasvini Trust, a registered charitable society. Members originally paid a premium of $1.20 per year (later raised to $2.50), and the Government of Karnataka provided contributions of about 50 percent of the net income of the program in the first year and 25 percent in the second and third years. Members can have their premiums deducted from cooperative earnings and pay in instalments – even of milk if they belong to a dairy cooperative! Membership, authorizations and claims are managed by a third party administrator, a profit-oriented company. Over 150 private hospitals all over the state have enrolled as service providers on a voluntary basis. The good reputation of these hospitals has contributed to the scheme's attractiveness. The benefit package focuses on 'high cost-low frequency events' such as surgery and certain accidents and injuries, and includes free outpatient consultations, subsidized medicines and diagnostics for any illness. About 1,600 types of surgery are covered including Cesarean sections. There are reports that Cesarean rates are higher than expected, which may be due to provider moral hazard or self-selection. Future plans include extending benefits to cover normal deliveries and neonatal care. Fixing the costs of the most common surgeries has minimized the risks of cost escalation. Patients do not need to handle payments as the insurer pays the health care provider directly for pre-approved surgeries. The scheme helps poor clients get surgeries they could not otherwise afford, and the free services provide additional protection. In its first year, over 30,000 out-patient treatments were covered. Evaluations show that communication with members needs to be improved and authorizations and claims need to be speeded up. Another important issue for the poor is the distance that some need to travel to a participating hospital – some quality may need to be sacrificed for improved access (Radermacher et al., 2005).

areas, has worked to reduce maternal mortality. For example, in Malaysia, low-risk birth centers with four to six beds are attached to health clinics. They are staffed by doctors, nurses and midwives from the respective clinics. High-risk women are also allowed to deliver at these centers if they do not want to go to a hospital, but are sent to the nearest hospital by ambulance in case of emergency. Through this strategy, both demand for and access to good obstetric care have increased, and outcomes have improved (Anon, 2003a). Efforts to improve home-based life-saving skills have been undertaken in India and elsewhere. They improve the ability of pregnant women and family members to recognize danger signs and increase birth preparedness. They have also helped to increase postpartum and post-abortion family planning; develop referral systems with emergency transportation and funds; and establish sustainable networks of community volunteers who manage the entire process and solve problems at the local level (PRIME, 2003). Organizing camps on well-publicized dates and sites has also helped to increase service delivery.

Other interventions that have successfully addressed some key barriers and increased access to quality reproductive health services include those that: encourage communities to take responsibility for their reproductive health needs; make use of private formal and non-formal service providers to increase available options; and increase efficient use of available resources. These also demonstrate that communities and households can take more responsibility in improving their own health when the formal system fails. In a project in Ethiopia that aimed to overcome social and geographic barriers to family planning in rural areas, extension agents lived in villages for six months and worked intensively with the communities to organize them and develop community-based service systems (e.g., to distribute pills and condoms). After three months, the villagers selected and trained local volunteers who then gradually took over the duties of the extension agents including counseling, group education and distribution of contraceptives. This allowed the outside agents to move on to other villages, making efficient use of scarce human resources (Rubardt (2002) cited in Anon, 2003b). In a remote tribal area of Maharashtra, India, the SEARCH Foundation trains village health workers and TBAs to diagnose childhood pneumonia and treat it with antibiotics under the supervision of a medical team. This has helped to reduce case fatality and substantially lower infant and child mortality. The Indian Council of Medical Research is carrying out a multi-center study to assess the feasibility of scaling up this approach through the government health system (Bang et al., 1999). In Sri Lanka, for the past ten years, trained PHMs have identified children with risk signs for Acute Respiratory Infections (ARI) and sent them for medical care. Based on this approach, the ARI Control Program has already proved effective nationwide.

There is considerable scope for expanding *public-private collaboration,* including using public funds to purchase health services for the poor from NGOs and other private providers (through a variety of financing mechanisms such as 'contracting out' or voucher schemes that will be discussed in Chapter 4). Other strategies to involve the private sector include social marketing and social franchising. At least two excellent examples are available in South Asia itself – the Pakistan Green Star Program and Janani in India (Box 3.2). Assessments point to many positive outcomes of these, such as better targeting of services, easier access to new products and procedures, service quality improvements, and utilization of spare capacity or efficiency improvements in the private sector. The public sector can also collaborate with the private sector in training, communications, organization of emergency transport and so on to improve access to, demand for and/or quality of services.

Improving Quality of Care

In South Asia, where there is a paucity of safety nets for the poor, the free services provided at public health facilities are virtually the only 'health insurance' currently available to them. However, the credibility and quality of these services need to be enhanced substantially, as discussed in Chapter 2. Although this is a difficult task in resource-poor environments, some programs in developing countries have been able to demonstrate marked quality improvements

with simple enhancements. For example, in Tanzania, a package of improvements led to a several-fold increase in RTI treatment and family planning, greater patient satisfaction, and increased community participation within two years (Atherton et al., 1999). The package included capacity-building (continuing education, training in service quality concepts, strengthened management systems, and enhanced community links), improving infrastructure, regular provision of supplies and drugs, quality monitoring (through regular management meetings and quality assurance techniques), service integration, community participation, and additional service provision through the private sector.

Several countries such as Malaysia and South Africa carry out total quality management programs, accreditation to establish national standards, or external assessments to ensure quality. At the Castle Street Women's Hospital in Sri Lanka 'work teams' use participatory decision-making processes to identify and analyze problems and devise strategies to overcome deficiencies in the system. A monitoring system was set up and monthly meetings of sectional heads are conducted to review progress and sort out cross-cutting issues. The obstetricians and gynecologists in the system play an advisory role to these groups (Withanachchi et al., 2004). In Egypt, clinical standards and protocols, training courses, a three-tiered supervision system, and a clinic certification plan were introduced to 'push' quality into every level of the service delivery system. At the same time, media campaigns were designed to 'pull' quality into health facilities by raising community expectations of the quality of family planning services and prompting clients to demand good quality care (Anon, 2003b). Maternal death audits have also been effective in improving the quality of maternal care in Sri Lanka. It is mandatory for all relevant functionaries to promptly notify a maternal death, and this is investigated. In addition, District Maternal Death Reviews are carried out every three months to identify managerial and technical problems that may have led to a maternal death, and measures are taken to correct them. The findings are also used to review relevant policies and devise strategies to prevent such deaths in the future (UNICEF, 2004).

Most critical to enhance quality in reproductive health care in the public sectors of the five countries are human resource development activities. There are many examples that indicate that initiatives in skill training and incentives have been successful in improving the availability and competence of service providers. The importance of having well-skilled frontline workers is demonstrated by the following experience. In Andhra Pradesh (India) an experiment set up private midwifery practice by trained ANMs in poor remote villages. Women's associations were involved in appointing the ANMs and deciding on the payment for their services. One village appointed a local married woman who was trained to provide basic health care, while the other village appointed a qualified ANM. The qualified ANM was more effective in providing services as she could treat women's illnesses and conduct deliveries. Within a year, she was earning more than she would have earned working at a private nursing home. The basic-trained worker, on the other hand, was not effective as she did not conduct deliveries and could not treat minor ailments.

BOX 3.2 Franchising Family Planning for the Poor

Pakistan: When the social marketing program in Pakistan expanded from condoms to clinical methods in the mid-1990s, it became essential to expand the pool of skilled family planning providers serving poor communities. The solution was social franchising, recruiting physicians from Pakistan's highly-developed private sector to add family planning to their existing medical practices and market their services under an easily recognized brand name. Population Services International (PSI) and its local affiliate, Social Marketing Pakistan (SMP), designed and launched the Green Star network in 1995. Like commercial franchises, Green Star is governed by a contract between the franchiser, SMP, and the health care provider. Providers agree to deliver services according to protocols and quality standards set by SMP. In return, SMP supplies them with training, support and materials, including Green Star signs to display outside their clinics. By establishing franchise dues at the outset, SMP can screen out applicants who are not serious, increase franchisees' commitment to the network, and recover some costs. The contract clearly spells out the roles and responsibilities of franchisees and outlines enforcement mechanisms to maintain the quality of services. The incentive for providers is economic: they hope to attract more clients because of their Green Star affiliation and to profit from the sale of Green Star contraceptives.

Due to cultural restrictions on pelvic examinations in Pakistan, the Green Star network initially recruited licensed female physicians to offer a full range of family planning services including IUD insertions. Later, male physicians were added to the network because of their ability to talk with men about contraceptive use. The next step was to recruit pharmacists who play important roles in disseminating family planning information and influencing client decisions to use family planning. Eventually, Green Star included Lady Health Visitors who deliver health care to the poorest and most underserved urban neighborhoods. Recruiting providers into the network has become easier since the Green Star brand has achieved recognition and respect. The network can now use more stringent criteria to select and admit new providers.

Experience has shown that the most successful Green Star providers own and operate their own clinics, which makes their employment more stable and follow-up easier. Training is key to a franchise's success as it ensures that providers understand Green Star service delivery protocols and can meet advertised standards of quality. The network has developed different training curricula and reference materials for each type of provider. To ensure that providers meet the quality standards, training staff also have a monitoring function. They make regular site visits, especially to providers who are new to the network, to answer technical questions, assist with procedures and solve problems. In addition, SMP field staff visit Green Star sites quarterly to assess providers' performance, and mystery client surveys are conducted periodically. If a provider's services do not meet Green Star standards, he or she is required to undergo remedial training.

SMP also markets the Green Star name to attract clients. Multimedia advertising campaigns, promotions and public relations have created awareness and generated demand for services and products. By 1997, 93 percent of respondents in low-income urban areas recognized the Green Star logo and identified it as a symbol of high-quality family planning at affordable prices. In 2003 Green Star provided 30 percent of all couple-year protection in Pakistan, which compares well with 59 percent provided by the public sector, and 11 percent provided by Key Social Marketing, commercial sales and NGOs combined (Ahmed, 2006).

India: Janani, a non-profit organization, also uses social franchising to provide services to the poor. It is among the largest public-private networks delivering reproductive health care in India. The program covers Bihar and Jharkhand, two of India's poorest states (annual per capita income about $120) and home to 125 million people (est. 2008), and 10 districts of Madhya Pradesh, another large and poor state. Janani has an extensive distribution network of pharmacies, cigarette shops, grocery stores, general merchants and rural medical practitioners providing quality family planning services at affordable prices. It also has a network of general practitioners providing clinical family planning services under the Surya (Sun) Clinic franchise. This program covers a number of districts in Bihar and has shown that couples are willing to adopt family planning and pay for services if these are easily accessible and good quality.

Janani started as a conventional social marketing program in 1996 using shops to sell subsidized products. Subsequently it refined its strategies to address three major shortcomings of conventional social marketing programs: the inability to reach beyond urban areas, to deliver clinical services, and to serve the needs of the poorest. These meant that service delivery channels had to extend beyond shops. Janani consequently identified rural practitioners to increase village communities' access to products and services, and private doctors to deliver clinical services. By December 2005 the organization had trained over 40,000 providers and established 520 medical clinics, in addition to delivering its products through 31,000 shops. The network will ultimately consist of 40,000 shops, 360 streamlined medical clinics and 57,000 rural centers, one in each village in the areas covered. Janani's clients are predominantly poor and pay significantly less than commercial health service prices.

When Janani began, the program partnered with the Indian government and focused only on the delivery of condoms and oral pills. The integration of clinical services began in 2000 with emphasis on enhancing doctors' surgical skills while using paramedics for routine procedures. Quality standards at the Surya Clinics are maintained by a Janani-appointed administrator. The network of rural health practitioners, each working in partnership with a woman family member, serves as the link between these clinics and communities. After their training by Janani, the rural practitioners are franchised into Titli (Butterfly) Centers, where they sell non-clinical products and over-the-counter diagnostic tests. They counsel clients needing clinical services and refer them to the nearest Surya Clinic, earning a commission. This bundling of services has enhanced the viability of franchising. The conventional social marketing infrastructure of shops and stockists serves to sell products in urban and semi-urban areas and to replenish supplies to Titli and Surya centers.

In essence, Janani's operational strategy leverages service delivery resources that are already in place. Creating such resources would have been expensive and time-consuming. Janani is managed by a small core team that communicates effectively, and field activities are outsourced. In the long-term the organization aims to expand service delivery in Madhya Pradesh and to Chhattisgarh, UP, Uttarakhand, Rajasthan, Orissa, West Bengal and Assam. In its first nine years of implementation it is estimated to have averted 5.52 million births. In 2005 it protected 1.68 million couples, averting almost a million births. Despite the difficulties of taking products and services to interior villages, the cost of protecting a couple during 2005 was US $3.09. (Internationally the cost of one couple-year of protection is estimated to be around US $20.) About 24 percent of the total cost of the program is met by revenues.

Based on material available on the Janani Website http://www.janani.org

Elsewhere, twinning arrangements between providers and training agencies have been effective in increasing women's confidence in and utilization of services. Integration of services has also strengthened service delivery through efficient utilization of available human and other resources, notably in Pakistan's Lady Health Worker Program in which this single cadre of community-based workers provides home-based reproductive health services. The program has had a significant impact on service delivery and helped to achieve country goals for immunization and contraception. In India, the government of the state of Andhra Pradesh established a Tribal Medical Service which provides incentives such as priority in admission to post-graduate medical courses to doctors who work in tribal areas for three years after receiving their basic medical degree (Andhra Pradesh Vaidya Vidhana Parishad, 1998). This approach contrasts with that of Karnataka and Orissa, where all medical graduates are compulsorily posted to rural areas for two or three years. In some other states, to fill vacancies and reduce absenteeism, doctors are consulted on their preference of posting.

Finally, using a combination of strategies could produce lasting results. For example, in Bangladesh, a 'multi-angle approach' has been adopted to improve the quality of family planning services (Landovitz (1997) cited in Anon, 2003b). Under this project, health officials are oriented to local planning using COPE (Client-Oriented Provider-Efficient) exercises. They identify factors hindering service quality and develop and implement action plans which are reviewed monthly. At the same time, service providers are given technical, counseling and supervisory skills to make them more responsive to clients' needs and rights.

Creating an Enabling Environment

The concepts of the ICPD POA have been incorporated into the policies of all five countries. However, despite this, several key aspects of reproductive health such as a 'client-centered women-friendly approach,' delivering an integrated essential package of services, a focus on adolescents and sexuality, and reproductive rights have hardly been implemented. There is an inadequacy also of broader strategies needed to achieve reproductive health goals, such as pro-poor actions, preventive health promotion, and gender sensitization. There is a need to implement such approaches to provide an enabling environment for reproductive health care.

The reproductive health policies in place are most likely to succeed if they are supported by a wide range of stakeholders from policymakers to service providers, women's advocacy groups to grassroots organizers and client representatives. Bolivia provides an example of robust political and social commitment to improving the quality of maternal and child health care. The Ministry of Health has been implementing the Making Pregnancy Safer Initiative with WHO support, focusing on increasing comprehensive obstetric care and capacity at the first referral level. This has been supported by the adoption of national standards of care, revitalization of the epidemiological surveillance system, and development of a uniform death certificate especially for maternal deaths. The initiative will continue to focus on improving

the quality of care and ensure that services are culturally sensitive (Anon, 2003a). It was possible to implement this set of reinforcing actions on account of the high-level political support to health reforms in Bolivia.

Many developing countries have established a strong enabling environment for reproductive health through wider health sector reforms. Sri Lanka's commitment to health improvements is of long standing (Box 3.3). In India, Tamil Nadu has made rapid progress more recently in strengthening its health system, getting good results in terms of service utilization and mortality and fertility reductions, and Bangladesh is making significant strides (Box 3.4).

Collaborations with and efforts within other sectors are important to enable and achieve reproductive health goals. An example of a strategic collaboration with another sector, such as Education or Women's Development, is provided by an effort to increase health workers' awareness of gender differentials and violence against women which in turn helped to increase their sensitivity to female clients. In South Africa, a four-day training module on gender violence was introduced into the training curriculum of primary care nurses. It focused initially on exploring the nurses' own attitudes, beliefs and personal histories of violence. Popular sayings and wedding songs were deconstructed to help them understand gender stereotypes and conditioning. The training focused on their responsibilities as health professionals. They brainstormed about implementing their role in addressing domestic violence and the practical skills needed to do so. This program is expected to counter the gender violence that prevails in rural areas of the country (Kim and Motsei, 2002).

More broadly, programs to improve girls' education, empowerment and nutritional status can have profound impacts on their health. Box 3.5 discusses the importance of health services and girls' secondary schooling to Bangladesh's fertility decline. There are many examples in South Asia of integrated health and nutrition or 'women and child development' programs such as India's Integrated Child Development Services (ICDS) Program and the Bangladesh National Nutrition Program (BNNP). Other types of multi-sectoral efforts combine community nutrition with income generation or water supply to improve women's reproductive health. A program in Senegal is similar to the ICDS and BNNP and, like the latter, is a partnership involving private administration and public financing. It includes water supply provision (Ndure et al., 1999). A program in Swaziland focuses on vegetable gardening to improve the nutrition and health status of HIV-affected households by increasing their vitamin consumption, food security and incomes (Shumba, 2003).

In adopting promising practices, clearly every unit of planning should think about its specific needs and the potential to make the promising practice work locally. Interventions that are appropriate, for example, in Sri Lanka may not be appropriate in other parts of the region, and even within countries there would be significant variations. Each area would need to select approaches that would work within its social, managerial and resource environment and set

BOX 3.3 Sri Lanka's Historic Efforts to Improve Maternal Health

Modernizing Midwifery Reduced Maternal Mortality. In 1927 a Medical Ordinance in Sri Lanka called for all midwives to be registered, and the Government introduced midwifery training to modernize birthing practices in rural areas. Although suitable candidates were initially scarce (they were required to be 'respectable,' which conflicted with the low status of midwives), the scheme gradually succeeded and the number of midwives trained and employed by government increased almost three-fold between 1931 and 1938. The Government also organized midwifery services and developed maternal and infant care alongside. The state took the responsibility of ensuring that every woman had the services of a qualified midwife during childbirth. Antenatal clinics and maternity centers were set up and staffed with qualified medical practitioners, nurses and midwives. A scheme was developed to provide financial and other assistance to poor pregnant women, focusing on the antenatal and infancy periods.

Until 1940, skilled attendants assisted only about 30 percent of births. By 1950, this percentage had doubled and, currently, skilled practitioners attend 99 percent of births, the majority within institutions. Only a few per cent of births occur at primary level (Rural Hospitals and Maternity Homes); about 94 percent are almost equally distributed at secondary facilities (District Hospitals, Peripheral Units, and Maternity Hospitals) and tertiary institutions (Teaching Hospitals, Provincial Hospitals, Base Hospitals and the National Hospital of Sri Lanka).

Sri Lanka is among the few developing countries that have succeeded in reducing maternal mortality to levels comparable to those of developed countries – its maternal mortality ratio (MMR) was 23 per 100,000 live births in 2000. In the 1930s, the MMR was estimated to be over 2,000; by the 1950s it had declined to below 500. Improvements in public health, particularly malaria control, and the introduction of modern practices in midwifery, infant and maternal care receive much of the credit for this achievement. In addition, access to education expanded rapidly during the first half of the 20th century, resulting in a remarkable increase in female literacy from 8.5 percent in 1901 to 44 percent in 1946 and 71 percent in 1971. It was 89 percent in 2005. Increased gender equality and effective public investments in improving living standards also contributed.

Registration, Reviews and Referral. A strong civil registration system provided the information necessary to assess and accelerate progress in maternal health. In addition, audits of maternal death have been used by the government to identify problems in the delivery of care. Since 1970, all maternal deaths have been required to be notified to the local Medical Officer (MCH) within 72 hours. A Medical Officer of Health then visits the hospital and home and files a detailed report. A full inquiry and a meeting at the institution where the death occurred are completed with two weeks. There are also regional reviews to discuss all deaths and plan remedial measures, and finally a national review at the level of the Director of Maternal Health Services and representatives of the College of Obstetricians. A functioning referral system for obstetric care has been an important ingredient in recent MMR reductions, to which the availability of antibiotics, blood transfusion services, and family planning have also contributed. Recently, a two-way referral system for pregnant women, advanced training for providers, and involvement of the professional obgyn body in standards of care and medical education have further improved maternal survival.

What Remains to be Done. Although Sri Lanka's MMR has been about 25 since 1992, there are district variations: the conflict-affected and plantation districts have MMRs of over 50. A program to reach women on tea estates is an example of a targeted effort that needs to be expanded to ensure good quality services to all. The main causes of maternal death that have declined (during 1960-1996) are sepsis and pregnancy-induced hypertension, possibly due to improved antenatal care and skilled birth attendance. Although ergometrine and blood transfusion services are more readily available, hemorrhage and septic abortion continue to be major causes of maternal death and must be addressed.

Female Field Workers. The Public Health Midwife (PHM) is Sri Lanka's main grassroots health worker, responsible for providing family health services to a population of 3000-4000 through field visits and field clinics. She maintains an eligible women register and is expected to register all pregnant women and advise them to attend antenatal clinics. She carries out physical exams of mothers and educates them about pregnancy care, especially nutrition. Her role is to advise institutional delivery, but she assists any delivery that occurs at home. PHMs are expected to visit postnatal mothers three times during the first 10 days after delivery (though there are often delays in these visits). They are responsible for newborn care, immunization and other health services for infants and preschool children, and use a Child Health Development Record for each child. PHMs also counsel women about family planning and refer them to an appropriate service center. They sell condoms and oral pills at subsidized rates. They also register all women between 35 and 60 years and motivate them to attend 'Well Women Clinics' that screen women for diabetes, hypertension, cervical and breast cancer.

Health Services 'Free for All'. To improve health in the country, Sri Lanka introduced Health Units in 1926 to expand services in rural areas. Attention was paid to preventive and promotive activities at the community level, and especially to controlling the major communicable diseases. Each unit had a Medical Officer and a team of field workers responsible for serving the population of the area. They provided services in homes and at health centers. These units remain the main health service organization today. Higher-level facilities had specialist services and served as referral centers. While field services were expanded, institutional facilities were improved, from Rural Hospitals at the lowest level to General Hospitals at the top. Geographical access to these was facilitated by good road networks, and economic access was enabled by free services for all. In Sri Lanka now, maternity care including surgery and blood transfusion is available free to any woman in the country.

Decentralized Management. In Sri Lanka, the Central Ministry of Health (MOH) is responsible for establishing policy, training health personnel (except Medical Officers who are the responsibility of the Department of Higher Education), managing teaching and specialized medical institutions, and bulk purchasing of medical equipment and supplies. Responsibility for policy, planning and monitoring reproductive health lies with the Family Health Bureau (FHB), a unit of the MOH. In 1987, management of other health services was devolved to the Provincial Councils – now nine Provincial Directors of Health Services (DHS) are responsible for implementing RH programs. Below them are 26 Deputy DHS, each responsible for a district, and 265 Divisional DHS, responsible for the current equivalent of the Health Units. All directorates are responsible for providing comprehensive health services (including preventive and promotive care) to the population of their administrative unit. The divisional units are staffed by a Medical Officer of Health and several field staff, including Public Health Nursing Sisters, Public Health Inspectors and Public Health Midwives.

At the district level there is a Medical Officer for MCH (MO-MCH), who may be a specialist. In 2000, there were almost an equal number of PHMs and MOs (including women MOs) in this system – 38 and 41 per 100,000 people, respectively.

The decentralization of health management in Sri Lanka presents a mixed picture. Decentralized responsibility has not been accompanied by commensurate provision of finances, and even human resources under the control of the provinces and lower levels are inadequate, especially for planning, management and monitoring. The MOH continues to manage the posting and career development of doctors. HR practices and information systems require strengthening.

Sectoral Interactions. Sri Lanka's health and demographic successes are widely attributed to its combination of health and education policies and programs, and to the status of its women. Education was free and available to women, and women's education and empowerment had positive effects on their use of health services. Along with food subsidies and supplementation programs, health care improved their nutrition. Family planning also made an important contribution to women's health. In the 1950s, the Family Planning Association of Sri Lanka spearheaded efforts to make barrier methods available through clinics and to train doctors in family planning. Family welfare activities were carried out along with antenatal and postnatal care, contraceptives were distributed free, and mass media were used for education. In addition to birth spacing and family limitation services, subfertility services were also provided. From the 1960s, family planning services were integrated with MCH programs and widened to include oral contraceptives, condoms, and IUCDs. Male and female sterilization were introduced in the 1970s. Family planning services provided by the Government are complemented by the efforts of four major NGOs and other private sector provision. A social marketing program provides oral contraceptives and condoms through 8000 outlets in the country. Counseling and choice are hallmarks of the program. Currently, injectables are the most popular modern method, followed by oral pills, IUCDs, condoms and sterilization. Incentives are paid to medical teams and clients for sterilization. Education assisted the spread of contraception and rise in the age at marriage, both of which achievements contributed to the declines in maternal and infant mortality, and helped Sri Lanka to reduce fertility to replacement level by 2001. This gain has eroded recently with a rise in the TFR to 2.4 in 2006-07.

Efficient Spending. Sri Lanka achieved its health improvements with relatively low spending. Analysis of public health expenditures shows that total government spending on health care was about 1.8 percent of GDP, with maternal health accounting for 0.23 percent. There has been a declining trend – government expenditure fell to about 1.5 percent of GDP in the 1990s, and further to about 1.2 percent after 1999. (During the period 1996-2001, public spending on health accounted for about four to five percent of total government expenditure.) About 50 percent of total health expenditure in Sri Lanka is public, and an equal amount private. Hence, total health expenditure (including out-of-pocket and insurance payments) has been about 3.0 to 3.5 percent of GDP since 1990. Some of the private out-of-pocket expenses are incurred on use of public facilities (e.g., for transport, prescribed drugs, and patient attendants). The remainder is largely fees for out-patient services in the private sector – private practitioners contribute about 50 percent of 'first-contact' curative care, including RH services. Only six percent of deliveries take place in private hospitals, which are largely in urban areas – about 70 percent in Colombo alone. The private sector provides some sophisticated services (such as *in vitro* fertilization) which are not available in the public sector.

BOX 3.4 Health Sector Reforms in Tamil Nadu (India) and Bangladesh

India. Tamil Nadu has made rapid progress in different aspects of health care – policy, facilities and logistics, human resources, information, legislation, quality assurance, financing and outcomes. The Government has introduced several innovative practices and reforms to strengthen the state's health infrastructure and human resources, improve quality of care and expand public-private partnerships. For example, nurses are hired on contract to provide round-the-clock delivery care, and private anesthetists and obstetricians are engaged to bridge staffing gaps in the public sector. Improved accommodation for health staff and continuous monitoring have helped to reduce absenteeism, a major hurdle in service delivery. Transfers and postings are rationalized to ensure that specialists are available within the public system. Selected Primary Health Centers (PHCs) are provided additional facilities and personnel to run on a 24-hour basis. Members of Parliament and the State Legislative Assembly are encouraged to utilize their development funds to improve primary health facilities in their constituencies. In order to increase mobility of village health nurses posted at Sub-Centers, loans are provided to help them purchase two-wheelers. A visitor's fee of Rs. 5 has been introduced at government Medical College Hospitals and District Hospitals, and the funds are utilized to maintain the facilities. Hospitals at the *taluka* level and below are exempt from this.

A pioneering effort has been made to streamline drug supplies to all health facilities. The state has had an efficient procurement and distribution system in place since 1994. The Tamil Nadu Medical Services Corporation (TNMSC) was set up to purchase, store, distribute and control the quality of drugs. Through centralized procurement, the Corporation has been able to obtain price advantages and optimize public resources. It maintains 23 drug warehouses, each responsible for meeting the drug requirements of all the health facilities in its service area. The facilities indent for drugs on a prearranged schedule, and the entire operation is computerized and monitored on a daily basis. Steps have been taken to train doctors in the rational use of drugs.

Comprehensive norms have been adopted to standardize the distribution of human resources and services in all health institutions. To strengthen the Health Management Information System (HMIS) and its utilization, Tamil Nadu has developed two types of systems – one to monitor institutional services and the other to monitor outreach and program-related services. These are operated in an integrated manner and capture data, analyze and prepare reports from the block level. Recording and reporting tools have been simplified – importantly, the number of registers maintained by Sub-Centers has been reduced from 21 to seven! The Government has handed over ambulances to NGOs or communities to improve emergency transport. In its ongoing health sector reforms, Tamil Nadu is addressing issues related to resource allocations, integration of primary and secondary care, equitable access to services, referral, public-private partnerships, and the utilization of available information.

Bangladesh. The Government is making an Essential Services Package (ESP) including reproductive health, child health, communicable disease control, limited curative care, and behavior change communication available at the community level. The key monitoring indicators for this effort include reproductive health indices such as maternal mortality, infant mortality, under-five mortality, age of women at first birth, unwanted fertility and total fertility. An important aim is to increase the proportion

of deliveries conducted by trained personnel through a network of Emergency Obstetric Care facilities. The availability of goods and equipment has been improved, and timely distribution of health and family planning materials has increased substantially. In order to achieve cost-effective and client-focused delivery of the ESP at the *Upazilla* level and below, the program is delivered through health and family planning workers under a single manager. At the community level, the services are provided from a fixed Community Clinic. The construction of community clinics involves the communities themselves. They then own the structures and take some responsibility for clinic operation. These strategies have helped to increase access, but there remains a need to cover the poorest and most vulnerable groups through targeting and initiatives to reduce out-of-pocket expenditures. The ongoing multi-donor assisted Health and Population Sector Program includes activities in these directions.

BOX 3.5 Bangladesh's Fertility Decline and the Role of Education

Fertility Decline. Between 1971-75 and 1994-96, Bangladesh almost halved its total fertility rate (TFR) from 6.3 to 3.3 births per woman. Contrary to experience in most other parts of the world, this occurred at fairly low per capita income levels (US$270 in 1997), high infant mortality (82 per 1000 live births in 1996-97) and low life expectancy (58 years in 1997). Family planning programs have been given a large part of the credit for this change because it was made possible by increased contraceptive use (50 percent of all couples in 1994-96). Socio-economic developments also underlie the decline (Cleland et al., 1994; Caldwell et al., 1999). During this period, schooling of both boys and girls increased substantially. Girls' primary school enrolment rose from below 50 percent in the mid-'80s to 100 percent in the early '90s. Subsequently, secondary school enrolment also increased due to motivation and incentives provided by the Government (see below). Urbanization was rapid during this period, and rural areas developed through improved water supply and electrification. Changes also occurred in land and agricultural patterns, and farm and off-farm employment of men, women and children. As additional sources of income became available to poor households, particularly the landless, children were freed to attend school. The adoption of family planning at the household level was found to be related to declining expectations of 'support from the land,' increased economic choices and a desire to invest in health and education.

While the climate within which family planning acceptance takes place is surely critical, health service factors also play important roles. Between 1978 and 1997, family planning services and counseling were provided through Family Welfare Assistants (FWAs) throughout Bangladesh. This 'doorstep delivery' increased contraceptive awareness, use and continuity considerably. It also reduced dependence on sterilization. Although overall use of oral pills increased, it declined where injectables were made available. Where contraceptives are readily available, the incidence of abortion is also believed to be lower than in poorly-served areas.

Some shortcomings in the program, however, included the lack of other reproductive health care (health and family planning were under separate departments in the government ministry), and inadequate training, supervision and management affected the quality of the program. Some FWAs tended to neglect the poor and focused on better-off women, and men were also neglected in this approach. Some observers argued that doorstep services reinforced women's seclusion, while traveling

to clinics could increase women's mobility and autonomy. For these and other reasons, and due to cutbacks in donor funding for the large force of FWAs, the Government stopped domiciliary services in 1997. The FWAs were placed in 'satellite clinics' at the sub-district level to provide basic health and family planning services.

Between 1993 and 2004, Bangladesh's TFR declined very slowly from about 3.4 to 3.0. Some suggest that this was directly related to deterioration in the effectiveness of the family planning program (Islam et al., 2002). Not only was the advocacy and availability of contraceptives 'proximal' to Bangladesh's early and rapid fertility decline, but changes in deployment and management of the main contraceptive providers, the FWAs, may have resulted in a slowing down of the program. Although the deceleration of fertility decline had started by 1994, before the shift to fixed facilities, the lack of doorstep services may have led to women discontinuing use and reduced contraceptive uptake. Inadequate quality at clinics and lack of integration of services constrained women's use of them. Doorstep delivery was fortunately reinstated in 2003. This experience has important lessons for women's reproductive health care throughout South Asia.

The Role of Female Secondary School Assistance. The educational attainments of women in Bangladesh were among the lowest in the world – in 1991 only 20 percent could read and write. During the early 1990s, gender disparity was most significant in secondary education – only one-third of students enrolled in secondary schools were girls, and the number of girls completing secondary school was less than half the number of boys. Unlike primary school, secondary education requires payment of tuition fees in Bangladesh. Other costs such as transportation, books, uniforms, school supplies and examination fees have also to be met by families. In a culture where daughters are considered economic liabilities, many parents are not willing to make these investments in girls' education.

In its Fourth Five-Year Plan (1990-95), the Government of Bangladesh set a goal to raise female literacy from 16 to 25 percent. The Plan included an initiative to provide stipends to girls attending secondary schools, aiming to increase their numbers and to encourage them to go on to participate in other socio-economic development efforts. In 1994, the World Bank began supporting the government's stipend program under the Female Secondary School Assistance Project in 118 *thanas* where income, female literacy and girls' school attendance were especially low. The Bank contributed US$68 million in IDA funds to the total project cost of US$88.4 million. The program was subsequently expanded nationally to 460 rural *thanas* with assistance from the Asian Development Bank and the Government of Norway.

Under the program, stipends are available to girls as they progress from Grade 6 to 10. They cover tuition, examination fees, and an increasing proportion of other fees, textbooks, school supplies, uniforms, shoes, transport and kerosene for lamps, offsetting the increasing educational costs. This responds to the need for a larger incentive to reduce dropout in higher grades. The project is reaching out to the poorest families, providing them the incentives to keep daughters in school. Schools are also given bonuses to attract girl students. To reduce the supply constraint (i.e., the limited number of school places) the Government also funds the program in private schools. The project is also increasing the number of secondary school teachers, particularly women; providing vocational skills to girls who are about to graduate; making schools healthier and safer for girls and more attractive; and strengthening government institutions for secondary education.

As a result of the program, enrolment has increased markedly – there are now more girls in secondary schools than boys. In 2004, almost 49 percent of 15-19 year-olds had acquired secondary schooling compared to 32 percent in the 20-24 year cohort and 20 percent in the 25-34 age-group. Although the program has yet to achieve quality goals and to address the problems in urban areas, it is beginning to have an impact on fertility and malnutrition. While the TFR is over 3.5 among women with no education in all income quintiles, and between 2.5 and 3.2 among those with primary education, it is between 1.5 and 2.3 among those with secondary schooling. The two richest quintiles have a higher TFR than the two poorest, suggesting that those families that can afford children have them, while poor households limit their numbers more when they are educated. This may be because the opportunity costs of bearing and raising children are higher among poor women who are educated. The use of contraception is 10 percentage points higher among women with primary education and 18 points higher among those with secondary education, compared with uneducated women. Stunting is 17 percentage points lower among children of mothers with secondary education.

Improvements in education lead to lower desired family size. Based on trends, about 60 percent of girls in Bangladesh would have completed secondary school by 2015 and an additional 30 percent would have completed primary school. This would reduce the TFR from the current 2.9 to 2.4, and child stunting from 47 percent to 33 percent, close to the country's MDG targets for 2015. International experience shows that raising female literacy and school enrolment helps to reduce infant mortality as well, and increases income-earning potential and economic productivity. The path between increased female education and improved reproductive and child health requires the availability of good reproductive health services in order for the changing aspirations in family size, child survival and 'quality of children' to be met.

Based partially on World Bank (2002) and el Zayed et al. (2005).

realistic goals for their achievement. Thus, promising practices are best implemented within the decentralized planning framework described earlier. To show that appropriate practices can be identified and materials about them prepared and used in DAP efforts, Table A7.1 in Annex 7 provides a suggestive list of practices that address some of the priority issues identified in South Asian countries. Many of these innovations have already been piloted and tested in South Asia – the list focuses on interventions that would be beneficial if thoughtfully replicated and scaled up. Many other good practices are known, details of which can be obtained through the sources mentioned in the endnotes.

Moving Forward in South Asia

Chapters 1 and 2 discussed reproductive health in the five south Asian countries, recognizing the geographical and social variations within each. While the overall recommendations for improving reproductive health were mentioned briefly in those chapters and are described further in Chapter 5, this chapter focused on how reproductive health care can be improved 'where the rubber hits the road,' i.e., where planning and implementation take place. The focus on decentralized action planning is not intended to start a debate on the merits of

'bottom-up' vs. 'top-down' planning – both are necessary in large and complex countries. The DAP process can help to sort out what is planned which way, and how implementation is made more effective.

Using the DAP method, each unit of health planning can take heed of its differences from the average or the norm, and direct its resources and efforts to improve its performance. Decentralized action planning is a significant step toward evidence-based decision-making and policy which are much-needed in South Asian countries. It is a process that:

- uses available local data and evidence of what works;
- adapts and expands these experiences in appropriate and manageable ways;
- checks what is succeeding through monitoring and evaluation; and
- improves implementation as well as data collection, focusing on what is needed and useful to plan and make improvements and achieve better outcomes.

The DAP framework facilitates appropriate use of 'promising practices,' 'lessons learned' or 'best practices' (following the Advance Africa taxonomy) as it can both 'do with learning' (i.e., plan on the basis of evidence) and 'learn by doing,' as conscientious use of DAP entails a cycle of planning, doing (implementation) and learning (M&E). In this way DAP can help to make better use of resources, and obtain additional resources on the basis of local or higher-level decisions facilitated by evidence of success.

The DAP approach suggests strongly that change must come from those involved (in this case, primarily the providers and managers of health services) through a better understanding of what they are trying to achieve, for whom, and how; and through their capacity development and empowerment by participation in decision-making and resource allocation. Such change is fundamental to improving poor women's access to quality reproductive health care. More and better reproductive health care – 'scaling up' – will require intensive and extensive collaboration between program decision-makers, implementers, communities and professionals. DAP actively promotes such collaboration, involving horizontal reaching-out at every level at which it is practiced. A key feature of DAP is the sharing of power by decision-makers. Senior officials guide and facilitate (rather than control) staff and others by showing their willingness to adjust policies, rules and resources to achieve agreed (shared) and reachable goals.

The five countries in which the DAP method was piloted are at various stages of decentralizing health management and implementation. They either need or are in the process of developing decentralized planning methods to produce need-based health plans. Sri Lanka has already made the DAP method described above an integral part of its District Health Plan initiative under the Health Sector Development Program; in India this specific approach has been used in the states of Maharashtra and Orissa. Health sector reforms offer the opportunity to institutionalize DAP to improve implementation with the involvement of all stakeholder groups

and to build capacity among district health managers and decision-makers for better planning, resource allocation, management and results.

Recently, India has begun a widespread process of decentralized planning under the Reproductive and Child Health Program and National Rural Health Mission (Box 3.6). It aims to improve equity in access to health services through local-level planning and resource allocation, which are also focused on the key reproductive health goals of reducing maternal and child mortality. Thus, it will be of great interest to all those concerned with improving poor women's reproductive health in South Asia.

BOX 3.6 India's Rural Health Mission and Reproductive and Child Health Program

In April 2005, India launched a **National Rural Health Mission** (NRHM) to provide health care more effectively to rural people throughout the country, especially in 18 states with poor public health indicators and inadequate health infrastructure. Improving access to, utilization and quality of health services are key aims of the Mission, which also emphasizes the equity and gender dimensions of health care. The main objectives of the NRHM are to reduce child and maternal mortality, prevent and control communicable and non-communicable diseases, and stabilize the population, achieving gender and demographic balance. The second phase of the **Reproductive and Child Health Program** was launched at the same time and subsumed into the NRHM. It focuses on reducing the IMR, under-five mortality rate, MMR and TFR, with state and district plans directed at achieving local goals in these areas.

Strengthening the Health Structure. The NRHM aims to 'undertake architectural correction' of the health system to improve public health management and service delivery. The vertical health and family welfare programs will be integrated. Comprehensive primary health care is to be provided. Women health activists called ASHAs are expected to 'organize the demand side' and promote use of health care. There is also a focus on strengthening Sub-Centers by increasing the number of ANMs, human resource development, quality standards, community support and an 'untied fund' to support local actions. PHCs will be similarly improved, and 30- to 50-bedded CHCs brought up to Indian Public Health Standards to provide better curative care. NRHM is placing long-overdue emphasis on human resource improvements including locally-resident workers, contractual positions, multi-skilling, career development and transparent policies.

Promoting Institutional Delivery. An important intervention under NRHM is the *Janani Suraksha Yojana* which aims to promote institutional delivery and thereby reduce maternal and neonatal mortality. Women who complete three antenatal visits, two tetanus toxoid injections, and deliver in an institution receive cash payments for these. ASHAs who accompany women to institutions for deliveries also receive cash incentives.

Traditional Health Systems. One of the cornerstones of the program is the promotion of local health traditions including Ayurveda, Yoga, Unani, Siddha and Homeopathy (AYUSH). The NRHM aims to mainstream these systems into public health care.

Decentralization. Decentralized management of public services is a core strategy of the Mission. Each district has a District Health Mission (DHM), and the states have a State Health Mission. District health action planning (DHAP), has been started through participatory and 'bottom-up'

processes to make plans more responsive to local needs. It includes a situation analysis of the district, formulation of objectives, identification of interventions, a work plan and budget, and an M&E plan. The DHAPs will be appraised and approved at the state level. Following this, each district will develop its own plans for Training, BCC, and Logistics in keeping with its health plan, and each health facility (Sub-Center, PHC and CHC) is expected to develop its own service delivery plan on the basis of the approved DHAP. Village health plans are also to be prepared by the Village Health Committees of Panchayats, the local self-government institutions.

Facility-based health management committees (*Rogi Kalyan Samitis*) are also expected to play a greater role. The DHMs are responsible for overseeing implementation of the DHAPs. 'Funds, functions and functionaries' are to be transferred to the Panchayati Raj institutions (PRIs). Capacity enhancements are planned for the PRIs to control and manage public health services. These mechanisms are collectively expected to address the problems of intra-district and intra-state disparities.

Attention to Determinants of Health. District planning and management are expected to foster greater attention to the determinants of health and coordination across government departments concerned with nutrition, drinking water, sanitation, and efforts to improve the status of women. The program aims to universalize access to public food, nutrition, sanitation, immunization and health services, and to activate adolescent girls' and women's groups.

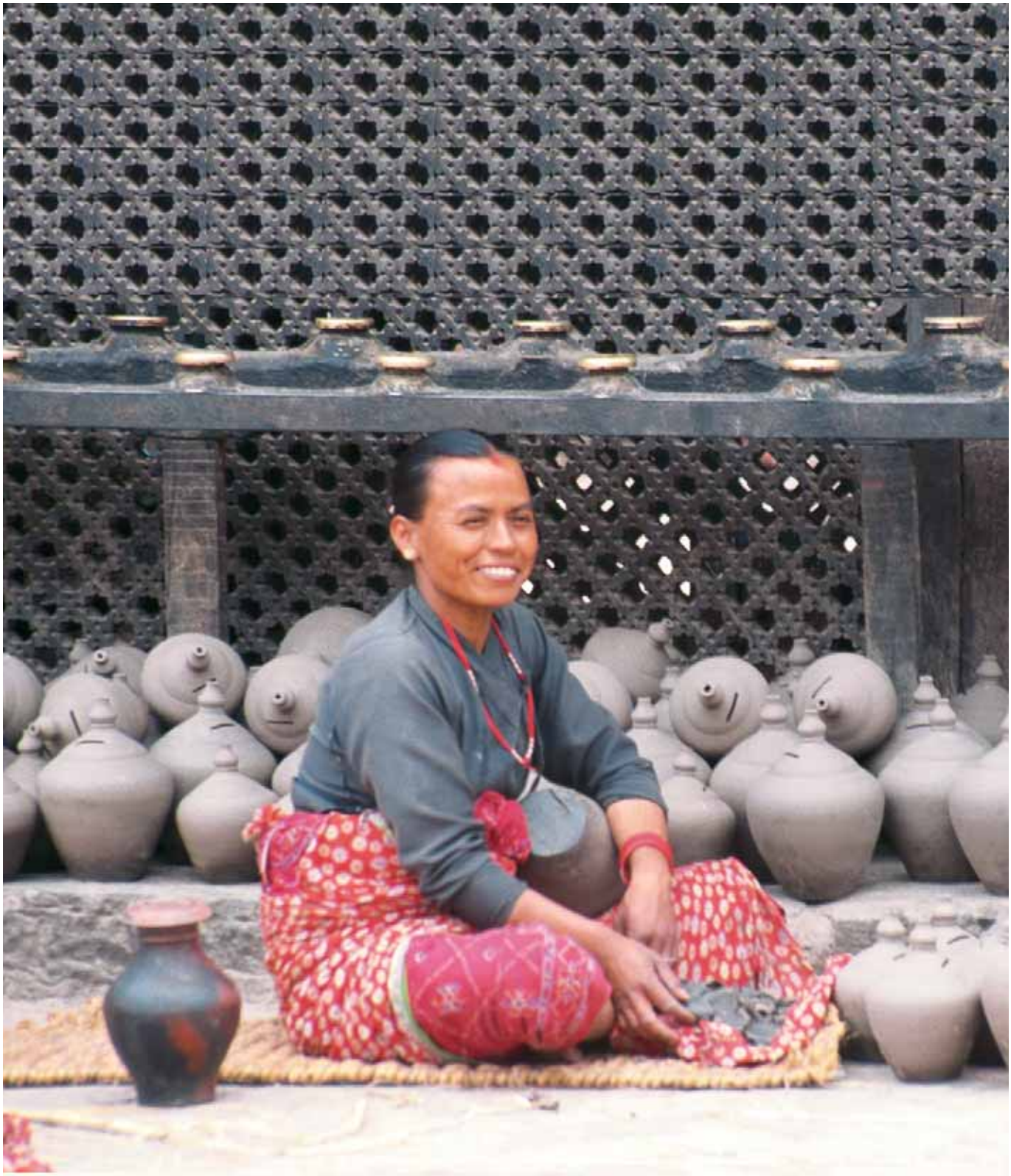
Health Spending. The NRHM plans to increase public spending on health from India's current 0.9 percent of GDP to two to three percent, including community financing and risk pooling. Health care is expected to become more affordable to the poor. The non-profit health sector is to be promoted especially in underserved areas. Allocations of RCH/NRHM funds to the states are done on the basis of population, with additional weight given to more needy states. States have the options of allocating equal shares to districts, or providing them funds on the basis of socio-demographic criteria to improve equity, or on the basis of need.

Accountability. The goals of NRHM are 'time bound' and its processes transparent. Data collection will be strengthened and data used for planning as well as for progress monitoring against standards and goals. The program is expected to report publicly on its progress.

As action planning is not a one-time activity, the DAP method needs to be institutionalized and used on a continuous basis to improve the performance of the health system, while simultaneously augmenting resources, to bring about better outcomes for poor women. Identifying relevant and feasible actions is critical and the process is at once a strategy for communication, innovation and diffusion of successful efforts. Local people know the social, political and economic context best to decide what innovations may work. The pool of promising practices relevant to South Asia provides a basis for this but needs to be strengthened continuously, including information on how changes have been made in the health system. The several existing initiatives could help this process but it is important for South Asia to develop its own database of promising practices based on local experiences. This would be a useful and exciting beginning to a regional effort to improve the reproductive health of poor women.

NOTES

1. There have been several reviews of global best practices in reproductive health, notably those by Gelband et al. (2003), Lule et al. (2003) and Nanda et al. (2005) which focus on maternal health. While the first two summarize the impact of various interventions, Nanda et al. also provide two-page summaries of 39 promising approaches. The selected practices cover most technical areas of maternal health and range from needs assessment to monitoring; the enabling environment to community-based approaches, communication and capacity building; and several aspects of health sector reform including accreditation, financing and partnerships.
2. Many clinical practices in reproductive health have been scientifically tested and systematically reviewed. The Cochrane Review Collection contains several relevant reviews of the evidence for clinical interventions in all areas of reproductive health. The WHO Program to Map Best Reproductive Health Practices covers evidence-based obstetric interventions. The Better Births Initiative, a related effort, seeks to promote proven beneficial practices related to maternal health. Advance Africa, a project sponsored by USAID, documents reproductive health interventions and program models that have had measurable impact. The database developed as a result includes information on lessons learned and the program context to help program managers elsewhere apply the practices. The Implementing Best Practices Consortium Initiative assists reproductive health program implementers to enhance their program's effectiveness in a variety of ways. For example, the Consortium assisted Jordan to decide on a single reproductive health training curriculum for counseling, and a program for health care providers to avoid duplication (Shears, 2003). The MAQ Exchange is another effort to share the wealth of new information, data and lessons on improving access and quality.
3. Reproductive Health Outlook (http://www.rho.org) has many other examples of successful or promising practices related to enhancing demand for reproductive health care among adolescents and families.



Improving women's economic status would increase their access to health care.

CHAPTER 4

FINANCING REPRODUCTIVE HEALTH FOR POOR WOMEN

South Asia faces significant challenges in organizing its health institutions and financing to ensure sufficient resources, improve access to and equity in health care, and protect people – especially the poor – against health shocks. Significant improvements in reproductive health outcomes in South Asia will be realized only with larger and more effective investments in health services, oriented to benefit poor households currently facing the greatest constraints to service use. This chapter presents new analyses of the level and allocation of financing of reproductive health care in the five South Asian countries, and highlights several 'points to watch' as decision-makers assess various financing options. Four findings stand out:

- *Across the countries of the region, per capita spending on reproductive health services delivered through the public sector is not correlated with health outcomes. This suggests that in at least some areas there is significant room to increase the efficiency of spending with respect to outcomes.*
- *In most countries a large financing burden falls on households. In the absence of effective risk-pooling mechanisms, the poor are disproportionately affected. As financial barriers limit the use of preventive services and/or lead to delays in seeking medical attention, this contributes to poor health outcomes.*
- *The priorities of donors and governments are poorly aligned, hindering implementation. Both need to focus squarely on supporting the essential package of reproductive health services. In particular, while donors have focused on support to family planning services, the greatest share of the financing burden on households has been in the area of maternal services. This is an important area in which greater spending is required to achieve improved outcomes – donors need to increase their investments and national governments need to increase their investments even more.*
- *Creative approaches to using general revenues that are spent on reproductive health, such as demand-side financing, and greater contributions of the private sector to the health of poor women, possibly through partnerships, could help improve outcomes.*

Important data limitations affect our ability to make definitive statements about financing patterns. Comprehensive National Health Accounts and breakdowns, including private spending, were available only for Bangladesh, Sri Lanka and the Indian state of Rajasthan, thus limiting the analysis of private

and total spending. Estimates of public financing were compiled for all countries, but a detailed comparison of Pakistan with the other countries was not possible because of accounting inconsistencies.

The chapter is structured as follows. The policy context is described briefly. The next two sections deal with resource mobilization and resource allocations for reproductive health care. The last section deals with financing options and emphasizes the issues that need to be considered in selecting among them to increase the supply of reproductive health services and improve outcomes in South Asia.

The Policy Context

In South Asian countries, the public health sector provides free or highly-subsidized health care funded from general revenues (supplemented to varying degrees by grants from bilateral donors and/or credits from international financial institutions). Whether funding is from national or sub-national sources varies by country.

In all countries, private out-of-pocket financing plays an important role. User fees are levied on services at many public facilities (except in Sri Lanka), typically with exemptions for low-income patients. However, in several countries, informal payments are rife, even for the poorest patients. Social insurance mechanisms have not been of major importance (notwithstanding a scheme that covers formal sector workers in India). Thus, private spending is primarily out-of-pocket expenditure, which is least desirable from an equity perspective.

In all five countries, a variety of changes are underway in health sector financing and organization to support expansions in quantity and quality improvements in health care. In Nepal, for example, government policy has focused on three areas: privatization, use of community schemes particularly with respect to essential drugs, and income generation at public facilities. In India, financing reforms at the state level have included the introduction of user fees, setting up 'autonomous bodies' to manage public hospitals, various types of public-private contracts, and health insurance schemes.

Although the region has reconceptualized reproductive health care after the ICPD, institutional constraints have impeded implementation. Among these, the continued separation of organizational structures for MCH-Family Planning, general health services and nutrition not only affects integration of service delivery and management but also results in inefficient allocations of scarce public resources and, most likely, increased out-of-pocket spending. To date, only limited attention has been devoted to addressing demand-side barriers to improve utilization of key reproductive health services. The few schemes that exist, such as the *Janani Suraksha Yojana* in India, are experiencing teething problems and their outcomes have yet to be established.

Within these contexts, Sri Lanka's long-standing policies for maternal and child health are noteworthy. The country has put a strong emphasis on motivating women to obtain institutional

care for delivery as well as for treatment of infections at the same facilities. Investing simultaneously in its preventive network, it has achieved efficiencies by ensuring that PHMs cover all the relevant target groups in their areas, including adolescents. As the country's age structure has changed, older women can seek care at Well Women Clinics established since 1996. Sri Lanka's investments in health have been more efficient than in the other countries and egalitarian, protecting the poor from the costs of inpatient services and keeping levels of private spending relatively lower, especially for reproductive health.

Resource Mobilization for Reproductive Health

A picture of resources currently mobilized for reproductive health is provided by public and private spending on these services. New estimates of expenditures on reproductive health care were developed for this study.[1] The reproductive health services covered include maternal health (ANC, PNC and dietary supplementation), childbirth (delivery, care of pregnancy complications, and abortion), infant care (immunization, micronutrients, growth monitoring and health care), family planning (including goods and services, counseling and IEC), prevention and control of RTIs/STIs including HIV/AIDS, and other personal reproductive health services for women (all obstetric and gynecological services).[2] In the case of integrated services, the estimates include the relevant shares of program overheads, supporting infrastructure and other non-service delivery expenditures.

Differences in the data available for each country result in some variations in the methods used to analyze public (including donor) and private expenditures on reproductive health. Details of the methods used for each country and the assumptions made are presented in Annex 2. For example, Bangladesh and Sri Lanka have National Health Accounts (NHA) enabling direct computations; for the Indian states of Andhra Pradesh and Rajasthan, it was necessary to use a combination of NHA-based methods and private expenditure data from the National Sample Survey. In Nepal, data on private expenditure were not available, while in Pakistan, government data were incomplete. The details of the household surveys that provide out-of-pocket expenditure data also vary across countries. While public expenditures could be analyzed by service components in five locations (excluding Pakistan), private spending could be disaggregated only in Bangladesh, Sri Lanka and Rajasthan. Hence, comparisons between the countries/states are made cautiously, mindful of these variations.

Total Spending

Estimates of total (public and private) expenditures on reproductive health are only presented for Bangladesh, Sri Lanka and the Indian state of Rajasthan. As a percentage of GDP they vary considerably between Sri Lanka (0.3 percent) and Rajasthan (1.3 percent), mainly due to differences in private spending.[3] As a share of total health spending, reproductive health spending varies in a similar way – from 10 percent in Sri Lanka to 21 percent in Rajasthan.

Public Expenditure

Public sector health expenditure as a share of GDP is high in Sri Lanka and Rajasthan, but relatively small shares are allocated to reproductive health (Table 4.1). Despite its low expenditure, however, Sri Lanka provides near universal access which supports high utilization of reproductive health care. Another Indian state, Andhra Pradesh, has lower overall health expenditure as a share of GDP, but spends a much larger share on reproductive health. Bangladesh and Nepal also allocate over a quarter of public sector health resources to reproductive health services.

TABLE 4.1 Public Sector Expenditure on Health and Reproductive Health in South Asia

	Bangladesh 2000-01	India: Andhra Pradesh 2000-01	India: Rajasthan 1998-99	Nepal 1999-00	Sri Lanka 1997
Total Health Expenditure (Constant 2000 US $ millions)	332	266	188	47	252
Total Reproductive Health Expenditure (Constant 2000 US $ millions)	88	111	28	13	39
Health Expenditure as a Share of GDP, percent	0.8	0.9	1.7	0.9	1.6
Reproductive Health Expenditure as a Share of GDP, percent	0.2	0.4	0.3	0.2	0.2
Reproductive Health Expenditure as a Share of Total Health Expenditure, percent	26	42	15	28	16

Private Spending

Household resources spent on both health and reproductive health as a share of national or state income are significantly larger in Bangladesh (2.6 and 0.4 percent) and Rajasthan (4.2 and 1 percent) than in Sri Lanka (1.6 and 0.1 percent) (Table 4.2). Although public and private health expenditures as shares of GDP are roughly the same in Sri Lanka, private *reproductive* health expenditure is half that of public, reflecting the greater degree of support provided by the state for reproductive health – an outcome of its policy emphasis on maternal and child care that began early in the 20th century. In Rajasthan, private reproductive health expenditure is more than three times public expenditure. Indeed, in most parts of the region, the levels of out-of-pocket spending on essential health care (relative to public investments) are cause for concern, particularly given the barrier that this can create in the health-seeking behavior of poor households.

TABLE 4.2 Private Expenditure on Health and Reproductive Health in South Asia

	Bangladesh 2000-01	India: Rajasthan 1998-99	Sri Lanka 1997
Private Health Expenditure (Constant 2000 US$ millions)	1,055	462	257
Private Reproductive Health Expenditure (Constant 2000 US$ millions)	144	111	13
Private Health Expenditure as a Share of GDP (or State GDP), percent	2.6	4.2	1.6
Private Reproductive Health Expenditure as a Share of GDP (or State GDP), percent	0.4	1.0	0.1
Private Reproductive Health Expenditure as a Share of Total Private Health Expenditure, percent	13.6	24.0	4.9

Public-Private Financing Mix

Overall resource mobilization for reproductive health as a share of national resources is inversely related to the level of public financing. For example, the lowest level of reproductive health spending is in Sri Lanka which has the highest proportion of public funds, and the highest overall spending is in Rajasthan, with the largest private funding mix. Since households pay for both private spending (directly out-of-pocket) and public spending (indirectly through taxes), the financing strategy that would be least burdensome for households is likely to be that which involves the most extensive risk pooling.

Inter-Country Comparisons of Public Expenditure Per Capita

When standardized, the levels of public sector reproductive health expenditure per capita vary somewhat among the five countries.[4] Expenditure in Andhra Pradesh (US$ 2.5) is greater than in Sri Lanka (US$ 2) and the other countries (around US$ 1.5). However, these variations could not account for the differences between countries in service delivery levels and reproductive health outcomes. Instead, they suggest that efficient use of financial resources can achieve better outcomes. Sri Lanka has better reproductive health than the other countries not because it spends more but because it uses a similar level of finance more efficiently and equitably.

The standardized private expenditures reinforce the conclusion made above and in the preceding section. The burden on households with reproductive age women in Sri Lanka (US$ 0.6) is substantially lower than that in the other countries (US$ 2.7). It appears that Sri Lanka's stronger public sector effort, including higher efficiency, considerably reduces out-of-pocket contributions by households for reproductive health.

Donor Assistance

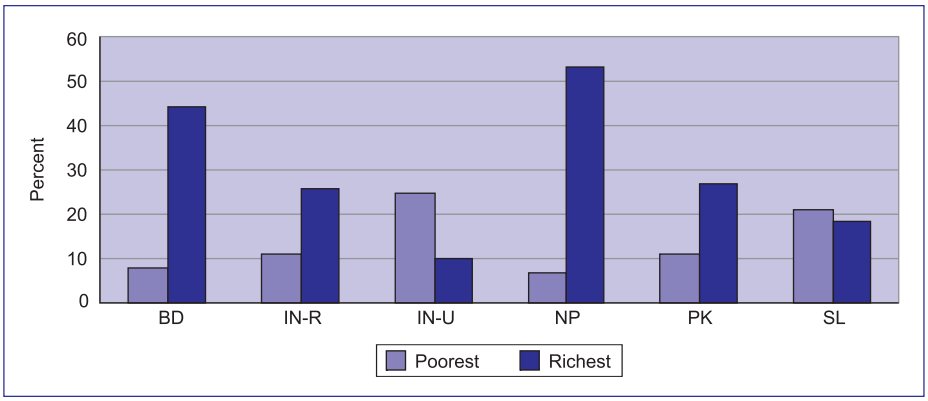
Donor support to reproductive health varies greatly across the region – from three percent of public reproductive health expenditure in Sri Lanka to around 30 percent in Bangladesh and Rajasthan and 65 percent in Nepal.[5] In India as a whole, a large proportion of public expenditure on reproductive health is funded by international agencies. For instance, in 2001-02, two-thirds of the estimated US$ 228 million of Family Welfare spending by the Central Government was met from external funds (GOI-MOHFW, 2002).

In Pakistan, donor support to the Population Welfare program has declined over time and, over the past decade, the program has relied largely on government funding. Donors, however, continue to finance the two major social marketing agencies that distribute more than two-thirds of all condoms and one-third of oral pills in the country. Foreign assistance as a proportion of public health sector allocations has varied between four and 16 percent during the period from 1998-99 to 2004-05.

Who Benefits from Public Reproductive Health Spending?

Severe data inadequacies introduce difficulties in estimating reproductive health expenditures at sub-national levels. In Bangladesh, India and Sri Lanka, household surveys have the necessary data, but the sample sizes of those reporting reproductive health expenditures at the provincial/state or district levels are too small to permit meaningful analyses. Therefore, only quintile analyses of the national samples were attempted. The distribution of use of services is an acceptable proxy to assess how well public resources are targeted at poor users. The data indicate that the richest quintile of women obtain a disproportionate share of institutional deliveries at government health services in most South Asian countries (Figure 4.1). The exceptions are urban India, where the distribution is progressive as richer women have more

FIGURE 4.1 Distribution of Deliveries in the Public Sector, Poorest and Richest Quintiles, various years, percent



private sector alternatives, and Sri Lanka where institutional deliveries are near-universal. The distributions of other reproductive health services presented in Chapter 2 demonstrate a similar pattern. These data suggest that public resources need to be targeted more efficiently at the poor and/or that governments need to achieve universal coverage with essential health services.

What Resources are Needed for Reproductive Health?

The ICPD POA contained estimates of the resources required to provide basic reproductive health services, covering family planning, ANC, delivery, PNC, abortion, STI treatment, IEC, treatment of infertility, and some capacity building. However, resources required for emergency obstetric care, child survival programs, broader STI programs including HIV/AIDS, and strengthening primary health care delivery systems were not included. Subsequently, the UN Millennium Project estimated the resources required to achieve the health MDGs (among others) at the country level, and the WHO (2005) worked out the requirements to achieve universal coverage with maternal and newborn care. Most recently, Vlassoff and Bernstein (2006) have been able to rework and update the ICPD costs, including health system overheads as well as improvement costs, EmOC, HIV/AIDS prevention, data collection needs, and other relevant investments. The estimates for one of the focus countries, Bangladesh, show that US $3.6 will be required per capita by 2015, over double the estimate for 2005 (US $1.6). The figures for Cambodia and Ghana were similar – so that extrapolation to the rest of South Asia would not be unreasonable.[6]

If reproductive health services in Bangladesh called for a total of US $229 million in 2005 and US $610 million in 2015, at least these amounts would be needed in Pakistan, and seven times as much in India. Clearly, expenditure in all these countries is far short of what it would take to deliver adequate reproductive health care to reach the MDGs. Another estimate points out that over the next 20 years increases in population and changes in the age structure alone in South Asia will result in an increased need of 45 percent in total health spending or two to three percent annually (Gottret and Schieber, 2006). The South Asian governments must take the major responsibility for meeting the costs of providing services at least to the poor. It is noteworthy that the country that provides the best reproductive health care in the Subcontinent, Sri Lanka, also has the lowest proportion of its health budget provided by donors (3 percent). Nevertheless, increases in donor assistance would be helpful to achieve the increased spending required. This in turn would increase the proportion of the total reproductive health budgets of the five countries contributed by donors, which is currently quite low in four of the five countries (except Bangladesh). While total donor funding to health globally is estimated to have doubled between 2002 and 2005, much of the increase constituted assistance to HIV/AIDS programs, including treatment and care costs, and South Asia received a relatively low share.

Resource Allocations within Reproductive Health

In concert with mobilizing additional resources for reproductive health care, governments and donors need to pay attention to how these resources are distributed in order to achieve greater equity and better health outcomes. This section discusses the current scenario and points to improvements that must be made.

Total Resource Allocations to Reproductive Health Components

The distribution of total reproductive health resources by different service components is similar in Bangladesh, Rajasthan and Sri Lanka (Table 4.3). Maternal health and childbirth services account for 26 to 33 percent of total spending, and family planning for seven to 18 percent. One striking difference among the three countries is the relative share of resources spent on routine gynecological outpatient and inpatient services. It is less than three percent in Bangladesh compared to 35 percent in Sri Lanka and 43 percent in Rajasthan.[7]

TABLE 4.3 Total Expenditure on Reproductive Health by Components, percent

Reproductive Health Components	Bangladesh 2000-01	India: Rajasthan 1998-99	Sri Lanka 1997
Maternal Health	18	11	9
Childbirth and Pregnancy Complications	14	15	24
Infant Care	47	24	23
Family Planning	18	7	9
Prevention and Control of STIs	0	0	0
Other Inpatient RH Services for Women	1	43	19
Other Outpatient RH Services for Women	2		15

Allocations of Government Resources

Public reproductive health resources in Andhra Pradesh, Bangladesh and Nepal are allocated largely to family planning and infant care (Table 4.4). Maternal health receives moderately large shares in Bangladesh and AP. Resources to other reproductive health services are relatively small or insignificant in these countries/state.

In Sri Lanka, on the other hand, childbirth and other reproductive health services for women, particularly inpatient services, obtain the largest shares of public resources for reproductive health, thus providing a form of public insurance for inpatient care which could otherwise impose a large financial burden on households. This pattern in Sri Lanka emerged from the very early emphasis on institutional care in the context of addressing maternal and child health needs in the island country. The Indian state of Rajasthan also allocates about 20 percent of reproductive health resources on other services for women (including treatment of RTIs and abortion services, which are not captured separately by this analysis).

TABLE 4.4 Allocation of Public Sector Resources to Reproductive Health Components, percent

Reproductive Health Components	Bangladesh 2000-01	India: Andhra Pradesh 2000-01	India: Rajasthan 1998-99	Nepal 1999-2000	Sri Lanka 1997
Maternal Health	26	8	15	11	11
Childbirth and Pregnancy Complications	8	18	24	4	25
Infant Care (including Immunization)	37	16	26	27	24
Family Planning	26	57	16	58	10
Prevention and Control of STIs	0	0	0	0	0
Other Inpatient RH Services	2	1	20	0	22
Other Outpatient RH Services	1	0		0	9

Trends in Resource Mobilization for Reproductive Health Services. Reproductive health received increasing shares of public health resources during the periods studied in Bangladesh, Andhra Pradesh and Nepal, with significant variations in different components.[8] In real terms, resources increased most in maternal health (45 percent), infant health (30 percent) and family planning (45 percent) in Bangladesh, while in Nepal an increase occurred in family planning. In AP, spending on childbirth/pregnancy and family planning increased by over 40 percent, infant care by 50 percent and maternal health by 62 percent.

In Pakistan, the trends in population welfare expenditure were rather erratic due to the program's heavy dependence on donor funding (see below). There was a sharp increase in MOH expenditure on AIDS control during 1994-98 and on the LHW Program which was launched in 1994. Since the late 1990s, the population program has relied increasingly on government financing. In Sri Lanka, the ratio of public and private reproductive health expenditures to total public and private health expenditures changed very little during 1990-97. In real terms, government spending on childbirth and general obgyn services increased by more than 60 percent in this period, while family planning expenditure declined by 20 percent. NGO expenditure on family planning increased sharply in the same period.

Donor Support to Various Services. A functional analysis of donor assistance indicates that an overwhelming proportion of resources to reproductive health goes to family planning in Nepal and Sri Lanka (Annex 8 Table A8.1). In Bangladesh, however, infant care expenditure receives the largest share of donor reproductive health resources (37 percent), and maternal health and family planning account for 28 percent each. The pattern of donor assistance to Bangladesh stayed roughly the same during 1999-2001.

In Nepal, 80 to 90 percent of donor support was to family planning during the period 1995-99. In a country whose maternal mortality ratio is among the highest in the world, less

than 20 percent of donor reproductive health assistance was on maternal health and childbirth services. The GON's improved fiscal position after 1994 and medium-term expenditure framework have enabled it to increase financing of essential health services, with priority to reproductive health care, and the proportions of government funding to family planning and 'safe motherhood' services have increased gradually. In Sri Lanka, the share of donor resources to infant care has fallen from about 50 percent to 10-20 percent in recent years, while the share on family planning (which may include some MCH care) has increased significantly. This was incongruous given that the country had below replacement level fertility from 1993-2000, and appears not to have sustained results given the increase in Sri Lanka's TFR between 2000 and 2006-07.

The low proportions of donor contributions to maternal, childbirth and infant services are surprising, given the importance of safe motherhood to the Millennium Development Goals and donor commitments to achieving these. Donor emphasis on family planning harks back to historical concern with population growth in South Asia and demonstrates insufficient agility after ICPD. Sri Lanka's early success in controling fertility and its other positive social indicators have kept levels of donor assistance to the health sector low. Support to the other countries has increased over time and expanded from family planning to some MCH activities such as immunization, vitamin A supplementation and child nutrition; but despite recent efforts at sector-wide approaches and budget support, many donors continue to prefer picking up the tabs for specific 'vertical programs,' components or commodities.[9] It is difficult to choose 'reproductive health services' because of the ways in which these are spread (e.g., institutional deliveries are supported by overall hospital resources, diagnosis and treatment of RTIs/STIs are done by general health services). As discussed in Chapter 2, reproductive health services need to be integrated and strengthened, and clearly their financing must be rationalized alongside.

Unit Costs of Public Services. In South Asia, the unit cost for deliveries at public facilities ranged from over US$100 in Bangladesh and AP to less than US$40 in Sri Lanka, Rajasthan and Nepal. The low unit cost in Sri Lanka reflects the high utilization of public facilities for childbirth (which was discussed in Chapter 2), while the very low unit cost in Nepal (US$12) reflects low spending. Similarly, very low unit costs for family planning in Sri Lanka can be attributed to high utilization, while high unit costs in AP reflect the low use of services relative to the high level of spending on family planning. Overall, the picture that emerges is that Sri Lanka achieves good reproductive health outcomes with relatively low per capita and per service spending.

Allocations of Private Resources within Reproductive Health Care

Allocations of private resources to different reproductive health services vary across the five countries (Table 4.5). Other reproductive health services for women take up a substantial share of total private resources in Sri Lanka and Rajasthan. Around one-third of private

spending in Sri Lanka is on outpatient services, which are generally low cost and provided at reasonable quality. In Bangladesh, more than half of private resources are spent on infant care.

TABLE 4.5 Private Allocations to Reproductive Health Components, percent

Reproductive Health Components	Bangladesh 2000-01	India: Rajasthan 1998-99	Sri Lanka 1997
Maternal Health	13.2	10	0
Childbirth and Pregnancy Complications	18.1	14	23
Infant Care	52.8	23	23
Family Planning	13.2	5	8
Prevention and Control of STIs	0	0	0
Other Inpatient RH Services	0	50	15
Other Outpatient RH Services	2.1		31

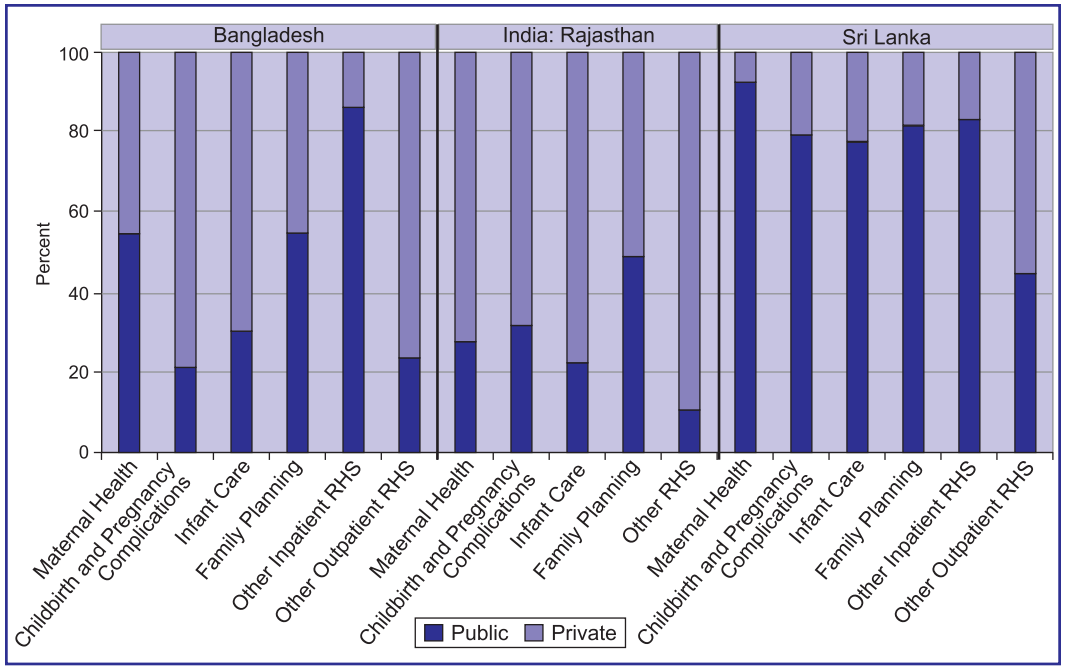
Private financing of each reproductive health component increases with an increase in overall private expenditure (Fig. 4.2). In Sri Lanka, public funding is the predominant source for all components (80 to 90 percent), except routine outpatient obstetric and gynecological services (40 percent), demonstrating a progressive use of public and private resources. A high degree of public financing of maternity (around 55 percent) and inpatient services (80 percent) is seen also in Bangladesh, indicating that public spending responds to some extent to market failure. However, no such pattern is seen in Rajasthan.

Average Private Costs of Reproductive Health. Average private costs per couple for modern contraceptives are very high in Bangladesh (0.72 percent of per capita GDP) compared with Sri Lanka (0.05 percent of per capita GDP) and can be attributed almost entirely to NGO spending.

Survey-based estimates of out-of-pocket payments for reproductive health have been derived for Pakistan and AP. The 1995-96 round of India's National Sample Survey (NSS) provides data on payments for childbirth which indicate the variation in out-of-pocket expenditure between rural and urban settings. In Andhra Pradesh, institutional deliveries were expensive, more so in rural areas (9 percent of per capita GDP) than urban (7 percent), while home deliveries were cheaper in rural areas (1.2 percent) than in urban ones (2.1 percent) (Annex 8 Table A8.2). In Pakistan, a visit to a private practitioner for immunization costs four times more than a visit to a government facility (0.4 and 0.11 percent of GDP, respectively) (Annex 8 Table A8.3).

Analysis of data on household consumption and health expenditure in Bangladesh indicates that the richest quintile of households accounts for a larger share of household spending on reproductive health care (61 percent) than of household spending on health care in general

FIGURE 4.2 Public-Private Composition of Financing of Reproductive Health Components, Bangladesh, Rajasthan and Sri Lanka, various years, percent



(34 percent) (Annex 8 Table A8.4). The financial burden imposed on households by reproductive health spending is an important issue. Analysis of household data for Andhra Pradesh and India indicates that (with the exception of urban areas in AP) the financial burden of facility-based deliveries is somewhat progressively distributed in India, with richer households more likely to incur higher payments as a share of total household consumption (Annex 8 Tables A8.5 and A8.6). The fact that richer women make use of private hospital services for childbirth would account for much of this difference. However, this distribution of spending also reflects the low overall use of institutional facilities by poor women.

Improving Reproductive Health Financing

Issues to be Addressed through Financing. As discussed in Chapters 1 and 2, reproductive health outcomes and services in South Asia are inadequate in the aggregate and particularly for poor women, affected by both supply- and demand-side barriers. To increase the supply of services, several interventions are required including: filling in the gaps between 'needs' for health facilities and human resources and 'actuals' on the ground; expanding outreach; and increasing the availability of acceptable quality private services to poor women. Addressing demand-side barriers mainly entails: improving information about reproductive health and its care, enhancing the quality of services and increasing affordability.

Indeed, low affordability is a serious constraint to poor women's access to reproductive health care, even public care which has both direct (often informal) and opportunity costs. As discussed earlier, private expenditure on reproductive health is two to three times higher than public expenditure in countries other than Sri Lanka. Dependence on household resources to finance a large share of reproductive health services in most of South Asia has grave consequences for equity and outcomes. Inappropriate financing (i.e., mostly out-of-pocket payments) leaves women (particularly those from poor households) more vulnerable to inattention to their health; and health crises, especially those requiring hospitalization, are a major cause of indebtedness, often resulting in poor people falling deeper into poverty. Thus, improvements in reproductive health financing must involve greater pooling of risks and resources across the whole population, and reduction of the financial burden on individual poor households.

There is clearly a need to increase public expenditure on reproductive health, to improve the efficiency of available resources (including targeting to the poor), and to enhance accountability at health facilities. The large differences between Sri Lanka and the other countries in service delivery levels and reproductive health outcomes, with modestly higher overall spending, show that it is not only the amount of spending that is important but how efficiently the resources are used to produce services and results, i.e., both financial and technical efficiency matter. While general revenue financing is currently the most viable option to increase the size of the reproductive health 'pie' for the poor in South Asia, efforts to enhance efficiency can include many supply-side improvements (such as filling in the gaps, outreach, etc.) and demand-side financing can be introduced or expanded, as is being done effectively in Bangladesh.

Given the large share of private services, efforts must also be made to increase the supply to poor women, and improve their quality. Quality improvements can be brought about in part through regulation (e.g., of unsafe abortion) and in part through incentives that encourage providers to deliver good quality services to poor women at low cost. The latter can be effected through a variety of public-private partnerships including contracting out and reimbursement schemes.

The significant differences in spending by reproductive health components among the countries of the region suggest the need to revisit resource allocations. While Sri Lanka allocates a substantial proportion of its public resources to cost-intensive services such as pregnancy, childbirth and inpatient obstetric care, the other countries spend more than half their public resources on family planning. Sri Lanka's financing strategy clearly manages to protect poor women from both physical and financial shocks, while the investments in family planning in the other countries have not improved reproductive health more broadly. Wide variation in donor financing of reproductive health in the different countries are accompanied by insignificant contributions to childbirth services in all countries. This issue needs to be addressed in view of the importance of safe motherhood in the Millennium Development Goals, and of South Asia in achieving the global MDGs.

Significantly greater resources are required to meet the MDGs for health, especially in India, Nepal and Bangladesh, but the absorptive capacities of the government health systems are a key issue. Larger resources for enhanced service delivery will require more and better human resources, greatly improved management, and better governance. For this reason, and because such a large proportion of health spending is private, there is no option but to call into service a variety of financing strategies including more and better spending in the public system, greater contributions by private health providers, and better management of client demand and purchasing. The next section discusses how these strategies could be implemented.

Financing Options

Improving reproductive health in South Asia requires both the mobilization of *more* resources and *better* spending through more efficient organization and allocation of resources, including payment/purchasing systems. Whether financing interventions are optimal and effective depends on how they address demand- and supply-side constraints, and improve the use and quality of reproductive health services. Different financing options address demand and supply issues differently, as discussed below. All countries will need to use a mix of financing options. The optimal choice for each country (or sub-national unit, where these are at different reproductive health service and achievement levels) would be based on its particular situation in terms of public resource availability, private sector capacity and willingness, and client demand and ability to 'negotiate' the health system.

Options for Resource Mobilization

General Revenue Financing has two attractive features from an equity perspective. First, it has proven to be a progressive source of health care financing in both developed and developing countries (Van Doorslaer et al., 1993; Institute of Policy Studies, 2004). Second, when combined with universal coverage and low or no user fees, it provides high levels of financial protection against catastrophic ill-health. In South Asia, Sri Lanka has shown the way to achieving these goals. The scale of the other countries' reproductive health problems, the need to keep prices low while substantially increasing the supply of services, and the challenges of increasing demand for and utilization of services among the poor call for greatly increased general revenue financing of reproductive health care. Additional public and PPP efforts are needed to cover the poor, improve quality and performance, and provide adequate choice to clients. Among promising approaches in the region are on-going efforts to provide matching grants to autonomous bodies managing public hospitals, grants to local governments, and contracting private (usually non-profit) organizations to manage public facilities, provide childbirth services or distribute contraceptives.

Donor Contributions. Most official development assistance to the health sector in South Asia either goes through government health budgets or, if off-budget, supports identifiable

public efforts. Bilateral and multilateral institutions need to increase their support, ensuring that funds are additional *and absorbable*, and that they foster much-needed integration and rationalization of reproductive health services. In addition to maternal and neonatal care, other reproductive health services such as RTI/STI treatment are underemphasized by donors relative to family planning and, increasingly in South Asia, HIV/AIDS. Private financiers (once confined to supporting non-governmental efforts albeit significantly in Bangladesh) are increasingly pooling their funds to support public efforts (e.g., national HIV/AIDS control programs).

Productivity Improvements. Improving allocative and technical efficiency is an important mechanism to finance increased coverage and access to services (Hensher, 2001). Information gathered in this study indicates large variations in cost levels and technical efficiency in the delivery of similar reproductive health services in the public sector. Although Sri Lanka now enjoys social and economic indicators that set it apart from most of the rest of South Asia, its high levels of technical efficiency and low unit costs were the result of public policy and decades of cost-reducing productivity gains (rather than of high levels of education as widely believed) (Pathmanathan et al., 2003). Low unit cost levels in Sri Lanka contribute to its high levels of reproductive health access, and are not the consequence of it. Although not enough is known about the determinants of productivity improvements to make very specific recommendations, achieving universal access to reproductive services is unlikely to be attained in the rest of South Asia without some contribution from cost-reducing productivity gains. Among the improvements that could be achieved (as discussed in Chapter 2) are: increasing the productivity of individual workers by providing motivation/incentives and reducing absenteeism; improving outputs from investments by supplying 'missing ingredients' such as essential staff at health centers, medicines where staff are available, etc.; and increasing the effectiveness of outreach efforts by ensuring better instructions, training, and reducing 'overload' with extraneous tasks. In addition, some of the broader mechanisms discussed, such as targeting and integrating services, would also enhance productivity.

Private Financing. In South Asia, the disproportionately large share of reproductive health services financed by households has consequences not only for equity and financial protection against the costs of illness as discussed earlier, but also for 'protection' through contraception, assisted delivery, identification of pregnancy risks through ANC, timely diagnosis and prevention of infections, and so on. Households may not purchase reproductive health services – many of which are preventive or promotive – because they perceive them to be of low need or benefit and high cost; or they may purchase 'more affordable' poorer quality services. Private financing is desirable for low-cost items for which there are no significant market failures and which would be delivered regardless of public financing. One example is the provision of routine outpatient reproductive health care services. The empirical findings of this study indicate that these services are more likely to be privately financed than other types of services. In this

situation, public financing is not necessarily best targeted at funding ambulatory services for all at the expense of reduced delivery of inpatient services (Filmer et al., 2002). It is better to use household resources to finance a large proportion of those services, leaving the public sector to finance more expensive and unaffordable inpatient care. However, this should be determined by the extent to which market failures are present in the supply of different types of services and distributional concerns. For example, the lack of information about appropriate health care is a critical form of market failure in reproductive health. This relates to the lack of awareness of signs/symptoms and clinical quality, and inability to identify appropriate providers. Private financing in such a setting carries the risk of women increasingly seeking poor quality care from unqualified providers or not seeking care at all. For many of the poorest households, even outpatient services are unaffordable with private financing. The optimal resource allocation pattern therefore is to ensure that all or most households are publicly financed for inpatient services, and that outpatient services are funded primarily for the benefit of poorer households. This type of funding pattern is seen in Sri Lanka.

There is scope for greater engagement of private sector providers – both commercial and non-profit – in financing provision of reproductive health services for poor women. Governments could encourage private providers to deliver a proportion of their services free or at low cost to the poor through incentive or award programs, contracts (discussed below) or even regulation. For example, in India, land is made available for private hospital construction at subsidized rates on the condition that 25 percent of beds are used to treat poor patients. While results have been mixed (due in part to poor monitoring) such strategies could enlarge the pie of private services for the poor.

Options for Resource Allocation

Resource allocations affect access, cost, quality, satisfaction and outcomes. Other than the risk pooling achieved through national health systems, insurance efforts could optimize resource allocations – but these face some difficulties in the South Asian context.

The **national health systems** in South Asia have networks of facilities and providers, largely funded from general revenues. As they cover entire populations the risk pool is broad. However, as discussed above, there is a need to increase the efficiency and equity of public spending on reproductive health. The national health systems need to operate more efficiently, reach out to the poor and target resources to them, and actually achieve universal coverage. The wide range of problems that is encountered in health care (health problems as well as difficulties in service delivery) calls for better allocation and rationalization of resources in tandem with productivity improvements. This includes allocations by services – in this case, to reproductive health and, within reproductive health, to the package of services that is essential to achieve the MDGs. Low priority expenditures could make room for more necessary ones, especially interventions that have the greatest marginal impact on the poor.

Resource allocations must also be improved by level (e.g., to inpatient rural health facilities because the transaction costs to the rural poor of using local health centers are lower than those of using more distant urban facilities) and by input. Many examples of the latter were discussed in Chapter 2. Imbalances in staff, equipment, drugs and supplies may need to be rectified through appropriate allocations. Shortages of certain types of staff may require contracting in (e.g., anesthetists and obgyn specialists in India) to provide the necessary range of services (in our example, EmOC) and use available resources (such as operation theaters) more efficiently.

In addition to addressing the inadequacy and allocation of resources and improving the efficiency of national health systems, South Asian governments need to improve accountability. Poor experience with 'permanent' staff may call for services (such as cleaning, conservancy, watch or transport) to be contracted out; low motivation of staff may call for performance-based incentives to be provided; and so on. Such detailed allocation decisions are best made at the local level through decentralized action planning within an administrative framework that supports the principle of subsidiarity, as discussed in Chapter 3.

Although we have not presented a functional classification of reproductive health expenditure in this chapter, all five countries need to invest more in human resources, especially of skilled professionals. Valuable investments in human resources in the health sector are being drained from South Asia by the emigration of doctors, nurses and technicians to other countries. Information and innovative strategies are needed to stem this flow or compensate for it, particularly in view of the allied flow from rural to urban areas in each country which works largely against the poor.

Turning to private spending, South Asia's high out-of-pocket expenditure could be channeled to public or private pooling arrangements to increase financial protection through public health systems or various forms of insurance including social health insurance, community health insurance, or private/voluntary health insurance. However, **private health insurance** is less likely to produce more equitable health care in most South Asian contexts.

Social health insurance in South Asia accounts for only eight percent of public spending on health (or less than two percent of total health spending) (Gottret and Schieber, 2006). It would be a challenge to introduce at a national level in at least four of the five countries because of low incomes, a predominance of informal sector employment, large rural populations, inadequate administrative capacities, governance issues, poor quality of peripheral health services, and so on. These constraints may produce negative consequences for equity in the delivery and financing of reproductive health care. It could be argued that social insurance could alleviate the need for public financing of services for middle-income groups, thus releasing resources for the poor. However, international experience indicates that political economy factors make it difficult to divert health resources from the rich to the poor, and result in two-tier systems.

Social health insurance has been developed successfully for mothers and children in Bolivia. The government allocates 20 percent of national revenues to municipalities on a per capita basis, and they in turn reimburse facilities for services provided. The scheme led to increased use of services by adolescents and poor women, and service improvements (e.g., availability of medicines). As services were provided free, some users shifted from private to public services – and providers became dissatisfied because their remuneration was not enhanced as a result of increases in their workloads! This experience provides valuable lessons for South Asia.

Community insurance involves risk pooling at the community level, albeit to a limited extent. It faces the problems of raising sufficient resources from the limited incomes and small populations on which programs draw, limited management skills, and dominance of providers over prices and quality. A promising scheme that was begun in 2001 in a few districts of Indonesia was extended country-wide in 2005. The JPK-Gakin Scheme is administered by local governments, which has facilitated responsiveness to local conditions such as the problems of remote areas and seasonal or geographic vulnerability to epidemics. Although a review suggests that many improvements are needed in the scheme, it appears to have successfully increased health care coverage of the poor and deserves to be on a watch-list (Arifianto et al., 2005). In South Asia community insurance is unlikely to work alone, but attention to several aspects could enhance its usefulness as a complementary means of financing reproductive health care. First, most schemes in South Asia currently do not cover the more expensive inpatient reproductive services including childbirth. Coverage would need to extend beyond the narrow range of services to insure households against the financial consequences of illness. Second, community insurance schemes rarely enroll the richest groups in the population, nor are they able to enroll the poorest groups, as underlined by BRAC and Grameen Bank in Bangladesh (Rannan-Eliya and Hannan, 1997).[10] This needs to be addressed to exploit the progressive nature of this mode of financing. Finally, approaches to scaling up and sustaining community insurance schemes need to be developed in order to ensure lasting reproductive health benefits in South Asia.

Options for Purchasing/Payment Systems

Although the five national health systems studied provide services through staff who are salaried public employees, the bulk of purchasing in reproductive health care (except in Sri Lanka) is by individuals from private service providers. The goals of more and more equitable reproductive health care can also be furthered through purchasing mechanisms. In the public sector, for example, governments can get better value for the money they spend through a variety of purchasing mechanisms, including contracting in or out of services and efficiency-based provider payments or incentives, discussed earlier. Other promising approaches include demand-side financing and social marketing.

Demand-side Financing. The main advantages of demand-side financing are the potential to target benefits, provide a choice of providers, increase utilization of services and compliance with service or treatment regimens, and improve quality through competition (within a fixed price limit). Subsidizing specific health services for the poor, such as institutional delivery or contraception, could enhance demand and use, and increase the quantity of services flowing to them. Competitive voucher schemes are considered to be better than those in which there is a single provider, but non-competitive schemes can fulfill the purposes of targeting, providing an incentive to change a health behavior, or referral. Several countries have implemented successful schemes. A Safe Motherhood scheme in Indonesia distributed a booklet of coupons for MCH and FP services to poor women, who could redeem them through contracted midwives (who otherwise charged for their services). In addition to reaching poor women, the scheme increased utilization of these services, and increased the services of providers (Gorter et al., 2003). A scheme in Nicaragua provided vouchers to high-risk groups for STI treatment and reported a fall in the prevalence of infections as well as a lower treatment cost per patient. Bangladesh has initiated a health voucher scheme to increase demand for maternal and neonatal services and insure poor women against the costs of a normal delivery by a skilled provider or of emergency obstetric services. The vouchers enable pregnant women to purchase antenatal, delivery and postnatal services from a qualified private provider of their choice. Providers are reimbursed from a special fund.

Public monies can also be used for direct cash payments (conditional cash transfers (CCTs) or incentives) to poor households that achieve certain goals, such as 'three ANC visits' or 'delivering in an institution'. This would protect the poor, allow process monitoring, and improve health outcomes. The PROGRESA program in Mexico gives families below the poverty line a subsidy of about 25 percent of their annual income if they utilize a full package of mother and young child health and nutrition services. In addition to increased utilization of services, improvements in health were reported (Gertler, 2000). India has instituted reimbursement of transport and attendant costs for the use of public sector EmOC facilities. Although this has had variable success it could be improved and expanded, and increased in scope to cover other out-of-pocket expenses for reproductive health care. A newer scheme, the *Janani Suraksha Yojana*, is also providing CCTs to clients for using some RH services, and incentives to providers for supporting them. It will provide useful lessons in time.

Social marketing is an intervention that has effectively mobilized household resources in the reproductive health sector and simultaneously improved delivery. It involves selling government- or donor-subsidized products through commercial channels, NGOs or public retail outlets. The main advantages are that the products become more accessible to adolescents, poor and high-risk populations, and create demand. However, social marketing is not without drawbacks. Among the poorest households, where there are competing demands for scarce resources, having to pay, for example, for contraceptives may deter use even when prices are subsidized.

Nevertheless, social marketing has been found to be a viable method for delivering contraceptive supplies in South Asia (see Chapter 3) and is to be recommended, provided that publicly-funded zero-priced supplies are still available to the poorest.

Social franchising of reproductive health services can involve the private health sector in reproductive health goals, taking advantage of its contacts with poor clients and improving quality and accountability. Clients benefit through improved access to information, facilities, services and discounts, and private providers gain as a result of bulk purchases, branding, incentives, mass marketing and referrals. The public sector benefits from the organization of private providers and bulk handling, relative ease with which quality standards can be maintained and the possibility of performance-based contracts. The Green Star experience in Pakistan and Janani in India are financing and service delivery successes that have expanded commodity and service distribution. Janani provides products, testing, and safe abortion, delivery and contraceptive services through clinics, special centers for non-clinical services, or conventional shops. The Green Star network operates through private clinics, doctors, paramedics and chemists to provide 21 reproductive and related health products and services at roughly half the cost of Pakistan's overall family planning program.

User fees are a means of generating additional revenues at health facilities, and function as an incentive to facilities to improve service availability and quality. The actual amounts collected may be less important than how the funds are used to improve the quality of care. Financial barriers faced by the poor may be reduced if the monies are managed well and produce better quality public services, reducing waiting time or the need to use more costly private care. In addition, paying user fees can cause clients to express their demands (or 'vote with their feet'), consequently increasing provider accountability. User fees are usually combined with policies to exempt the very poor. However, evidence from Nepal and Bangladesh suggests that such exemptions need to be made more effective as exempt individuals often end up paying similar amounts in unofficial fees (Borghi et al. 2004; Ensor, 2003). Alternatively, the exempt may receive an inferior quality of service or – where quality is good – non-exempt individuals may crowd out the poor. Thus, decisions to introduce user charges must weigh the availability of public and private services, their quality, governance of the health institutions, and South Asia's strongly class- and/or caste-based societies. Transparency mechanisms and reliable information on willingness to pay for different services are needed to ensure that user fees support reproductive health services effectively, particularly where insufficient demand is a problem.

Choosing among Options

Improvements in reproductive health financing must be developed in the context of broader reforms in the health sector. Depending on starting conditions and underlying values and preferences, different countries may arrive at distinct solutions to their major health financing

challenges. In assessing their financing options, the countries should consider several factors to ensure that adequate priority is given to improving reproductive health outcomes for the poor.

All the five national governments considered in South Asia need to take responsibility for financing health care vigorously and subscribe to the *urgency* of improving reproductive health to reduce maternal and infant mortality, allow families to control their fertility, reduce RTIs/STIs/HIV/AIDS, and enhance well-being among women and adolescents and their contributions to national development. The urgency leads to the conclusion that a broad mix of solutions, achieving wide coverage, needs to be adopted.

Reliance on out-of-pocket payments contributes to demand-side barriers, so efforts should be made to introduce and/or strengthen collective funding of reproductive (and particularly maternal) health services for the poor. Ongoing monitoring of out-of-pocket payments and of the benefit incidence of public spending on reproductive health should accompany financing reforms.

Potential exists for demand-side financing to be used to encourage very poor households to seek appropriate reproductive health services. Various approaches are being tried in South Asian countries and should be considered for scale-up, especially in areas where significant demand-side barriers exist.

Even at current low levels of spending, there is room for greater efficiencies in the use of funds. Greater efficiency could be achieved by increasing the productivity of workers, integrating services, and promoting higher utilization, for example, through improved quality and outreach. Some of these approaches may require increased spending, but would produce proportionately greater impacts if properly implemented.

It is clear that current levels of investment would not achieve the MDG or ICPD goals so both donors and national governments need to increase their investments many-fold. While South Asia's people and governments need to fully own the efforts to improve reproductive health, donors could work more actively with them to identify how adequate resources could be mobilized from national and international sources and how these could best be programmed to achieve the necessary outcomes.

Support from Other Sectors

Reaching the MDGs requires growth and a multi-sectoral effort. The determinants of reproductive health point to the importance of girls' education, women's social and economic empowerment, and nutrition to achieving good outcomes. With the exception of Sri Lanka and a few states in India, South Asian countries have underinvested in these. Broader efforts are being made in the areas of girls' education and women's empowerment more recently but, for the vast majority of South Asian women, there are still 'miles to go.' While direct spending

on health positively affects maternal and child mortality more than other public investments such as sanitation, education and infrastructure, allocations to health in South Asia have shown themselves to be highly subject to political vicissitudes. In most countries, spending on health is considered low priority compared to defense, infrastructure, power, water and education. While arguing for higher health spending it would be well to encourage simultaneous investments in other sectors to improve food availability/distribution, water supply, sanitation, education, and transport as these can help to enhance the efficiency of health spending and further improve health outcomes.

NOTES

1. The estimates are full costs (as measured by expenditures) including both the recurrent and capital costs of providing services, but do not represent full economic costs of service delivery.
2. Reproductive health expenditures do not include child nutritional supplementation other than micronutrients. Among child health expenditures beyond infancy, some (such as immunization) are included but others (such as general illness consultations) may not be.
3. The private spending for Rajasthan could be overestimated as the estimates are based solely on household survey data and have not been reconciled with provider-side data as in Bangladesh and Sri Lanka.
4. Pakistan could not be included in this comparative analysis because of an absence of rigorous accounting estimates.
5. These estimates are based on an analysis of donor project data for Nepal and Sri Lanka, national health accounts for Bangladesh and reproductive health accounts for Rajasthan. Comparable estimates could not be produced for AP and Pakistan because similar data were unavailable.
6. While there are many studies on the costs of different reproductive health services in developing countries, they measure different activities and use different units (e.g., visits, pregnant women, couples, etc.), the costs of individual services range widely, and few have worked out the cost of a total package, correcting for the common infrastructure used in the delivery of different services. While several studies are useful to estimate the costs of individual services, even in the aggregate they would not serve well to work out the cost of the essential package of RH services for other countries. Information on the costs of individual or 'packaged' RH services is woefully inadequate for South Asian countries, and there is considerable deviation from the cost estimated by Vlassoff and Bernstein (2006). For example, an effort to cost 'Essential Health Care Services' in Nepal reported the 2003 cost per woman of two ANC visits as US$2.53 and the cost of a Mother-Baby package as US$7.57. Even the latter figure does not include, for example, the full cost of family planning or STI services (Alban and Sakya, 2004). Considerable work needs to be done in this area. Cost-effectiveness analyses focus on deaths averted or DALYs saved, and thus also do not serve reproductive health services well enough as the benefits, for example, of family planning are not fully captured by these measures. Many studies on the cost-effectiveness of RH interventions are ably summarized in the DCPP chapters on Adolescent Programs, Contraception, STIs, HIV/AIDS, Maternal and Perinatal Conditions, Quality of Care (for child health), Gender (for 'women's conditions') and Overview chapter (World Bank, 2006).
7. Expenditure (in Table 2.4) and allocation (in Tables 2.5 and 2.6) to STI services are not captured because they are not integrated in reproductive health care, but are part of general health services (or, more recently, HIV/AIDS control services).

8. Expenditures on reproductive health were estimated for the following years: Bangladesh: 1999-2000 – 2001-00; India-Andhra Pradesh: 1996-97 – 2000-01; India-Rajasthan: 1998-99; Nepal: 1995-96 – 1999-2000; Pakistan: 1993-94 – 1998-99; Sri Lanka: actual expenditures for 1990-97 and estimates for 1998-99. The ratios used to estimate reproductive health expenditures from data on total health expenditures were the same across the years for each country. The estimation ratios were generally calculated using household data and other information that were not available on an annual basis. No trend analysis was possible for Rajasthan.
9. Indeed, while the vertical programs (e.g., malaria, TB, EPI, HIV/AIDS) emerged originally from the desire of technical agencies to deliver interventions efficiently to the field, they have persisted due to separate sources of funding and technical assistance, resulting in waste and inefficiency. Governments, donors (and international partnerships) and technical agencies have been concerned to ensure priority to and mobilize/protect budgets for particular programs, bypass weak systems by having separate delivery 'shutes,' and achieve 'quick results.' As a result, and because resources have been insufficient even in the aggregate, they have been spread thin, systems have remained fragmented and weak, and human resources underdeveloped and uncoordinated – both horizontally and vertically. (In some cases there may be more than one cadre carrying out similar tasks – for example, MCH and FP workers in Bangladesh.) The need to integrate reproductive health services is discussed in Chapter 2. Their funding must also be rationalized.
10. Private/voluntary health insurance imposes financial barriers to access because of the low affordability of premia, and so is not considered here as our concern is primarily with poor women.

Chulie de Silva

Women's groups can be instrumental in increasing awareness and use of services.

Chapter 5

Improving Poor Women's Reproductive Health

To improve poor women's reproductive health, South Asian health systems have to implement a number of related strategies:

- ***Enhance inclusion.*** *They need to bring two important groups – poor women and adolescents – squarely into the fold of reproductive health services through geographic and household targeting and clearly-directed outreach. Social and gender sensitivity among providers, managers and policymakers is essential to achieve this inclusion, as well as the supply and demand improvements noted below.*
- ***Improve supply.*** *They must enhance the supply of services for all stages of the reproductive life cycle, for which integrating the essential package and providing a client-centered continuum of care are good approaches. Four services have been particularly neglected and require additional attention in this context: combating unsafe abortion, nutrition counseling and care, postnatal care, and* RTI/STI *diagnosis and treatment. Improving the availability and quality of frontline female health workers through recruitment and/or contracting in, training, field support and performance-based incentives would help to fulfill many needs, while contracting out of services and other client/provider payment systems could increase the availability of care for poor women.*
- ***Increase demand.*** *They need to increase demand for several services that are provided but underutilized, such as ANC, IFA, institutional deliveries and family planning (although supply may be a constraint in some areas). In addition to 'behavior change communication,' demand-side financing is important to achieve this.*
- ***Reform the health sector for reproductive health.*** *As reforms take place in the health sector, the delivery and financing of reproductive health services merit special attention. Reforms are especially necessary in three areas to support the above approaches to improving reproductive health. Decentralized planning and resource allocations, human resource development, and financing improvements are important to implement targeting, integration of services, supply improvements, a client focus, demand creation, and effective outreach.*

This chapter provides details of how these strategies could be implemented.

What Needs to be Done and How

A 'results framework' showing what is to be done to achieve reproductive health goals for poor women in South Asia and how it can be done is presented in Table 5.1. The 'what' actions cover the essential package of reproductive services listed in order of priority and overall feasibility, based on the evidence presented in earlier chapters. Detailed prioritization, particularly for resource allocation decisions, must be worked out at the local level. Decentralized action planning is a key 'how' strategy to obtain the necessary improvements in service delivery, demand and financing, as described in Chapter 3. While disadvantaged districts can be targeted through selection at national/provincial/state/etc. levels, poor areas, groups and households are better targeted through action plans formulated at the district level and below. The DAP method is, in fact, focused on redressing inequalities. Higher authorities should mandate and facilitate DAPs, provide additional resources as needed and deserved on the basis of plans and performance, and examine and act on their policy implications. For example, if needs for additional providers cannot be met locally, they may require changes in human resource policies. Another example is: widespread need for interpersonal communication by workers may call for pre-service skill development or parallel mass media interventions. Indeed, complementarity between decentralized planning and higher-level actions must evolve through the implementation of DAPs. All the five countries have policies in place that enable many of the necessary higher-level actions (Annex 9).

Decentralized planning facilitates choices among supply-side improvements and demand-creation actions, including demand-side financing, and encourages combinations of these that are suited to local circumstances. Supply improvements may include human resource development, performance incentives, management improvements, and public-private partnerships that can be effected at the local level. These can be fine-tuned appropriately – for example, decisions can be made about which services merit incentives or performance rewards, what needs to be supervised and monitored more carefully, and so on. As described in Chapter 3, DAP emphasizes better use of available resources, and need- and evidence-based requests for additional resources. By exploring what private resources are available locally, DAP teams can also plan for better public-private complementarities and partnerships to improve the overall 'pie' of services for the poor.

Some promising practices related to the actions in Table 5.1 were identified in Chapter 3. The sections below describe further how these recommendations can be implemented.

Enhancing Inclusion: Understanding the Poor Woman as Client

Reproductive health problems are clearly concentrated among the poor who also receive insufficient care. Indeed, for the poor women of South Asia, the key problem with regard to reproductive health services is inadequate access. Thus, to improve reproductive health there

TABLE 5.1 Results Framework to Improve Reproductive Health in South Asia

WHAT IS TO BE DONE	HOW IT CAN BE DONE
Goal A. To Increase Maternal and Neonatal Survival	
Direct: Ensure intranatal and neonatal care	
1. Increase access to and use of skilled birth attendance, including referral in case of need	• Increase availability of frontline female workers through recruitment or contracts with private individuals or agencies • Strengthen skills and social and gender sensitivities through need-based training of frontline workers and provision of guidelines (including referral instructions) and adequate equipment and supplies • Give incentives to providers for better coverage and performance • Provide information through mass media and inter-personal communication to create awareness of need for SBA; use demand-side financing to lower barriers
2. Increase access to and use of EmOC	• Motivate community-managed emergency transport through financing or reimburse individual costs • Establish EmOC facilities within reasonable reach; districts should determine needs and locations of facilities on the basis of local conditions including availability in the private sector; where the latter services are available they can enter into purchase agreements
3. Increase access to and use of PNC including management of PPH, treatment of infections and depression, and breastfeeding counseling	• Mandate timely home visits by workers and ensure skills to detect problems especially of women who have delivered at home • Finance community transport or individual costs to emergency care as in A2 above
4. Increase access to and use of IMNCI	• Implement protocols for IMNCI including skills training of workers, provision of supplies, and availability of facilities
5. Reduce use of unsafe abortion facilities and improve access to safe abortion where legal, and increase post-abortion care (including adolescents and unmarried women)	• Train frontline workers to provide information and counseling • Increase number of facilities in the public sector, train paramedics in MVA, and increase medical methods • Encourage safe services in the private sector through purchase agreements and voucher schemes • Provide public information (where acceptable) about unsafe abortion and availability of safe facilities
Indirect: Improve maternal health during pregnancy	
6. Increase access to and quality of ANC to detect risks and prevent mortality, treat infections and motivate use of SBA, EmOC; include immunization, antibiotics and tocolytics	• As in A1 above. ANC and SBA must be provided in a continuum by the same worker

WHAT IS TO BE DONE	HOW IT CAN BE DONE
7. Improve nutrition during adolescence and pregnancy 8. Provide IFA and deworming to prevent/manage anemia	• Strengthen frontline knowledge and advice on nutrition • Ensure supplies for adolescents and adults • Provide public education widely to improve practices in the home and compliance with IFA supplementation
Goal B. Ensure Wanted Fertility	
Direct 1. Increase access to and use of contraception to delay the first, space the second and prevent 'too many' and 'too late' births (including adolescents) 2. Increase access to information on sexuality, sex, sexual health, responsible sexual behavior, delaying marriage, reproduction, contraception, unsafe abortion, RTI/STIs, hygiene, nutrition and gender roles, especially for adolescents *Indirect* 3. Increase age at marriage and first birth: address all, especially adolescents	• Expand menu of options and supplies through frontline workers and strengthen their technical and counseling skills through training, guidelines and supportive supervision • Expand social marketing of contraceptives and services through public-private partnerships • Expand and improve BCC through mass media and interpersonal communications through training of frontline workers; both can be contracted out • Increase life-skills development programs (to develop talents, self-esteem, negotiation and economic skills, etc.) through other sectors and private organizations (e.g., CBOs, NGOs), especially to reach out-of-school adolescents, promote/assist in keeping girls in schools, e.g., through secondary school stipend programs
Goal C. Reduce Women's Reproductive Morbidity	
1. Prevent, diagnose and treat RTIs/STIs/HIV/AIDS (including adolescents) 2. Promote condoms 3. Syndromic management of RTIs/STIs 4. Targeted interventions for HIV/AIDS vulnerable groups	• Improve skills and performance of primary health workers through training and clear protocols • Encourage use of private facilities for diagnosis and treatment through vouchers (provided through frontline workers) • Establish additional facilities (e.g., ICTCs) through agreements with the private sector • Provide information as for B2 above
5. Prevent and address subfertility (through prevention/treatment of RTIs, post-abortion infection and postpartum infection)	• See C1, A5 and A1-3 above, respectively • Train individuals at primary and secondary levels to counsel both men and women and discuss alternatives; instruct workers to refer couples
6. Detect and treat malignancies: screen for breast and cervical cancers, refer and treat 7. Identify and treat menopausal problems	• Train public providers and ensure they include counseling and referral in their outreach visits/clinic work • Undertake mass screening programs for cancers possibly through contracting out, and/or provide vouchers (through frontline workers) for poor women to use private facilities • Provide public education on these topics

is a need to ensure coverage of the socio-economically disadvantaged by targeting the supply of public services to areas and groups (and within these, to households) that have the greatest reproductive health needs, and to create demand among these groups for necessary services. Socio-economic targeting of services must be overlaid on the biological targeting that is integral to reproductive care; it calls for a reordering of priorities, modifications in the organization of services, improvements in processes as well as facilities, and innovations to create effective demand. Both targeting and demand-creation strategies can be effected through creative financing mechanisms which will be discussed later.

Understanding Client's Needs. A focus on the poor calls, first, for an understanding of their needs – not only of the services they require, but also of how they expect services to be provided, and how their constraints to using services can be overcome. Two mechanisms can be adopted fairly quickly to provide this understanding. First, information can be collected through independent exit interviews of those who visit health facilities, and used directly in decentralized action planning to make improvements. Second, information must be collected at the community level through collaborations between local government bodies or citizens' groups (e.g., Village Health Committees) and health providers, and used to plan better outreach, clinic-based services, incentive mechanisms, and monitoring. Utilization of health care and client satisfaction can be assessed (e.g., by DAP teams) to identify problems. The evidence thus far points to poor women's needs being quite straightforward: better timings, availability of staff and medicines, better behavior, and so on. Many of these are easily addressed with little or no additional resources.

Serving the Poor. Beyond understanding poor clients' needs, it is necessary to *act on them*. The public health systems in all five countries need to be oriented to serving the poor. Clear pro-poor policies, programs, approaches and incentives are required in all countries. Several examples of pro-poor activities exist, such as free maternity beds, special camps, and free medicines. A novel scheme is the 'one-day mataram,' an effort in Karnataka (India) to rope in private sector obgyn specialists to provide free care on one day of the month. However, these are not yet enough to have a significant impact on the maternal mortality ratio or infant mortality rate. A range of mechanisms including targeting of supply, subsidies and incentives (to both clients and providers) is needed to ensure that larger numbers of poor women are reached and a much larger proportion of services (both public and private) flow to the poor.

The social contexts of most poor women in the Subcontinent call for services to be provided at their doorsteps through outreach by well-qualified providers. The Public Health Midwives of Sri Lanka are perhaps the best example of this, but all the five countries currently have one or more cadres of female paramedics with frontline responsibilities for reproductive health. Management of these workers has proved to be one of the most difficult tasks, and needs to be improved throughout South Asia. In addition to ensuring that there are sufficient numbers 'on the job,' the workers must be provided the necessary supplies, up-to-date knowledge and

skills – including technical, communication and simple managerial skills, and support to carry out their difficult social and technical tasks.

Geographical targeting is also of great importance throughout South Asia (including Sri Lanka) because of the current wide micro-regional variations in service availability and outcomes. At every level, the health systems should allocate resources preferentially to the most neglected areas in their charge and monitor their achievements. For example, in India, the significant differences in reproductive health outcomes in different states and districts call for the RCH program to target the worst ones; and, within districts, decentralized planning must focus attention on the worst blocks and villages, towns and urban slums. This approach should be taken down to the household level by frontline workers to achieve full socio-economic targeting.

Gender-Sensitive Services. Gender issues are among the core constraints to better reproductive health on both the supply and demand sides. On the supply side, provider behavior towards women, the design of facilities and programs, the availability of services (their type, timings, location and integration) and the status of women service providers (especially frontline workers most of whom are women) are significant aspects that need to be addressed. All health providers need to be held accountable for their behavior towards *poor* and *female* patients, particularly those from stigmatized communities. Regarding demand, poor women throughout South Asia report that ill-behaved staff deter them from using health facilities. Further, as reproductive health concerns the most important commodity traded between men and women (sex) and women's primal role in society (reproduction), efforts to promote women's health need to take cognizance of the imbalance of power in decision-making and control over resources that exist in the patriarchal cultures of South Asia, and employ strategies that can help poor women to overcome their weak position in their households. Some examples are: involving men in family planning, providing pregnant women vouchers to deliver in institutions, and promoting gender-sensitive behavior in adolescents.

Women's Reproductive Rights. The concept of women's reproductive rights has hardly entered the lexicon of the health services in South Asia (leave alone their 'mindset'). To begin the process, these rights need to be imbedded in a charter of health rights and service responsibilities (similar to that evolved in Bangladesh).[1] Then, working from the inside out, the reproductive rights of women should be the subject of active public education. A further step would be additional legislation to ensure a rights-based approach.

Increasing Information and Demand

Many community, household and individual factors that determine health and use of health services can be influenced by information. A key role for the public sector is to provide information to improve personal and household health practices, and encourage appropriate use of services. Creating demand for good quality preventive and curative services and

publicizing client rights and responsibilities are critical for improved reproductive health. These have several important dimensions.

- Widening and deepening communication with women and families, especially among the poor and disadvantaged, through mass media and interpersonal means. Information (and services) can be provided through 'local action,' for example, adolescent reproductive health can be addressed in schools and in out-of-school/ youth programs.
- Providing information on the availability of services (e.g., on service timings, what

TABLE 5.2 Some Supply-Side Improvements in Reproductive Health Care that Need Information/Demand-Creation Support

Supply of Reproductive Health Services	Demand Creation
Service Provision/Technical Issues • Providing an integrated package of ANC, delivery care, PNC, child health care, family planning (including men and adolescents), RTI/STI/ HIV/ AIDS care, MVA, PAC, care of older women's problems and general health care • Improving nutrition in the household **Institutional Aspects** • Improving the skills/competencies of providers • Ensuring availability of the right mix of medical and paramedical staff (especially women doctors, nurses, outreach workers, technicians) • Fully establishing and equipping basic facilities • Enhancing availability of medicines and supplies • Improving outreach • Improving the knowledge/skills/practices of traditional providers; ensuring quality standards, accreditation of providers and institutions • Expanding services for the poor, e.g., through public-private partnerships **Policy Matters** • Ensuring that 'no targets' also means that FP services are not pushed in isolation • Decentralizing decision-making about program contents, activities and use of resources • Legislating for quality (in both the private and public sectors) and accreditation • Clients' charter of rights at public facilities and in private services	**Direct: IEC/BCC by the Health Sector** ***Whom to address*** • Policymakers (including politicians, local bodies, bureaucrats, opinion leaders) • Health service managers and providers • Communities in general • Poor families • Women • Adolescents • Other influencers, e.g., teachers ***What to cover*** (not an exhaustive list) • Reproduction, the importance of proper growth, sexual development • The importance of delaying marriage/birth • Preventing, identifying and proper treatment of reproductive health problems • Use of services for different needs, especially institutional delivery, treatment of RTIs/STIs, family planning, safe abortion (where legal) • Gender equality (from childhood through adulthood) • Consumer rights (public and private sectors) **Demand-side Financing** **Indirect: Social Policies beyond Health** • Girls' education • Women's employment • Old-age security • Poverty reduction

workers should provide, locations of referral facilities, etc.) to facilitate their use by poor women, and to hold workers accountable for delivering services where and when these are expected. IEC/BCC and community involvement mechanisms must be seen as central to improving services and not as 'add-ons' or afterthoughts.

- A two-way flow. It is as important for the health system (and allied institutions) to understand the needs and wants of clients as it is for it to give information about right health practices and options.
- Internal Improvements. Health information is also needed by public and private providers, administrators and policymakers. For example, the contents of the essential package of reproductive health services and their benefits are little understood.

Many of the improvements that are required in the supply of services need to be supported by the provision of information and demand creation, as illustrated in Table 5.2.

Successful *supply* efforts can also reduce constraints to *demand*. Some examples are: regular service camps, integrated services at the village level, gender sensitization of health staff, and social marketing that reaches the poor with services. Initiatives that have successfully overcome socio-cultural obstacles to better reproductive health include: comprehensive counseling for family planning involving men; improved technical and interpersonal communication skills among staff and strengthened management for better quality STI services; and cooperative networks of public and private doctors, to name a few. Community mobilization efforts can help to raise awareness of reproductive health, involve both women and men to change household health-seeking behavior, and promote women's status and empowerment. Community-based groups such as self-help groups or local government bodies can be sensitized and involved in these efforts.

Expanding Services to Cover the Reproductive Life Cycle

Adolescents. Better reproductive health entails attention to all stages of the life cycle. Annex 10 summarizes the key interventions needed to improve reproductive health at each stage. By far the most neglected stage in all five countries, and the most important in terms of both short- and long-term reproductive health outcomes, is adolescence. The health system must take greater responsibility for adolescent knowledge of body processes, sex and safety, reproduction, nutrition, and preparation for marriage and childbirth. This calls for considerable shifts in attitude and organization. Several interventions have been identified as parts of well-designed adolescent reproductive health programs including: (i) Behavior Change Communication, which provides access to accurate information on sexuality, reproduction, abstinence, contraception, STIs, gender roles, and so on; (ii) adolescent-focused reproductive health services, especially for contraception and prevention and treatment of STIs (including HIV/AIDS); and (iii) life-skills development (through cross-sectoral cooperation) to enhance self-development and economic opportunities. In Bangladesh, in addition to the cash and

food incentives offered to encourage girls' schooling, programs such as the Total Literacy Movement run by the government, and non-formal education by NGOs have contributed to raising awareness among adolescents.

Sexually-Active Adults. Services to diagnose and treat RTIs/STIs and safe abortion are widely deficient to prevent serious reproductive health problems. In addition, there is 'unmet need' in family planning.

RTI/STI diagnosis and treatment. These tend to be separated from other reproductive services and provided only when women approach curative health facilities (or, more recently, HIV Integrated Counseling and Testing Centers). Active identification of infections by outreach workers and simple treatment or referral, and 'single window' reproductive services at health centers would greatly benefit women patients as well as improve their chances of healthy pregnancy, safe birth and family planning acceptance.

Abortion services (where legal). Both availability and quality of care in the public health systems of all five countries fall short of what is required to forestall morbidity and mortality on account of abortion. Facilities need to provide appropriate care, including PAC, contraceptive advice and services. Emergency contraceptives help to prevent some abortions. Increasing the safety of clinics in the private sector and supporting multi-service franchises through grants, subsidies or vouchers are some approaches that have succeeded in the region. Unsafe abortion facilities/providers must be eliminated by stringent enforcement of existing laws.

Family Planning. Despite decades of effort, contraceptive services remain woefully inadequate. Many things need to be done: provision of information; increasing the choice of methods; training providers in counseling and technical aspects; regular supply of contraceptives; follow-up and management of side-effects; involving men in decision-making, contraceptive use, and women and child health care. Promising approaches include subsidized supply through private social marketing and other means, and providing workers with incentives to retain satisfied users.

Maternal Health. Many service improvements are required for successful motherhood.

Prevention and treatment of anemia beginning in adolescence and during pregnancy. While providing adequate supplies at the local level it is also necessary to address demand, possibly through extensive education campaigns aimed at families. Only a more-supportive family and community environment or long-standing familiarity will encourage women to comply with prophylaxis during pregnancy. Social marketing is another potentially useful method.

The quality of antenatal care. In addition to complete examinations it is necessary to identify risk factors, counsel women, detect and manage complications early, and encourage women to have a skilled delivery. Information on risk factors and danger signs needs to spread in communities and among providers. Some effort should be made to provide incentives to mothers and providers to ensure 'full' ANC.

Access to skilled birth attendance. It is critical for poor women to have access to skilled birth attendance irrespective of the place of delivery. Investment in birthing skills, accessible facilities and incentives to frontline workers to attend deliveries or help women use available facilities are justified by the number of women's lives and very large number of neonates who could be saved. These must be supported by emergency transport to well-equipped obstetric facilities: in most of the five countries, progress in developing emergency obstetric services has been far too slow and needs to be accelerated. Poor women must also be encouraged to use private facilities through targeted financing mechanisms such as vouchers or provider incentives. Motivating families and women to deliver in institutions would entail a sizeable effort as current beliefs in most of South Asia do not support this.

Timely postnatal care. As long as the majority of South Asian women deliver at home and progress towards institutional births is slow, increasing postnatal visits is necessary to partially fill the breach. The standard for a postpartum visit by a trained provider should be a first visit within 24 hours. Appropriate incentives, training and supplies should be provided to workers, and transport arrangements (or funds or vouchers) made available to move mothers and neonates who are experiencing difficulties to hospitals. Widespread information campaigns are needed on the problems that precede and follow childbirth and how these should be attended. Increased postnatal care also offers the opportunity to improve early and exclusive breastfeeding and other aspects of child care.

Older Women. Strategies are needed to encourage them to approach health providers for reproductive and other health problems to ensure that life-threatening and debilitating conditions are diagnosed and treated. Treatment of menopausal problems and screening for breast and cervical cancers are relatively simple efforts that can be implemented where female nurses and doctors are available.

Integrating Services

A major challenge in South Asia, where the poor have multiple health needs, women are socially and economically restricted from using services, and the direct and indirect costs to the poor of health care are high, is to optimize their visits to health providers and facilities. This can be achieved in part by integrating the essential package of services (Annex 4), and in part by improving quality (which is discussed below), even while extending reach. The services in the package must be made available using the principle of subsidiarity, beginning at the community level and moving upwards, including the necessary linkages. Table 5.3 lists the key actions that can be taken by providers at different levels and service delivery points. Implicitly, where health workers are involved, they must be trained and instructed to refer clients upward for services not provided at their level; and they should be responsible for reporting to the closest level in charge of management and financing.

TABLE 5.3 Reproductive Health Services from the Bottom Up

Where: Location	Who: Provider	What: Reproductive Health Actions
Home	• Self • Friend • Women's Group • Traditional Provider • Community Health Worker	• Maintaining personal hygiene • Practicing safe sex, contraception with men's involvement • Peer counseling for prevention of RTIs/STIs/HIV/AIDS (including men) • Preventing anemia • Preparing for birth (planning delivery) • Identifying risk indicators and signs • Obtaining skilled birth attendance (and referral if needed) • Arranging referral transport • Obtaining postnatal visit by a trained person • Initiating breastfeeding early, exclusive breastfeeding, and timely supplementation
Community Site (Field or Mobile Clinics)	• Community Health Worker • Paramedical Worker	• Providing information on sexuality, reproduction, contraception, abortion (where legal) and reproductive morbidity • Counseling for prevention of RTIs/STIs/HIV/AIDS • Distribution of contraceptives • Antenatal check-ups and advice including diet and rest, IFA supplementation • TT and child immunizations • Ensuring SBA • Identification of high-risk cases and appropriate referral • Screening for cervical cancer and manual breast examination; counseling for menopause
Stationary Clinic with limited facilities (e.g., Health Post or Sub-Center)	• Paramedical Worker	• Insertion of IUD • Institutional delivery • Active management of third stage of labor; prevention of post-partum hemorrhage • Diagnosis and syndromic management of RTIs/STIs • Menstrual regulation or similar services
Limited In-patient Facility, 24-hour Services (e.g., PHC)	• Doctor • Nurses • Paramedical Workers	• Sterilization • MVA or similar services and post-abortion care • Basic Emergency Obstetric Care • Treatment of depression • Screening of cervical cancer (Pap smear)
Referral Unit – Hospital with Specialists, OT, Laboratory, Blood Transfusion	• Medical Specialists • Nurses	• Comprehensive Emergency Obstetric Care • Treatment of post-abortion complications • Treatment of infertility • Screening for breast cancer (Mammography)

TABLE 5.4 How Reproductive Health Services can be Integrated

What Services to Integrate	How to Integrate Them
Maternal and child health services • ANC including nutritional supplements and counseling, management of illness and premature labor • Intranatal care (skilled attendance and EmOC) • Postnatal care • IMNCI **Family planning** including IEC/BCC, counseling, choice of methods and follow-up; starting with newly-weds to 'delay the first' is a good approach. **Anemia prevention/treatment** and FP services should also proactively address non-pregnant and unmarried adolescents.	• Strengthen technical, managerial and communication skills of frontline workers • Disseminate complete and appropriate guidelines (including referral instructions) • Rationalize deployment and management of staff, mobile facilities, camps, etc. at the local level • Ensure adequate supplies (including a menu of contraceptives); promote social marketing • Organize community-based emergency transport and fully establish EmOC facilities • Expand availability through private providers using purchase agreements or reimbursement • Involve other sectors and private organizations (e.g., CBOs, NGOs) to reach groups such as adolescents and assist in keeping girls in school; secondary school stipend programs.[3]
Clinical abortion (where legal) and post-abortion care **RTI/STI diagnosis and treatment** (including HIV/AIDS) Include adolescents in all.	• Expand clinical/medical methods, train public providers and increase public facilities and ICTCs • Disseminate protocols, ensure supplies • Provide public information on and RTI/STI/HIV/AIDS; involve CBOs/NGOs where available, especially to reach adolescents • Expand social franchising of MR/MVA, STI clinics and ICTCs (or other PPPs to enhance availability)
Adolescent services covering all IEC/BCC needs, peer counseling and life-skills	• Extend mass education for adolescents and families on SRH topics (including males) • Greatly expand involvement of other sectors and private organizations (e.g., CBOs, NGOs) to reach adolescents through innovative programs, and efforts to keep girls in secondary school
Breast and cervical cancer screening and management of identified problems **Counseling/treatment of menopausal problems** **Treatment/counseling of subfertility and alternatives**	• Train public providers and ensure they include counseling, other relevant activities and referral in their outreach visits/clinic work • Expand public education on these topics • Ensure equipment and supplies at relevant levels • Undertake mass screening programs for cancers and/or provide vouchers for poor women to use private facilities

Previous experience in South Asia shows that it is possible to combine maternal and child health services well with family planning as the same workers can deliver both at the frontline.[2] However, diagnosis and management of RTIs/STIs (including HIV/AIDS), nutrition counseling and care, prevention and treatment of common diseases such as TB and malaria, and safe abortion where legal are generally provided separately in all five countries. Integration would support more effective use and better outcomes. Depending on the state of the health system, the essential package of reproductive health care can be integrated in stages, with each stage including all the activities of the previous (Table 5.4). This integration strategy is suited to South Asia as it prioritizes maternal and child health and adolescent reproductive health needs. It brings services for older women in later, and does not deal specifically with men's needs. Integration will require coordinated planning at both micro and macro levels, flexible management, and motivated staff. While it may require additional resources in the short run (e.g., for training), it would be expected to improve efficiencies and effect cost-savings in the long run. It will achieve efficiencies for providers as well as clients. It could be deemed successful when monitoring and evaluation show that all reproductive health actions possible at a given level are done at a single window (worker or facility), and the needs of poor clients are met at the lowest possible cost to them, including direct, indirect and opportunity costs.

Improving Quality

Perceived 'good quality' care attracts clients and can achieve efficiency and better outcomes. With increasing wealth and technology in South Asia, the quality gap between (some) private and public health care is widening, and the prices of private services of acceptable quality are rising out of reach of the poor, increasing their risks of financial crises or leaving them to the mercy of poor private services and the public sector. In this scenario, the public health sectors need to improve the quality of services as well as target them to the poor, ensuring better allocative efficiency. Organization, planning and financing mechanisms are needed to achieve this balancing act.

To begin with, all five countries could put into effect adaptations (to their own situations and to different services) of the Bruce (1990) framework for assessing quality from a client's perspective. Good quality includes: an appropriate constellation of services, availability of a choice of methods, provision of information, good interpersonal relations, technically competent providers, and follow-up and continuity mechanisms. Ensuring these can result in individual gains and overall better health outcomes. A South Asian example of the application of such a framework is described in Box 5.1.

Most critical to enhancing the quality of reproductive health care in the public sectors of the five countries are human resource improvements. These include ensuring that staff are available, working (not absent), up-to-date in knowledge, skilled and well-behaved. While the first of these requires attention to pre-service training and recruitment, which may have significant

BOX 5.1 Initiatives Implemented in Sri Lanka to Improve the Quality of Care

The **National Quality Assurance Program** (initiated in 1989) operates in selected hospitals in Sri Lanka. It focuses on using quality indicators to improve standards in five aspects of critical health care: Intensive Care, Surgical Care, Maternal Care, Pediatric Care, and General Sanitation.

A project launched in 1995 by the Government's Family Health Bureau sought to improve the quality of reproductive health services. It emphasized three dimensions of service delivery: (i) the client, including providing comprehensive reproductive health education for decision-making, and in-depth information on services; (ii) service providers: job responsibilities, technical competencies, and kind and courteous behavior; and (iii) the service delivery point, including access to and availability of a wide range of reproductive health services, choice of contraceptive methods, effective referral linkages, follow-up and continuity of care, privacy in communication and service delivery, and practice of safe standard procedures.

Two premier women's hospitals, the Castle Street Hospital for Women and the De Souza Maternity Home, introduced the Japanese 'Kaizen 5S housekeeping practices': sorting, systematic organization, spic and span cleanliness, standardization, safety and self-discipline to improve quality of care. Other measures taken include: providing in-service training regularly to PHMs; training and inputs focused on improving postnatal care; regular maternal mortality reviews to examine causes of death and ways to prevent them in future; and Total Quality Management programs at the facility level. Quality monitoring is done through the following mechanisms:

- Routine Management Information Systems
- District Reviews
- Special Reviews for Well Woman Clinics
- Availability of Guidelines/protocols and Handbooks
- Operations research in reproductive health

financial implications, the others entail less-costly managerial improvements and in-service training. Each country or sizeable administrative unit (state/province/etc.) will need to review its personnel requirements and identify 'macro' strategies to meet these including, importantly, what staff need to carry out their jobs (e.g., transport or travel allowances), incentives for good performance, and options to contract in staff (or contract out services). The section below discusses these further.

Reforms that Count for Reproductive Health

Bangladesh, India, Nepal, Pakistan and Sri Lanka have all embarked on health sector reform (see Annex 11), which enables them to examine the impediments to implementing the policies to which they are committed, and identify and implement the changes that are needed. Because of its role in improving the welfare of the poor and in building the foundations for health and productivity of future generations, reproductive health merits special attention in the design

and implementation of the reform agenda.[4] In South Asia, health sector reforms need to result in

- increased *availability* of health services, because they are dreadfully short of need;
- improved *access* of the poor to them to enhance *equity*;
- better *responsiveness* to client needs to improve *utilization*;
- better *quality* care to improve *impact* and *efficiency*, because needs are immense and resources relatively scarce; and
- more and better *financing*, accompanied by increased *accountability*.

This section suggests and briefly discusses the chief reforms that constitute the 'how' of improving reproductive health:

- institutional and human resource development,
- public-private cooperation,
- decentralization of planning, resource allocation and management,
- improved financing, and
- monitoring and evaluation.

Reforming Institutions and Human Resources

The institutions and staff managing and delivering health care must be developed by:

- integrating health, family planning and nutrition departments to increase the commitment of policymakers, managers and providers to all aspects of reproductive health, particularly, *integrated* reproductive health services;
- developing clear policy and program guidelines for integrated services;
- training to enhance technical and managerial capacities to deliver services, and to plan, organize and manage *change*;
- increasing flexibility in decision-making and resource allocations and improving information within the health system;
- redressing shortages (in relation to needs rather than norms per se), vacancies and/or absenteeism in particular cadres, especially frontline female staff, through the human resource strategies mentioned above;
- strengthening supply chains to ensure availability of adequate drugs, medical supplies and equipment so that workers can provide effective services;
- fostering attitudinal and behavioral change among providers towards poor female clients through training, incentives and disincentives (as discussed above);

- replacing input and output targets with a focus on outcomes, using a broad set of reproductive health indicators, and supplanting normative planning with decentralized outcome-oriented action planning and resource allocation as discussed below; and
- increasing accountability among service providers and managers for health outcomes, following responsibility for planning and monitoring, and using data for decision-making.

The government health systems in all five countries need to be strengthened from the bottom up, and much more emphasis needs to be given to basic services that reach out to peripheries: remote areas, villages and urban slums. This means investing in frontline workers and mechanisms that provide services 'at the doorstep,' with relevant changes such as ensuring that workers' timings fit local women's work and domestic patterns. Providing incentives to workers to deliver services and clients to use them could drive better outreach care, for example, full antenatal care, completion of infant immunization schedules, acceptance and continuation of spacing methods of contraception.

Improving institutional and providers' capacities should include accreditation, competency-based training, and management accountability. Most of the countries would benefit from long-term strategic human resource planning for health, undertaken with clarity on the skills required in the public and private health sectors (such as community health and public health management) and realistic expectations of the professionals trained.

Public-Private Synergies

A significant proportion of reproductive health services is provided by the private sectors in all countries. Given client preferences for private providers, both formal and informal, efforts to expand reproductive health services for poor women could increase their involvement. Public financing of private provision (e.g., of institutional delivery), contracting out of services (e.g., diagnosis and treatment of RTIs/STIs), or contracting in of private providers (such as anesthetists for FRUs) are possible options to increase the availability, accessibility and utilization of services for poor women. Many private providers could be trained to deliver essential services. For example, an innovative strategy that is spreading in India is a public-private partnership with traditional practitioners to extend family planning and antenatal services and encourage institutional delivery. As discussed in Chapter 3, public-private partnerships for social marketing have been quite successful in the region and could be increased. The private sector could also be encouraged to extend its reach, for example, to adolescents in schools, or its range of services (e.g., to provide integrated reproductive health care). Table 5.5 shows the types of partnerships that could be developed between different private sector providers and the public health sector. Loevinsohn (2006) has discussed how public-private partnerships can be developed and managed.

TABLE 5.5 Possible Interactions between the Public Sector and Private Health Providers

Modern	Traditional	Unqualified
Non-Profit Organizations		
Wide range of partnerships, mostly: • Contracting out of public sector facilities • Contracts to provide services (purchaser/provider splits, vouchers, insurance) • Contracts to provide inputs such as training to government health staff • Community-based activities	Some partnerships: • Contracts to provide services • Contracts to provide inputs, e.g., training to health staff • Community activities	• Regulation (shut down unsafe facilities)
Commercial Organizations		
Wide range of partnerships: • Contracting out of public sector facilities • Contracts to provide services: purchaser/provider splits, vouchers, insurance • Contracts to carry out accreditation/supervision of facilities, continuing education of doctors • Contracting in of services, e.g., specialists • Contracts for technical services, e.g., pathology, biochemistry • Social marketing of ORS, contraceptives, delivery kits, etc.	Some partnerships: • Contracts to provide services in the community • Social marketing of ORS, contraceptives, delivery kits, etc. • Contracts for training, continuing education of government staff	• Regulation (shut down unsafe facilities)
Individuals (possibly through Professional Associations)		
• Contracting in of services, e.g., specialists • Contracts to carry out accreditation/supervision of facilities, continuing education of doctors, etc.	• Train and engage in basic tasks, e.g., contraceptive depot holders, health and hygiene education, identifying clients for FP, ANC, etc.	• Regulate and control illegal/unsafe activities • Train for simple tasks, e.g., contraceptive counseling, encouraging institutional delivery

In addition to quantities of services, the governments can influence the *quality* of care in the private sector (for example, reducing unsafe practices) through their stewardship roles: policy-making, regulation, accreditation, information provision, monitoring and so on. Health sector reforms can streamline and strengthen these roles. There is also scope for a flow of benefits from the private to the public sector. As discussed in Chapter 3, private participants in decentralized planning can facilitate the adoption of good or innovative approaches and assist their replication/scaling-up through the public system; they can be involved in training government staff, and so on.

Decentralization

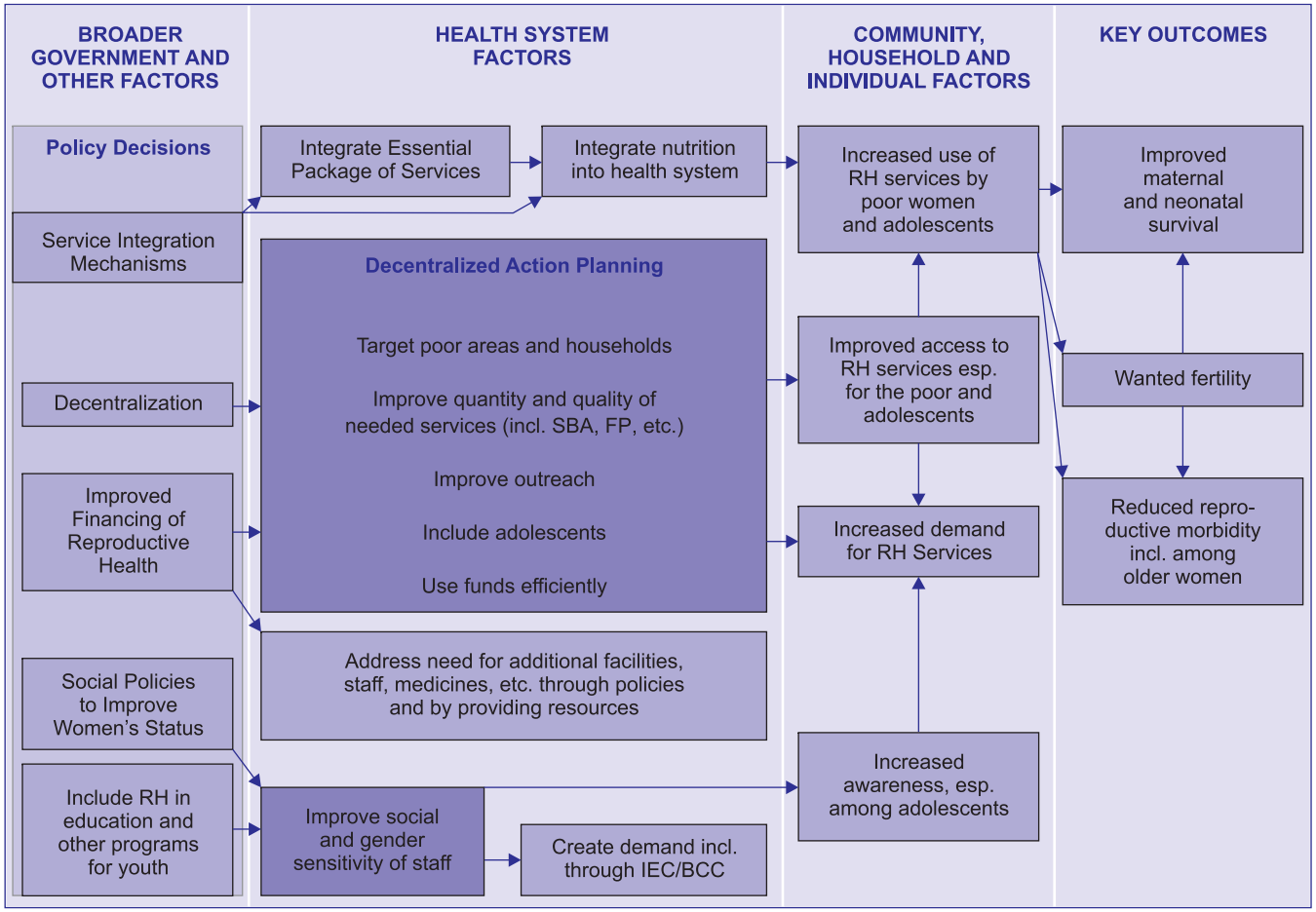
Each of the five countries has its own form and path of decentralization, and intra-country variations also are substantial in terms of the responsibilities and capabilities of different levels to plan, finance, manage and monitor health services. There is need everywhere to clarify which roles and responsibilities in the health sector can be executed effectively by local elected governments at each level, from provincial and district down to village/ward, and which require technical or bureaucratic management. The participatory planning approach described in Chapter 3 harnesses the knowledge and skills of local governments, technocrats, providers and communities to better meet the needs of clients and improve health management and resource allocations. It could be used to evolve appropriate roles and relationships among various stakeholders. Over time, it can help to mobilize additional public and/or private resources.

Considerable capacity building is needed for decentralized planning to be effective, but an advantage of the method described is that capacity can be 'built by doing' in repeated six-monthly cycles. Stakeholders can think through and prioritize local needs and goals, identify technical and managerial options to meet these needs, own and manage implementation of the plans they have forged, and evaluate them. The district level is currently the most critical level to strengthen and empower to make decisions to improve health in all countries. As districts with the worst health situations are also likely to have the weakest capacity, there will be a need to support their planning efforts with appropriate skills and knowledge, and ensure that adequate resources are available to make a difference. Opportunities for districts to exchange experiences, methods and examples would help to expand use of the tool and improve it over time. Higher-level authorities can provide incentives for good planning and performance, ranging from simple recognition awards to substantial increases in financial allocations.

While decentralization implies a policy of flexibility, in a technical sector such as health there is need for uniform standards for professional services, competencies, etc. Thus, higher authorities (national/state/provincial/etc.) have an important role to play in developing, setting and monitoring standards. Each country needs to review the extent to which these are already available, and fill in the gaps. Figure 5.1 shows how actions at different levels of the conceptual framework fit together for better reproductive health.

The decentralized action planning technique is a simple and practical approach to evidence-based planning which can facilitate supply improvements as well as demand creation. Reproductive health needs are identified using available (limited) data initially, but as capacity grows, information can be obtained through strengthened health management information systems as well as broader and more systematic community needs assessments. A community-based MIS could be built over time so that communities can monitor progress and influence the planning and implementation process more purposefully.

FIGURE 5.1 Actions at Different Levels Influence Reproductive Health Outcomes



Financing: Outlays for Outcomes

In 1994 the World Bank estimated that a package of reproductive health services including family planning, antenatal and delivery care, prevention and treatment of STIs, and health education (quite short of the essential package) would cost about US$6.75 per capita in low income countries. Most of the governments (central and subnational) in South Asia are even now spending under 10 percent of this; Sri Lanka's public expenditure is about 30 percent. Recent calculations of the actual costs of care are substantially higher than the 1994 estimates, suggesting that all five countries need to spend much more on reproductive health (Singh et al., 2004).[5]

As discussed in Chapter 4, household resources finance a disproportionately large share of reproductive health services in most of South Asia, with grave consequences for equity and health outcomes. Health crises such as hospitalization are major causes of indebtedness, resulting in poor people falling deeper into poverty. Improvements in reproductive health financing must clearly reduce the financial burden on individual households, particularly poor households, and involve greater pooling of risks and resources across appropriate populations. From an equity perspective, general revenue financing has proven to be a progressive means of financing health care. When combined with little or no user fees and universal coverage, general revenue financing provides high levels of financial protection against catastrophic ill-health.

An optimal resource allocation pattern would ensure that all or most households are publicly financed for inpatient services, and that outpatient services are funded primarily for the benefit of poorer households. However, public subsidies in South Asia generally go to the better-off. In India, for example, services received by the poorest quintile of the population accounted for 10 percent of total public expenditure, while the richest quintile accounted for over 30 percent (Mahal et al., 2001). Targeting services could help to redress such inequalities in the face of socio-political opposition.

Low demand for certain important reproductive health services and the large size (and heterogeneity) of the private health sectors in the five countries, however, call for additional innovative efforts to finance health for the poor, such as demand-side financing and purchasing arrangements. For example, voucher schemes could assist poor women to have institutional deliveries at accredited facilities in the private sector. Alternatively, contractual agreements with such facilities could purchase a specified number of deliveries for poor women. Community funds or patient refunds for transportation to EmOC facilities could be expanded as well as diversified to cover other out-of-pocket expenses for reproductive health care. Other promising financing approaches in the region include provider payments and incentives, social franchising (e.g., the Green Star and Janani programs), and contracting out through PPPs.

Monitoring and Measuring

Reproductive health services must be measured more effectively. Table 5.6 lists process and outcome indicators that could be used to assess reproductive health. Analyzing data by quintiles

TABLE 5.6 Process and Outcome Indicators for Reproductive Health Activities

What is to be Improved	How	Process Indicators	Outcome Indicators
Knowledge of Sex and Reproduction and Related Health	• IEC/BCC programs	• Awareness of contraception and HIV/AIDS • Contraceptive use rate • Desired family size	• Age at marriage • Age at first birth
Family Planning Services	• IEC/BCC programs (including counseling on choice and side effects) • Increase supply of contraceptives, including subsidized supplies and innovative means (e.g., franchising) • Include new contraceptives • Strengthen follow-up	• Contraceptive Prevalence Rate (Couple Protection Rate) • Unmet need	• Total Fertility Rate • Adolescent Fertility Rate
Antenatal and Natal Care	• Build capacities • Ensure adequate supplies of vaccines, iron-folate, blood pressure apparatus • Ensure counseling (on diet, danger signs, birth planning, institutional delivery, etc.) • Strengthen supportive supervision • Finance poor clients or private providers to use private facilities for delivery	• Coverage of pregnant women with ANC, TT, IFA • Proportion of women who have skilled birth attendance or institutional births • Proportion of poor women who delivered at an institution (Public or Private)	• Maternal deaths in the community
Abortion (where legal and accepted)	• Improve safety of abortion services to avoid morbidity • Provide skill-based training to health staff in safe and hygienic techniques • Accredit private facilities to ensure safety and quality	• Number of facilities providing safe services • Number of safe procedures carried out • Cases of post-abortion complications managed	• Maternal deaths due to abortion
Emergency Obstetric Services	• Improve health infrastructure • Ensure availability of drugs, supplies and equipment • Provide skill-based training • Build public-private partnerships to bridge the gaps in availability of facilities, specialists, blood banks, etc.	• Number of BEmOC and CEmOC facilities per 500,000 population • Proportion of population within two hours reach of facilities • Proportion of complicated cases managed • Case fatality rate	• Maternal Mortality Ratio • Neonatal Mortality Rate

Postnatal and Newborn Care	• Teach traditional birth attendants and community workers about danger signs • Ensure first visit within 24 hours by a trained service provider, two visits in first week to 10 days, and three visits during neonatal period	• Proportion of women who received PNC on first day (or second day depending on topography) and two visits in first week or 10 days • Proportion of newborn breastfed within two hours	• Neonatal Mortality Rate
Integrated Services (MCH, FP, RTI/STI diagnosis and treatment, and General health services, e.g., for common communicable diseases)	• Reform health service organization, including health facility development and training of staff	• Milestones for organizational reforms set and achieved • Integration of services at delivery point: Proportion of clients who seek and receive multiple services at a single-window • Client satisfaction • Number or proportion of older women clients	• Reduction in illnesses such as TB and malaria among women and children
Nutrition	• Build knowledge and skills of health staff to monitor and manage nutritional status of mothers and infants and counsel women • IEC/BCC programs • Coordinate with nutrition programs, including training of their workers in health issues	• Cases of malnutrition identified and managed • Coverage with IFA supplements • Knowledge of good nutrition practices among workers and mothers	• Anemia prevalence rate • Proportion of women with BMI $<18.5 kg/m^2$ • Child nutrition status (weight-for-age, etc.)
Human Resource Development	• Ensure functional worker: population ratios • Ensure appropriate skills for level • Develop teams • Provide skill-based in-service training • Provide on-the-job training through supervision	• Number of health staff positioned • Number of health staff trained • Coverage of area/ population with services • Quality of care provided	• Indicators above

or other socio-economic classifications would be useful to focus planning and programs on improving equity. Separate data on adolescents (especially their reproductive health knowledge, nutrition, contraceptive use, etc.) is necessary to address their needs. Strategies to collect data should include community needs assessments, sample studies and client satisfaction surveys that provide independent information, in addition to data from health management information systems. To improve care there needs to be a two-way flow of information based on these

measures. Data that come up must go down: there is little point in collecting community-based information or service statistics if these are not used by health managers, providers and communities to make decisions on how to improve coverage, equity and quality. DAP is an appropriate mechanism for this, as amply described.

Much of the analysis in this report has been based on cross-sectional surveys which do not establish causality nor reveal the time it takes for effects to occur. This limits the inferences that can be made, calling for a stronger evidence-base for future analyses. Impact evaluations and operations research are needed to assess the effectiveness of significant interventions and strategies, and regional capacity for these needs to be strengthened.

Other Matters Arising

Actions beyond the Health Sector

It is critical to involve other sectors such as education, food supply, and rural development in improving women's reproductive health. Besides the impact of the three R's, the psychosocial effects of schooling on women (e.g., increased assertiveness) help them to make better decisions in sexual and reproductive matters. Increased schooling has both direct and indirect effects on the age at marriage and consequently on childbearing and women's health. The ongoing efforts in South Asia to expand girls' education are already showing some positive impacts on reproductive health. One area that remains neglected, however, is sex education, which schools could usefully provide at the right age to both girls and boys. To counter nutritional deficiency, nutrition education, supplements, targeted programs for out-of-school adolescents, and women's employment are some effective interventions.

Women's empowerment efforts are important in South Asia. The combination of reproductive health services and social policies could greatly increase gender equity and improve women's health. These policies include: promoting the value of girls; enforcing the minimum age at marriage through compulsory education and other means; reducing son preference, e.g., through social security; reducing gender-based violence; enhancing sexual and reproductive rights; increasing women's autonomy, for example, through information or inheritance laws; and improving their economic status through employment opportunities.

Further Study

Due largely to space limitations, this study has not dealt with two important topics related to poor women's reproductive health in South Asia: gender-based violence and men's reproductive health. Violence against women in the home, on the streets and on account of politics is intimately related to their reproductive health and to women's health in general. However, it is a broad and increasingly deep topic whose complex manifestations, severity, underlying causes and legal ramifications call for specific attention. Men's reproductive health also deserves in-depth consideration.

Many gaps remain in our knowledge of poor women's reproductive health, such as knowledge of sexual practices and behaviors, reproductive decision-making, or 'positive deviance' in reproductive health outcomes. More operations research in South Asian health systems would help to identify how changes in service provision and use could be accelerated further.

Learning across Borders and the Role of the Bank

The five countries covered in this study have strong cultural similarities and shared histories. In addition, some of their problems are inter-related. For example, intra-regional migration of workers and women in the sex trade (e.g., between Nepal and India) are causing the spread of HIV across borders. The five countries together have a rich body of experience, both good and bad, which could be explored jointly. This 'cross-border' learning could include discussion of effective interventions ('regional best practices'), and the 'how' of human resource development, financing, and monitoring and evaluation. Providing a forum for such exchange could be a role for the World Bank. This report is just a beginning.

A multi-stakeholder and regional policy dialogue could help to establish further areas for country collaborations, and the comparative advantages and responsibilities of different development partners. In addition to inter-country and inter-agency exchange, the Bank has an important role in assisting further development of the reproductive health sector in South Asia. Key areas (in addition to ongoing activities) that require investment are: training and other aspects of human resource development; diffusion of technical knowledge; information and education programs through personnel, media and technology; data systems and surveys, including some designed to provide comparability across countries; developing and scaling-up innovations; and services, services, services… The Bank's comparative advantage lies in positioning and promoting these improvements within health sector reforms and overall economic reforms.

NOTES

1. During the Health and Population Sector Program in Bangladesh, the MOHFW developed a Clients' Charter of Rights. It was prepared by a National Stakeholder Committee to facilitate the incorporation of community voices into health programs, establish their right to transparency, and build a foundation for program accountability. The Charter includes rights to a choice of provider, accessibility, privacy, etc. A large number of copies of this Charter was disseminated by the MOHFW to all Divisions in the country with instructions to distribute the copies to the Upazilla Health Complex level, and then to Community Clinics. Although several problems were experienced, the approach can be adopted and improved upon by other countries.
2. An exception of some consequence in South Asia is the delivery of services to the opposite sex – generally, male workers (except doctors in some areas) cannot serve women clients, nor can female workers provide services to men. Thus, enhancing men's involvement in women's reproductive care may require additional communication and outreach strategies. Integration of men's services almost certainly would, and may need further operations research.

3. While integrating health, family planning and nutrition services is necessary to improve reproductive health, other sectors such as education, women's development, and water supply and sanitation could work through collaborations and implement programs in parallel.
4. There are several persuasive reports on reproductive health and health sector reforms including Ravindran and de Pinho (2005), WHO (2005), Standing (2002), Hardee and Smith (2000), and Krasovec and Shaw (2000).
5. For example, a first visit to obtain oral contraceptives was estimated to cost US$8.00 and a normal delivery, US$28.

Definitions

Abortion: Termination of pregnancy from whatever cause before the fetus is capable of extra-uterine life or before 28 weeks of gestation. Spontaneous abortion refers to those terminated pregnancies that occur without deliberate measures even if an external cause such as trauma, accident or disease is involved. Induced abortion refers to termination of pregnancy through a deliberate intervention intended to end the pregnancy (Royston and Armstrong, 1999).

Adolescence: The term 'adolescence' has been defined as including those aged 10-19 years, and 'youth' as those between 15 and 24. 'Young people' is a term that covers both age groups, i.e., those between the ages of 10 and 24 years. True adolescence is the period of physical, psychological and social maturing from childhood to adulthood, and may fall within either age range (WHO, 1999).

Adult literacy rate: The percent of persons (male, female or both sexes) aged 15 years and over who can read and write a short simple statement on their everyday life with understanding.

Age-specific fertility rate (ASFR): The number of births to women of a specified age group during a specified period (usually of one year) per 1000 women in the same age group.

Anemia prevalence: The proportion of women aged 15-49 years whose hemoglobin levels are below 12.0 gm/dl if they are not pregnant, or below 11.0 gm/dl if pregnant.

Annual population growth rate: The average rate of change of population size for a given country, territory or geographic area, during a year. It expresses the ratio between the annual increase in population size and the total population in that year (multiplied by 100).

Antenatal visit: A health check-up provided to a pregnant woman any time during pregnancy for reasons related to the pregnancy.

Basic emergency obstetric care (BEmOC) facility: A facility with functioning basic emergency obstetric care, including parenteral antibiotics, oxytocics, sedatives for eclampsia and the manual removal of placenta and retained products; usually measured per 500,000 people.

Birth weight: The weight of the newborn obtained at birth, preferably within the first hour of life before significant postnatal weight loss occurs (WHO, 2006).

Body mass index (BMI): Weight in kilograms divided by height in meters squared. Women with BMIs < 18.5 kg/m^2 are considered underweight (Last, 1995).

Child mortality rate (CMR): The number of deaths of children in the age group 1-4 years per 1000 live births in a year.

Children stunted: Percent of children whose height measurement is more than two standard deviations below the median reference standard for their age as established by the US National Center for Health Statistics.

Children wasted: Percent of children whose weight is more than two standard deviations below the median reference standard for their weight as established by the US National Center for Health Statistics.

Children moderately underweight: Percent of children whose weight measurement is more than two standard deviations below the median reference standard for their age as established by the US National Center for Health Statistics.

Children severely underweight: Percent of children whose weight measurement is more than three standard deviations below the median reference standard for their age as established by the US National Center for Health Statistics.

Comprehensive emergency obstetric care (CEmOC) facility: A facility with functioning comprehensive emergency obstetric care which includes basic emergency obstetric care plus surgery, anesthesia and blood transfusion facilities; usually measured per 500,000 people.

Contraceptive prevalence rate (CPR): Number of currently married women aged 15-49 years using any method of contraception, modern or otherwise, per 100 women of that age.

Crude birth rate (CBR): Annual number of live births per 1000 mid-year population (UN, 2003*)*.

Currently married (couples, women or men): All those in consensual unions or married, including those not currently living together but not divorced.

Dependency ratio: The ratio of persons below 15 years of age and over 65 years to those aged 15-64 years. This ratio is usually referred to as the total dependency ratio, while the first component of the numerator alone (children under 15) gives the child or young dependency ratio, and the second component (those 65 and over), the old-age or old dependency ratio (UN, 2002).

Disability-adjusted life year (DALY): This measure expresses the years of life lost to premature death and lived with a disability of specified severity and duration. One DALY is

one lost year of healthy life. The total DALYs of a population in a given year indicate that population's disease burden for the year (Murray and Lopez, 1996).

DPT3: A complete course of three doses of vaccination against diphtheria, pertussis (whooping cough) and tetanus.

Full immunization coverage: Percent of infants (or children 12-23 months) who have been fully immunized with one dose of BCG, three doses of DPT, three doses of oral polio and one dose of measles vaccine (and hepatitis B vaccine as applicable) according to the national immunization schedule. The denominator used to calculate the percentage is the number of infants surviving to age one (WHO, 1994).

Fertility rate of women in the 15-19 year age group: The number of live births in a given year to women aged 15-19 years per 1000 women in the same age group.

GDP spent on health (percent): Public expenditure on health in a given year divided by GDP for the same year, expressed in current prices multiplied by 100.

Gross domestic product (GDP): The total output of goods and services for final use produced by an economy by both residents and non-residents, regardless of the allocation to domestic and foreign claims. It does not include deductions for depreciation of physical capital or depletion and degradation of natural resources (UNDP, 1999).

Human development index (HDI): A composite of three indicators which reflect important dimensions of human development: longevity and health as measured by life expectancy at birth; educational attainment as measured by a combination of adult literacy (two-thirds weight) and combined primary, secondary and tertiary school enrolment ratios (one-third weight); and standard of living as measured by real GDP per capita (in purchasing power parity US dollars) (UNDP, 2005).

Infant mortality rate (IMR): The total number of infants who die before reaching one year of age in a given year divided by the total number of live births in the same year multiplied by 1000 (UN, 2003).

Infertility: Primary infertility is the failure to conceive despite coitus in the absence of contraception, and secondary infertility is the failure to conceive despite coitus following a previous pregnancy (in the absence of contraception, breastfeeding or postpartum amenorrhea) (WHO, 2006). Assessment is usually over a two-year period.

Life expectancy at birth: Average number of years that a newborn could expect to live if he or she were to pass through life exposed to the sex- and age-specific death rates prevailing at the time of his or her birth, for a specific year in a given country, territory or geographic area.

Low birth weight (LBW): A weight of less than 2500 grams at birth (WHO, 2006).

Maternal death: Death of a woman while pregnant or within 42 days of termination of pregnancy, irrespective of the duration and the site of the pregnancy, from any cause related to or aggravated by the pregnancy or its management, but not from accident or incidental causes. A late maternal death is the death of a woman from direct or indirect obstetric causes more than 42 days but less than one year after termination of the pregnancy (WHO, 2006).

Maternal morbidity: Morbidity in a woman who has been pregnant (regardless of the site and duration of the pregnancy) from any cause related to or aggravated by the pregnancy or its management but not from accidental or incidental causes. The term is used interchangeably with obstetric morbidity (WHO, 1994).

Maternal mortality ratio (MMR): The number of maternal deaths occurring over a year per 100,000 live births in that year. It may also be expressed per 1000 or 10,000 live births (WHO, 2006).

Median age at marriage: The age (in years) by which 50 percent of the reference population (usually 'ever-married women' or a specific cohort of this group) was married.

Menstrual regulation (MR): Any chemical or mechanical process used to induce menstruation (that has been delayed by 14 days or more) within six weeks of the due date of onset. The most common method is by mini-vacuum aspiration, which is safe and can be performed as an outpatient procedure without anesthesia. The current medical method of choice is a combination of 200 mg mifepristone and 400 mcg misoprostol.

Midwife: A person who has been regularly admitted to a midwifery education program that is duly recognized in the country in which it is located, and has successfully completed the prescribed course of studies and acquired the requisite qualifications to be registered and/or legally licensed to practice midwifery (International Confederation of Midwives).

Menopause: The time of a woman's life when her reproductive capacity ceases – the ovaries stop functioning, their production of steroid and peptide hormones falls, and a variety of physiological changes take place in the body. Some of these result from cessation of ovarian function and related menopausal events while others may be a function of aging (WHO, 1996c).

Neonatal mortality rate (NMR): The number of deaths in infants under 28 days of age in a given year per 1000 live births in that year (Last, 1995).

Nurse: A person who has completed a program of basic nursing education and is qualified and registered or authorized by the country to provide responsible and competent services for the promotion of health, prevention of illness, care and rehabilitation of the sick.

OPV3: A complete course of three doses of oral poliomyelitis vaccine.

Per capita expenditure on health: Public expenditure on health in a given year in current value of US dollars, divided by the mid-year population.

Perinatal mortality rate: Number of deaths of fetuses (of at least 22 weeks of gestation) and early neonatal deaths (within 7 days of birth) per 1000 live births (WHO, 2006).

Population below the national poverty line: Percent of the population living below the national poverty line in a given country, territory or geographic area, at a specific period in time, usually a year. The operational definition for a national poverty line varies from country to country and represents the amount of income required by each household to meet the basic needs of all its members. Poverty estimates are based on data from an actual household budget, income or expenditure survey and on the concept of an 'absolute' poverty line expressed in monetary terms, i.e., the income or expenditure below which a minimum nutritionally-adequate diet plus essential non-food requirements are not affordable.

Population below the international poverty line: Percent of the population in a given country, territory or geographic area living below the international poverty line at a specific period in time, usually a year. For low-income countries the international poverty line is drawn at a 'dollar a day', i.e., a daily per capita consumption of less than US$1.00 at constant 1985 prices (equivalent to $1.08 a day at 1993 prices) adjusted to local currency using purchasing power parities (World Bank, 1993).

Population density: The number of persons in the total population divided by the total surface area of a country or territory in square kilometers (UN, 2003).

Prevalence: The number of events (e.g., instances of a given disease or other condition) in a given population at a designated time. When used without qualification, the term usually refers to the situation at a specified point in time (point prevalence). The prevalence rate (ratio) is the total number of all individuals who have an attribute or disease at a particular time (or during a particular period) divided by the population at risk of having the attribute or disease at this point in time or midway through the period (Last, 1995).

Proportion of births attended by skilled health personnel: Percent of births attended by a skilled birth attendant (see below).

Reproductive tract infections/Sexually-transmitted infections (RTI/STIs): Reproductive tract infections include both those that are sexually-transmitted and those that are not. Non-sexually transmitted infections may be endogenous infections caused by the abnormal growth of organisms that are normally present in the vagina, such as bacterial vaginosis or vulvovaginal candidiasis, or exogenous infections caused by unsafe obstetric and gynecological practices (traditional and modern) and poor genital hygiene. Sexually-transmitted infections include chlamydia, trichomoniasis that can cause chronic and frequently painful vaginal infections, gonorrhea, syphilis and genital warts.

Sex ratio: Normally, the number of males in a population for every 1000 females (UN, 2003). In India and this report, the number of females per 1000 males in a population.

Singulate mean age at (first) marriage: The mean age in years at first marriage of those ever-married in the 15-50 year age group. It is computed from the proportions never-married in each five-year age group within the broad age group 15-50, and therefore measures the average age at first marriage over the historical period covered by the age group 15-50, rather than the average age of those currently marrying for the first time (UN, 2003).

Skilled birth attendant: A health professional such as a midwife, doctor or nurse who has been trained and is competent in the skills needed to manage normal (uncomplicated) pregnancies, childbirth and the immediate postnatal period, to identify complications, and to provide necessary emergency management and/or referral to a higher level of health care.

Total fertility rate: The total number of children a woman would have by the end of her reproductive period if she experienced the currently prevailing age-specific fertility rates throughout her childbearing life.

Under-five mortality rate: The annual number of deaths of children under five years of age per 1000 live births (UN, 2003).

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ANNEXES

Annex 1

Poverty and Reproductive Health

TABLE A1.1 Poverty in the Five Countries of South Asia, various years

	Bangladesh	India	Nepal	Pakistan	Sri Lanka
Percent of Population below $1 a day	36.0	34.7	37.7	13.4	6.6
Poverty Gap at $1 a day	8.1	8.2	9.7	2.4	1.0
Percent of Population below $2 a day	82.8	79.9	82.5	65.6	45.4
Poverty Gap at $2 a day	36.3	35.3	37.5	22.0	13.5
Percent reported by National Poverty Line/International line of $2 a day	60.1	35.8	49.1	49.7	55.1
Average Annual Per capita Growth 1981-2000	2.1	2.5	2.6	3.6	3.7
Per capita Health Expenditure (US$), 2000	14	23	16.6 (2003)	18	31
Human Development Index, 2001	0.502	0.590	0.499	0.499	0.730

Note: Data were the most recent available up to 2004: for Bangladesh and India, 2000; Pakistan, 1998; and Nepal and Sri Lanka, 1995. In Nepal, the percent of population living below $1 a day was 31.0 in 2004 (NLSS 2004) but other data were not available for this year. Some more recent data were given in Chapter 1, endnote 1.

Sources: World Bank, 2004; UNDP, 2005; GON-MOHP, 2005.

TABLE A1.2 Reproductive Health Levels and Millennium Development Goals, Five Countries

	Bangladesh	India	Nepal	Pakistan	Sri Lanka
Population, 2002, millions	136	1,048	25.9	145	19
Maternal Mortality Ratio, 1995*	600	440	539	200	60
Maternal Mortality Ratio, 2000	330	540	470	500	92
Maternal Mortality Ratio Goal, 2015	150	110	213	50	15
Skilled birth attendance, 2001	13.4	42.5	12.9	24.6	~80
SBA, 2005/2006/2007	18	47	44	39	99
Contraceptive Prevalence Rate, 2001	44.1	42.9	35.2	20.4	49.5
Contraceptive Prevalence, 2005/2006	47.5	48.5	44.2	21.7	52.8
Under-Five Mortality Rate, 1990	144	123	162	128	23
Under-Five Mortality Rate, 2001	77	93	91	109	19
U5MR, 2005/2006/2007	65	74	61	94	21
Under-Five Mortality Rate Goal, 2015	48	41	54	42	8?
Infant Mortality Rate, 2001/02	71.5	63[a]	64.4	77.1	12.2
IMR, 2005/2006/2007	52	57	48	78	15
Child Malnutrition, 1990	66	64	na	40	na
Child Malnutrition, 2001	48	52[b]	48	na	33
Child Malnutrition Goal, 2015	33	32	na	20	na

Notes: * Modeled estimates of MMR (WHO, 2004). As reliable data for 1990 were not available, the MMR Goals for 2015 are one-quarter of the 1995 (and not 1990) level, except for Nepal whose MMR Goal is based on the 1988 level of 850 per 100,000 live births. New (2006/2007) MMR estimates for Nepal and Pakistan are 281 and 276, respectively. Contraceptive Prevalence Rates are for modern methods. Child Malnutrition is the percent of children under two standard deviations of the standard weight-for-age. New (2005/2006) levels for India and Nepal are 43 and 39 percent, respectively. a: 2002 data; b: 1998 data. Various sources.

Annex 2

Study Methodology

This annex contains details of: (a) the data used to analyze reproductive health status and service use in Chapters 1 and 2; (b) the methodology of the quintile and multivariate analyses; (c) the approach to primary data collection for the analysis of constraints to the use of health services; and (d) the methodology used to determine costs and financing in Chapter 4.

Survey Data

The reproductive health indicators used in the study are given in Box A2.1.

BOX A2.1 Reproductive Health Indicators Used in the Study

General Demographic and Economic Indicators

Crude Death Rate
Age-specific Death Rate
Life Expectancy at Birth
Sex Ratio
Poverty Head Count Ratio

Fertility Indicators

Crude Birth Rate
Total Fertility Rate
Age-specific Fertility Rates*
Mean or Median Age at First Marriage*
Mean Age at First Birth*
Total Number of Pregnancies/Parity
Number of Children Ever Born*

Fertility Preferences and Family Planning

Desired Family Size
Desire for No More Children*
Unwanted Births*
Induced (and Spontaneous) Abortion*
Current Use of Modern Method of Contraception
Unmet Need for Family Planning*

Women's Status Indicators

Women's Autonomy Index
Women's Mobility
Women's Employment

Safe Motherhood

Anemic Women*
Underweight Women (based on Body Mass Index)*
Antenatal Care Coverage
Tetanus Toxoid Coverage during Pregnancy
Iron Folic Acid Coverage during Pregnancy*
Institutional Delivery*
Skilled Assistance during Delivery*
Postnatal Care Coverage
Maternal Mortality
Antenatal/Postnatal Morbidity*

Child Survival and Care

Low Birth Weight*
Neonatal Mortality Rate
Infant Mortality Rate
Child Mortality Rate (Children Surviving)
Median Duration of Breastfeeding
Immunization Coverage of Children*
Percent of Children Underweight*

Reproductive Morbidity and Awareness of Disease

RTI/STI Awareness
RTI/STI Prevalence
HIV/AIDS Awareness
HIV/AIDS Prevalence
Loss of DALYs due to Reproductive ill-health

Note: *These indicators were used also to examine Adolescent Health (15-19 year-olds).

Data from the following sources were used to analyze reproductive health status and use of health services.[1]

Bangladesh

- Bangladesh Demographic and Health Surveys, 1999-2000, 2004 and 2007 (Preliminary Report).
- Bangladesh Maternal Mortality and Morbidity Survey, 2001.

India

- National Family Health Surveys, 1992-93, 1998-99 and 2005-06.
- Reproductive and Child Health Rapid Household Survey, 1998-99, for district level analysis.
- 50th (1993-94) and 55th (1999-2000) rounds of the National Sample Survey covering over 100,000 households in 10,000 sampling units (villages and urban blocks).
- Sample Registration Survey, 2002.

Nepal

- Nepal Demographic and Health Surveys, 2001 and 2006.
- Nepal Living Standards Survey, 2004.
- Nepal Family Health Survey, 1996.
- Micro-nutrient Status Survey, 1998.

Pakistan

- Pakistan Demographic and Health Survey, 2006-07.
- Pakistan Social and Living Standards Measurement Survey, 2004-05.
- Status of Women, Reproductive Health and Family Planning Survey, 2003.
- Pakistan Reproductive Health and Family Planning Survey, 2000-01.
- National Nutrition Survey, 2002.
- Pakistan Fertility and Family Planning Survey, 1996-97.
- Adolescent and Youth Survey, 2001-2002.
- Study of Unwanted Pregnancies and Post-abortion Care, 2002.

Sri Lanka

- Demographic and Health Surveys, 1993, 2000 and 2006-07 (Preliminary Report).
- Annual Health Bulletins published by the Ministry of Health.

- Reports of the Household Income and Expenditure Surveys, 1990-91, 1995-96 and 2000.

Data Limitations

The demographic surveys focus on ever-married women in the reproductive age group of 13 or 15 to 49 years, thus excluding early adolescents aged 10 to 12 or 14 years and adults 50 years and above. The sample sizes of these large-scale surveys are inadequate to disentangle the impact of socio-economic or health service factors on low frequency events such as maternal deaths. Further, there have been no attempts to track women over time to study behavioral or other changes at different stages of the reproductive life cycle.

The orientation of large sample surveys is generally such that subjective and qualitative responses are rarely available. In the case of reproductive health, issues such as comfort levels with health care providers, self-confidence in interacting with the outside world, atmosphere within the household, and support from spouse are important determinants of service utilization, but we are unable to study these on a large scale. Recent advances in psychometrics and survey techniques may enable such surveys in the future.

In the absence of national data on certain subjects, data that are specific to smaller areas or population groups have been included in the review and analyses. Due to a lack of uniformity, these data serve, at best, to illustrate phenomena. It is difficult to make comparisons and draw unerring inferences.

Quintile Analysis

Respondents' economic status was measured using an asset index as described by Gwatkin et al. (2000). The items included in calculating the index were: source of water supply, electricity, presence of radio, television, refrigerator, bicycle, motorcycle, car, van, tractor or any other vehicle, type of flooring, latrine and other characteristics related to wealth status that are available in the demographic surveys. Each of these assets was assigned a weight and scores generated through principal component analysis. The scores were then standardized against a standard normal distribution with a mean of zero and a standard deviation of one using the formula given below:

$$\left(\frac{Value\ of\ asset\ variable - Unweighted\ mean\ of\ asset\ variable}{Unweighted\ standard\ deviation\ of\ asset\ variable} \right) \times Raw\ asset\ fa$$

The section within brackets indicates the standardized value of the asset status based on the presence or absence of a particular asset (1 or 0) in the whole sample. The scores were then added up by household and individuals ranked according to the total score of the household in which they live. The sample was then divided into quintiles (five groups of equal numbers of individuals). In India, the asset index was developed separately for rural and urban areas.

Multivariate Analyses

As most dependent variables are dichotomous, logistic regression was used to carry out the multivariate analyses. The net effect of each category of an independent variable on the dependent variables, with respect to the reference category, is represented by an odds ratio. The odds ratio for the reference category is 1. An odds ratio of greater than 1 therefore indicates a higher chance of occurrence of the dependent variable for that category, with respect to the reference category, when other independent variables are controlled. The dependent and independent variables included in the multivariate analyses are as follows:

	Dependent Variables
Fertility	Total Fertility Rate
Family planning	Contraceptive use, Unmet need for contraception, Desire to have no more children
Antenatal care	TT coverage, Antenatal visits
Intra-natal care	Delivery assisted by a skilled birth attendant, Institutional delivery
Postnatal care	Postnatal care
Nutritional status of mother	BMI<18.5 kg/m^2
Child health	Low birth weight, Breastfeeding, Underweight (weight-for-age <-2SD), Immunization
Mortality	Neonatal mortality, Infant mortality, Child mortality
	Independent Variables
Socio-economic indicators	Maternal education, Husband's education, Economic status, Women's working status, Residence, Women's status
Demographic indicators	Age at first birth, Maternal age, Number and gender of living children, Parity/Birth order

Some of the dependent variables were also used as independent variables where relevant, e.g., the number of antenatal visits was used as an independent variable in the analysis on intra-natal care.

Primary Data Collection for the Assessment of Quality of Care

Primary research was carried out in selected sub-national units within each country. Criteria for the selection of sub-national units were as follows:

India. Rajasthan and Karnataka were selected because they represent different regions of the country (North and South) and different levels of social and economic development and reproductive health, based on a reproductive health index.[2] Karnataka fares better than Rajasthan in these respects. In each state, two districts were selected based on districts' reproductive

health indices. These were: Raichur (low) and Mysore (high) in Karnataka, and Udaipur (low) and Jhunjhunu (high) in Rajasthan. From each district, two blocks were selected randomly. Two Primary Health Centers (PHC) were selected in each block, and two Sub-centers in each PHC area. Interviews, focus group discussions, and assessments of health facilities were carried out in these selected areas.

Bangladesh. Using data for six indicators of reproductive health, two average-performing districts were selected from the 64 districts in the country.[3] In each district one *upazilla* was chosen as the field site: Ishwardi *upazilla* in Pabna district and Ullapara *upazilla* in Sirajganj.

Nepal. Three districts were selected purposively: Darchula in the Far-Western Development Region and Bardia and Pyuthan in the Mid-Western Region. Bardiya and Pyuthan are among the districts in Nepal with a high percentage of people living below the poverty line and a low human development index.

Pakistan. Punjab province was selected on the basis of its population size and number of districts. A disadvantaged district was selected on the basis of socio-demographic (including total population, rural and urban proportions, ethnicity, education and electricity) and health data (crude birth rate, maternal mortality ratio, number and type of health facilities). Multan was the district selected.

Sri Lanka. The two districts selected in Sri Lanka, Anuradhapura and Vavuniya, are situated in provinces that are predominantly rural and relatively underdeveloped. These districts have a lower availability of services, and have been facing the challenges of poverty and pressures due to the conflict in the North and East – directly in the case of Vavuniya and indirectly in the case of Anuradhapura (some areas of the district border the conflict areas).

Data Collection Techniques

Data was collected in the selected sub-national units in the five countries from clients and health providers, and by direct observation of health facilities.

Clients. Several tools were used to obtain the perspectives of clients:

*Survey Questionnaire. I*n the study area in Sri Lanka, a survey was administered to households selected by using a multi-stage sampling process. The focus was on individuals in those households that had used reproductive health care in 12 months prior to the survey. In order to identify event-based households, 5,382 households were checked and 1,002 of these were administered the questionnaire.

Focus Group Discussions (FGD). This method was used in Bangladesh, India, Nepal and Sri Lanka. In Sri Lanka the groups consisted of younger mothers, older women, female adolescents, or men. One FGD was conducted per group in each of four locations. It was divided into five sessions to discuss participants' concepts of reproductive health, household decision-making

processes regarding care and other issues. In Bangladesh, the FGDs were carried out with poor women.[4] In Nepal, 12 FGDs were conducted, four in each study district. The four focus groups were: unmarried adolescent girls, married women, elderly women and married males. In India, adolescent boys and girls were a specific focus group.

Interviews and Informal Discussions. In Bangladesh, male family members of poor women who participated in the FGDs were interviewed. In Nepal, the team had informal discussions with unmarried adolescent males. In India, 834 interviews were carried out with 436 poor and 398 non-poor women who had had a recent reproductive event such as a birth, infant death, reproductive illness, or abortion.

Health Providers and Key Informants. Information was obtained from providers at different levels of the health system, from policymakers and administrators to community-level workers. Private practitioners and representatives of non-governmental organizations were also included. The views of some opinion leaders and 'responsible' members of the communities (e.g., journalists, educationists, social workers) were also obtained. The following methods were used.

Consultation Workshops were carried out in Sri Lanka and Nepal. In Nepal, one workshop was conducted in each district with participants ranging in number from 21 to 36. Participants included government health providers and representatives of local NGOs. Some key informants (e.g., a college principal, women's group representatives, social workers) were also present. In Sri Lanka, different categories of service providers from government, representing different levels of the district health system, private practitioners and NGO representatives participated in the two district-level workshops (which had 28 and 47 participants).

Focus Group Discussions. Nine FGDs were conducted in India with health providers from the public and private sectors, and five were conducted in Pakistan.

Interviews. These were conducted in all five countries. They were with government health personnel in administrative, managerial and policy-related positions, as well as fieldworkers, medical officers, nurses, and personnel from private clinics. In Bangladesh, traditional healers, untrained TBAs and 'quacks' were included among those interviewed. In Nepal, other responsible members of the community were also interviewed. NGO representatives were interviewed in Bangladesh, Nepal and Pakistan.

Facility Assessments. Assessments of health facilities were carried out by the study teams in Bangladesh, India, Pakistan and Sri Lanka. In India, a list was prepared of all facilities where women seek reproductive health care, including public and private hospitals and clinics as well as clinics of unqualified rural medical practitioners. Of these, 75 health institutions – 40 government and 35 private run by qualified practitioners (20 percent of all facilities) – were selected for the facility survey and interviews with providers. In Bangladesh, the medical doctor in the team observed health facilities. To assess the quality of reproductive health care in the

facilities, a facility assessment form was filled out through discussions with doctors, nurses and managers. In Sri Lanka, two large public institutions, namely the Provincial Hospital in Anuradhapura and the General Hospital in Vavuniya, were assessed along with three other facilities in each district. The institutions were visited and information was obtained through interviews, examination of records and direct observation. In Pakistan, a rapid qualitative assessment was conducted in Multan city and its adjoining *tehsil* by visiting 11 health facilities, seven clinics and two private sector hospitals.

Assessment of Costs and Financing

The methodology used to assess the costs and financing of reproductive services in the five countries is given below:

Analysis by Source of Financing

Given differences in the availability of data, there were variations in the methods used to analyze the public, private and donor spending on reproductive health in the five countries.

Bangladesh and Sri Lanka possess National Health Accounts (NHA) that are updated on a regular basis and used to track the relative importance of different fund-channeling mechanisms in the health sector.

Andhra Pradesh, India. Two types of analyses were undertaken to estimate expenditures on reproductive health in the state. The first was an analysis of public expenditures using a method derived from the NHA, and the second was an analysis of health expenditures using the National Sample Survey (NSS). Budgetary accounts with details of the programs and projects within each heading and sub-heading of the Medical and Health Department of the state government are used.

For the estimation of private expenditure, the 52nd round (1995-96) of the NSS which has detailed information on health utilization and expenditures for a range of symptoms reported to have occurred during the previous month (for outpatient care) and previous year (for inpatient care) was used. Expenditures on childbirth were reported separately. The two reproductive health-related items in the list of symptoms on which the survey collected information were 'pregnancy and childbirth-related complications' and 'sexually-transmitted diseases.' The sample size for AP was too small to derive any meaningful estimates of expenditure on either of these. Mean expenditures on childbirth were, however, estimated. Distributional analysis of expenditures was done by sorting households into household consumption-based quintiles. This analysis was also carried out for India as a whole.

Rajasthan, India. Results for Rajasthan that are used in this study are derived from an earlier effort to produce reproductive health accounts for the state by Sharma et al. (2000). The study used a National Health Accounts framework to track government, donor and household

resource flows for overall health and reproductive health. Since donor expenditures were not reported separately, it was assumed that 12 percent of public expenditures were from external resources and donor funding was estimated on that basis.[5] The division of total expenditures between the Government of Rajasthan, Government of India and donors was based on an earlier analysis of family welfare and reproductive and child health program budgets. Government expenditures on different reproductive health components were estimated by weighting utilization rates of each reproductive health service by relevant unit costs. Utilization data were obtained from household surveys. As actual unit costs were not available for all reproductive health activities, expert opinions were sought. For the estimation of private expenditure, household expenditures on reproductive health care services were derived from household survey by Hotchkiss et al. (2000).

Nepal. The estimation of public expenditure involved creating a set of limited health accounts for the public sector to produce a detailed functional classification of all health expenditures. Reproductive health spending was then derived from the functional classification of expenditures, either directly or using secondary estimation methods. The analysis was done separately for the regular budget, central development budget and the district development budget. Estimates derived from a recently completed public facility survey (Nepal Public Facility Survey) were used to disaggregate hospital spending between inpatient and outpatient care. In the absence of data, it was not possible to derive reliable estimates of private spending for Nepal.

Pakistan. National Health Accounts do not exist for Pakistan. Data from government and donor documents and household surveys (PIHS 1998-99 and 2001-02) were therefore used for the analysis. It was not possible, however, to produce a full set of reproductive health expenditure estimates compared to those produced for other countries/states in the region. The functional classification of available budgetary data does not allow a breakdown of public spending on reproductive health. Government health expenditure data used were extracted from a range of government and donor documents and donor agencies for the years 1993-94 to 1998-99 (using limited breakdowns). Further, in the absence of reliable NHA-based private expenditure estimates, two rounds of the Pakistan Integrated Household Survey were analyzed. The health expenditure module of the survey does not collect information on the types of illness conditions for which expenditures were incurred. Only estimates of spending on immunization (on the last visit) and family planning were obtained.

Donor contributions to governments are included in the budgetary data that were used to estimate public expenditures on reproductive health. In order to assess the use of external resources for reproductive health activities, a functional analysis of donor support to governments was carried out for Bangladesh, Nepal and Sri Lanka.

Analysis by Level of Provision

This analysis was carried out for India and Pakistan using household survey-based estimates of out-of-pocket spending on childbirth and family planning by type of provider. Such information is not available for the other three countries.

Standardization of Results

The levels of public and total expenditures on reproductive health services in each country cannot be directly compared as the estimates are for different years and in different currencies. Besides, the income levels in each country differ, as also the relative need for services. To provide some comparison, expenditure levels in each country were standardized. Standardization involved converting expenditures into US dollars at constant 2000 prices, and adjusting these with respect to per capita income level and to factors relevant to each item of service. The standardization was carried out using Sri Lanka as the reference country. A higher level of expenditure in a particular country indicates that, controlling for its income level and relevant indicator of need, it spends more resources than Sri Lanka.

Analysis to Assess the Distribution of Spending

A distributional analysis of the utilization of reproductive health services using Demographic and Health Surveys was undertaken to indicate the distribution of public subsidies. An asset index, a composite measure of asset wealth, was constructed for each country in order to rank households by socio-economic status.

A second type of analysis done was payment incidence analysis, which looks at the distribution of out-of-pocket payments for reproductive health across socio-economic groups. It requires detailed household level data on reproductive health expenditures, which were only available for Bangladesh (HDS 1999) and India (NSS 1995-96). The annual household expenditure was estimated and used as a proxy for living standards. Household estimates of aggregate consumption were adjusted to reflect household size and composition (age and sex) by dividing total household expenditures by an equivalence scale defined as:

$$e_h = (A_h + 0.5K_h)^{0.75}$$

where A_h is the number of adults in a household, h and K_h the number of children (0-14 years old). Households were then ranked on the basis of this measure of living standards and grouped into quintiles. Mean values for the out-of-pocket expenditures for each quintile were then estimated.

Annex 3

Reproductive Health Status

TABLE A3.1 Adolescent (10-19 years) and Youth (15-24 years) Populations in the Five South Asian Countries, 2000

Age Group		Bangladesh	India	Nepal	Pakistan	Sri Lanka	All Five Countries
10-14 years	Females (millions)	9.08	52.91	1.47	9.07	0.85	73.38
	Total (millions)	18.39	109.41	3.04	18.74	1.73	151.31
	Percent of Total Population	14.09	10.91	12.30	12.80	8.97	11.43
15-19 years	Females (millions)	8.26	48.76	1.33	7.58	0.94	66.87
	Total (millions)	17.06	101.78	2.74	15.68	1.92	139.17
	Percent of Total Population	13.08	10.15	11.10	10.71	9.95	10.51
20-24 years	Females (millions)	6.06	43.20	1.14	6.22	0.87	57.49
	Total (millions)	12.29	92.64	2.36	12.91	1.75	129.94
	Percent of Total Population	9.42	9.2	9.5	8.81	9.09	9.44

Source: Population Reference Bureau, 2000.

TABLE A3.2 Early Marriage and Childbearing in Five Countries of South Asia, various years

	Bangladesh	India		Nepal		Pakistan		Sri Lanka
	1999-2000	1998-99	2005-06	2001	2006	2001	2006-07	2000
Percent Ever-Married								
15-19 year-olds	48.1	32.8	30.4	40	32.3	14.1	16.0	2.5
20-24 year-olds	81.5	79.4	75.7		82.1	58.5	48.0	9.4
Median Age at First Marriage (25-49 yrs)	14.7	16.4	16.8	16.6	17.0	18	19.1	22.9 [a]
Median Age at First Birth (25-49 years)	17.8	19.4	19.8	19.9	19.9		21.8	23.2 [a]

Notes: a: These figures are for all women. New data are not yet available for Bangladesh and Sri Lanka.

Sources: *Bangladesh:* NIPORT, 2001; *India:* IIPS and ORC Macro, 2000; IIPS and Macro International, 2007; *Nepal:* GON-MOH et al., 2002; GON-MOHP et al., 2007; *Pakistan:* NIPS, 2001; NIPS and Macro International, 2008; *Sri Lanka:* GOSL-DCS, 2002a.

TABLE A3.3 Changes in Fertility in Five Countries of South Asia, 1990s

	Bangladesh		India		Nepal		Pakistan		Sri Lanka	
	1993-94	1999-2000	1992-93	1998-99	1996	2001	1990-91	2001	1993	2000
TFR	3.4	3.2	3.4	2.8	4.6	4.1	5.4	4.8	2.3	1.9
ASFR										
15-19	140	134	116	107	127	110	84	65	35	27
20-24	196	188	231	210	266	248	230	211	110	83
25-29	158	149	170	143	229	205	268	258	134	118
30-34	105	97	97	69	160	136	229	206	104	98
35-39	56	53	44	28	94	81	147	128	54	40
40-44	19	20	15	8	37	34	73	61	14	8
45-49	14	6	5	3	15	7	40	26	4	1
CEB	3.5	3.1	3.11	3.00	3.4	3.3	4.1	4.1	2.6	2.2

Notes: TFR = Total Fertility Rate; ASFR = Age-specific Fertility Rate (age-groups in years); CEB = Mean number of Children Ever Born to currently married women. Data for 2005/2006 were presented in Chapter 1, endnote 18.

Sources: *Bangladesh:* Mitra et al., 1994; NIPORT, 2001; *India:* IIPS, 1995; IIPS and ORC Macro, 2000; *Nepal:* Pradhan et al., 1997; GON-MOH et al., 2002; *Pakistan:* NIPS and IRD/Macro International, 1992; NIPS, 2001; *Sri Lanka:* GOSL-DCS, 1994; GOSL-DCS, 2002a.

TABLE A3.4 Total Fertility Rates of Women with Different Socio-Economic Characteristics, Five Countries, various years

	Bangladesh	India		Nepal		Pakistan		Sri Lanka
	2001	1998-99	2005-06	2001	2006	2000-01	2006-07	2000
All Women	3.2	2.8	2.7	4.1	3.1	4.8	4.1	1.9
Maternal Education								
None	3.8	3.5	3.6	4.8	3.9	5.0	4.8	2.4
≤ 5 years	3.4	2.6[a]	2.5	3.2[b]	2.8	4.5	4.0	2.9
6-9 years	3.2[c]	2.3[d]	2.5/2.2[e]	2.3	2.3	3.5	(3.2)	2.0[f]
10+ years	2.5	2.0	2.1/1.8[g]	2.1	1.8	3.4[h]	3.1	1.7/1.6[i]
Economic Quintile								
Poorest	4.2	3.4[j]	3.9	5.1	–	5.2	5.8	2.4
Second	3.7		3.2	4.6	–	5.1	4.5	2.0
Third	3.2	2.9	2.6	4.4	–	5.4	4.1	2.0
Fourth	2.9		2.2	3.6	–	4.5	3.4	1.9
Richest	2.4	2.1	1.8	2.6	–	4.2	3.0	1.6
Residence								
Rural	3.4	3.1	3.0	4.4	3.3	5.1	4.5	1.8
Urban	2.7	2.3	2.1	2.1	2.1	4.0-4.3[k]	3.3	1.9-2.1[l]
Estate	–	–	–	–	–	–	–	2.4

Notes: a: 1-7 years of schooling; b: 1-4 years; c: 5-9 years; d: 8-9 years; e: 5-7/8-9 years; f: 6-10 years; g: 10-11/12+ years; h: 11+ years; i: GCE O-level/A-level; j: Data for 'Low', 'Medium' and 'High' standard of living (not quintiles); k: The lower value is for 'Major Urban' and the higher for 'Other Urban'; l: The lower value is for 'Colombo Metro' and the higher for 'Other Urban'. 2007 data are not yet available for Bangladesh and Sri Lanka.

Sources: Computed using data from *Bangladesh:* NIPORT et al., 2003; *India:* IIPS and ORC Macro, 2000; IIPS and Macro International, 2007; *Nepal:* GON-MOH et al., 2002; GON-MOHP et al., 2007; *Pakistan:* NIPS, 2001; NIPS and Macro International, 2008; *Sri Lanka:* GOSL-DCS, 2002a.

TABLE A3.5 Undernutrition (BMI<18.5kg/m^2) among Mothers in Four Countries, various years, percent

	Bangladesh	India		Nepal		Sri Lanka
	1999-2000	1998-99	2005-06	2001	2006	2000
All	33.1	35.8	35.6	26.7	24.4	23.6
Maternal Education						
None	39.7	43.1	41.7	30.4	29.0	38.0
Up to 5 years	32.0 [a]	38.2 [a]	37.2	18.1	21.7	31.0
6-9 years	29.5 [b]	30.3 [b]	34.1/35.0 [f]	16.3	19.8	20.4
10+ years	12.0 [c]	15.5 [c]	29.4/21.8 [g]	13.0	12.8	30.0
N	*5064*	*77593*	*111775*	*7784*	*10003*	–
Economic Quintile		**Rural**	**Urban**			
Poorest	40.9	48.5	41.5 51.5	30.6	25.1	37.8
Second	36.5	47.2	28.7 46.3	33.7	33.4	30.2
Third	33.3	44.8	21.1 38.3	30.0	28.6	22.0
Fourth	27.6	40.1	14.6 28.9	25.0	23.8	18.3
Richest	22.7	25.8	8.3 18.2	13.4	12.7	13.5
N	*5073*	*76832*	*111782*	*8696*	*10001*	–
Residence						
Rural	27.0	41.0	25.0	27.7	25.9	–
Urban	34.5	22.7	40.62	16.8	16.6	–
N	*5073*	*77613*	*111782*	*7784*	*10003*	–
Age of Mother						
15-19 years	44.8	42.0	46.8	–	26.3	–
20-24 years	33.1	37.4 [d]	38.1	–	23.3	–
25-29 years	40.8					–
30-34 years	30.7	29.9	31.0	–	22.2	–
35-39 years	29.0 [e]					–
40-49 years		26.1	26.4	–	27.0	–
N	*5055*	*77613*	*111781*	–	*10003*	

Notes: a: 1-4 years of schooling; b: 5-9 years; c: 12+ years; d: Age categories for India are 15-19, 20-29, 30-39 and 40-49 years; e: 35+ years of age; f: 5-7/8-9 years; g: 10-11/12+ years. Data are not available for Pakistan, nor yet for Bangladesh and Sri Lanka for 2007.

Sources: Computed using data from *Bangladesh:* NIPORT, 2001; *India:* IIPS and ORC Macro, 2000; 2005-06 as reported in IIPS and Macro International, 2007; *Nepal:* GON-MOH et al., 2002; GON-MOHP et al., 2007; *Sri Lanka:* GOSL-DCS, 2002a.

TABLE A3.6 Socio-Economic and Demographic Determinants of Undernutrition (BMI <18.5 kg/m^2) among Mothers in Three Countries, various years, odds ratios

	Bangladesh 1999-2000	India 1998-99		Sri Lanka 2000
Maternal Education				
Illiterate	1.000	1.000		1.000
Primary	0.033 (1.034)	– 0.067[a] (0.934)*		–0.267 (0.766)
		– 0.185[b](0.830)***		
High School/Secondary	–0.130 (0.878)	–0.321 (0.725)***		–0.552 (0.576)*
Secondary and Higher	–1.225 (0.294)***	–0.395[c] (0.673)***		–0.309 [d] (0.734)
				–0.685 [e] (0.504)*
Economic Quintile		**Rural**	**Urban**	
Poorest	1.043(2.837)***	1.726(5.620)***	1.574(4.827)***	0.462 (1.587)*
Second	1.057(2.879)***	1.694(5.441)***	1.147(3.148)***	0.445(1.561)*
Third	0.931(2.536)***	1.656(5.241)***	0.771(2.162)***	0.185(1.204)
Fourth	0.544(1.723)***	1.518(4.562)***	0.479(1.616)***	0.215(1.240)
Richest	1.000	1.037(2.819)***	1.000	1.000
Age of Mother				
15-19 years	–0.263 (0.769)	0.290 (1.336)***		–0.178[f] (0.837)
20-29 years	–0.421 (0.656)*	0.415 (1.515)***		–0.483 (0.617)
30-39 years	–0.351 (0.704)*	0.091 (1.095)***		–0.604 (0.546)
40-49 years	1.000	1.000		1.000
Constant	*–0.882 (0.414)****	*–1.862*		*–1.961(0.141)*
Chi Square	*411.090*	*7008.68*		*126.269*
Df	*29*	*27*		*34*
N	*4344*	*76150*		*2847*

Notes: ***: p ≤ .001, **: p ≤ .01, *: p ≤ .05. The figures in brackets denote Odds Ratios. These data are for: a: those who have not completed primary education; b: those who have completed primary education; c: higher secondary and above; d: O level; e: A level and higher. f: Maternal age categories for Sri Lanka are 15-25, 26-35, 36-45 and 45+ years.

Sources: Computed using data from *Bangladesh:* NIPORT, 2001; *India:* IIPS and ORC Macro, 2000; *Sri Lanka:* GOSL-DCS, 2002a.

TABLE A3.7 Estimated Number of Maternal Deaths, Maternal Mortality Ratios and Lifetime Risk of Maternal Death in the Five Countries, 2000

	Estimated Number of Maternal Deaths	Maternal Mortality Ratio	Lifetime Risk of Maternal Death
Bangladesh	16,000	380	1:59
India	136,000	540	1:48
Nepal	6,000	539	1:24
Pakistan	26,000	500	1:31
Sri Lanka	300	92	1:430
South Asia (Five Countries)	184,000	560	1:43
Developing Countries	527,000	440	1:61
Industrialized Countries	1,300	13	1:4000
World	529,000	400	1:74

Sources: WHO, 2004. The MMR estimate for Nepal (2000) has been revised as suggested in the 2006 DHS report. More recent (2006/2007) DHS estimates for the MMRs in Nepal and Pakistan are 281 and 276, respectively (GON-MOHP et al., 2007; NIPS and Macro International, 2008).

TABLE A3.8 Percent of Mothers with Low Birth Weight Infants (less than 2.5 kg at birth) by Socio-Economic Characteristics, India, Nepal and Sri Lanka, various years

	Maternal Education				
	No Education	Below Primary	Primary	Secondary	Higher Secondary and above
India, 1998-99	30.17	24.20	23.52	18.49	16.98
India, 2005-06	26.2	26.5	22.3	18.8	15.7
Nepal, 2006	14.8	–	22.6	16.2	4.7
Sri Lanka, 2000	27.4	–	19.0	17.7	11.5-13.8
	Economic Quintile				
	Poorest	Second	Third	Fourth	Richest
India-Rural, 1998-99	27.11	28.02	28.26	23.88	19.95
India-Urban 1998-99	24.91	23.55	20.05	22.08	16.50
India, 2005-06	25.4	25.4	23.7	21.8	17.4
Nepal, 2006	16.8	22.1	18.2	12.2	12.0
Sri Lanka, 2000	19.4	21.2	16.2	14.6	11.3
	Residence				
	Rural	Urban	Other Urban	Colombo Metro	Estate
India, 1998-99	23.94	21.06	–	–	–
India, 2005-06	23.3	19.3	–	–	–
Nepal, 2006	15.0	12.7	–	–	–
Sri Lanka, 2000	11.6	–	11.6	14.9	20.8

Sources: *India:* 1998-99 computed using data from IIPS and ORC Macro, 2000; 2005-06 as reported in IIPS and Macro International, 2007; *Nepal:* GON-MOHP et al., 2007; *Sri Lanka:* GOSL-DCS, 2002a.

TABLE A3.9 Socio-Economic and Demographic Differentials in Children's Nutritional Status in Four Countries, various years, percent below 2SD in Weight-for-Age

	Bangladesh		India		Nepal		Sri Lanka
	1999-2000	2007	1998-99	2005-06	2001	2006	2000
Total	**47.7**	**41.0**	**46.2**	**42.5**	**48.3**	**38.6**	**26.7**
Maternal Education							
None	55.5	46.9	54.3	52.0	53.1	46.6	46.0
Up to 5 years	51.1 [a]	47.8 [a]	52.3 [a]	45.8	41.0	31.1	39.3
6-9 years	43.6 [b]	35.5 [b]	38.5 [b]	38.5/34.9 [i]	31.3	24.0	28.0
10+ years	32.1	22.8 [c]	22.8 [c]	26.8/17.9 [j]	21.9	11.0	12.3-24.3 [d]
N	–	*5192*	*27350*	*45878*	*6235*	*5106*	*1549*
Economic Quintile			**Rural**	**Urban**			
Poorest	–	–	58.2	51.4 56.6	57.3	47.0	44.3
Second	–	–	53.5	44.5 49.2	52.1	46.0	40.5
Third	–	–	51.9	36.0 41.4	50.1	41.7	30.7
Fourth	–	–	44.6	29.2 33.6	43.3	31.0	22.0
Richest	–	–	32.2	16.1 19.7	28.1	18.8	13.5
N	–	–	*27072*	*46656*	*6409*	*5262*	*1549*
Residence							
Rural	39.8	43.0	48.7	45.6	49.4	40.7	26.9
Urban	49.2	33.4	37.6	32.7	33.0	23.1	17.0-22.4 [e]
Estate	–		–	–	–	–	43.2
N	–	*5312*	*27359*	*46655*	*6409*	*5262*	*1549*
Birth Order							
1	47.4	–	40.9	36.1	43.3	–	–
2-3	44.2	–	46.2	41.4	46.4	–	–
4-5	51.9	–	52.9	49.9	52.3	–	–
6+	54.6	–	58.6	56.6	56.3	–	–
N	–	–	*27359*	*45337*	*6242*		–
Age in Months							
<6	8.1	29.1	11.9 [f]	29.5	6.7	16.2	0.6 [g]
6-9	39.3	25.2	37.5	33.7	28.7	28.0	20.2
10-11		33.0		36.7	54.5	36.1	
12-23	59.9	39.1	58.5	40.2/45.9 [k]	60.1	39.0	28.8
24-35	55.6	44.5	58.4	44.9	56.2	41.3	34.8
36-47	52.1	46.8	–	45.6	52.7	43.7	–
48-59	49.6	46.3	–	44.8	49.1	43.4	–
N [h]	*5421*	*5312*	*27206*	*46656*	*6411*	*5262*	*1549*
Sex of Child							
Male	45.8	39.9	45.3	41.9	46.1	37.5	–
Female	49.6	42.1	48.9	43.1	50.5	39.7	–
N	–	*5312*	*27359*	*46655*	*6410*	*5262*	–

Notes: SD = Standard Deviation; a: 1-4 years of schooling; b: 5-9 years; c: 12+ years; d: The higher value is for GCE O-level and lower for A-level; e: The higher figure is for 'Other Urban' and lower for 'Colombo Metro'; f: The age groups for India are: <6, 6-11, 12-23, 24-36 months; g: The age groups for Sri Lanka are 3-5, 6-11, 12-23, 24-36 months; h: In India and Sri Lanka, children under 3 years; Nepal, children under five years; i: 5-7/8-9 years; j: 10-11/12+ years; k: 12-17/18-23 months. Comparable data are not available for Pakistan, nor yet for Bangladesh and Sri Lanka for 2007.

Sources: Computed using data from *Bangladesh:* NIPORT, 2001; NIPORT et al., 2007; *India:* IIPS and ORC Macro, 2000; IIPS and Macro International, 2007; *Nepal:* GON-MOH et al., 2002; GON-MOHP et al., 2007; *Sri Lanka:* GOSL-DCS, 2002a.

TABLE A3.10 Socio-Economic and Demographic Differentials in Neonatal Mortality, various years

	Bangladesh	India		Nepal		Pakistan	Sri Lanka
	2001	1998-99	2005-06	2001	2006	2006-07	2000
Total	**47.2**	**43.4**	**39.0**	**38.8**	**33**	**54**	**8.3**
Maternal Education							
None	52.5	55.3	45.7	51.6	43	57	15.9
Up to 5 yrs	47.8	40.5 [a]	48.4	41.2 [b]	34	47	21.3
6-9 years	46.4 [c]	33.7 [d]	34.5/32.0 [n]	31.3	25	45	14.6 [e]
10+ years	36.4	24.3	26.9/19.6 [o]	8.8 [f]	9	35-39	6.3-9.0 [g]
Economic Quintile							
Poorest	56.5	55.8 [h]	48.4	49.3	43	63	–
Second	52.1		44.6	59.9	38	60	–
Third	48.1	47.0	39.3	49.3	47	52	–
Fourth	39.7		31.9	43.6	31	47	–
Richest	32.5	30.9	22.0	29.8	26	38	–
Residence							
Rural	48.3	51.7	42.5	48.5	40	55	–
Urban	41.6	33.5	28.5	36.6	25	48	–
Birth Order							
1	60.9	52.4	47.8	56.8	46	73	15.9
2-3	41.3	38.5-43.8 [i]	30.3	44.1	30	49	11.6
4-6	41.0	44.7-48.7 [j]	41.5	39.7	38	45	16.6
7+	47.0	62.5 [k]	48.6	63.0	55	52	
Previous Birth Interval							
< 2 years	71.9	71.7	57.9	79.9	63	69	18.2
2-3 years	34.8	35.5	30.9/19.2 [p]	26.5-39.7 [l]	19-31	34	7.4
≥4 years	34.5	24.1	24.2	21.7	20	35	9.0
Sex of Child							
Male	52.4	50.7	40.9	52.0	39	57	–
Female	41.7	44.6	36.8	43.3	37	48	–
Age of Mother							
< 20 years	63.6	63.1	54.2	71.2	55	85	17.9 [m]
20-29 years	38.6	40.7	34.2	40.3	32	51	13.9
30-39 years	41.5	48.7	37.9	42.8	36	45	11.3
40-49 years	47.3	61.9	42.9	–	38	39	15.2

Notes: Overall rates are based on events over the five years preceding the survey, while rates for different socio-economic indicators are based on events over ten years preceding the survey. a: 1-7 years of schooling; b: 1-4 years; c: 5-9 years; d: 8-9 years; e: 6-10 years; f: 11+ years; g: The higher value is for GCE O-level and lower for A-level; h: The data for India are for 'Low', 'Medium' and 'High' standard of living (not quintiles); i: The higher value is for a birth order of 2, and lower for 3; j: The lower value is for a birth order of 4 and higher for 5; k: This figure is for a birth order of 6 and above; l: The higher value is for a birth interval of 2 years and the lower value for 3 years; m: The age categories in Sri Lanka are <20 years, 20-29, 30-34, and 35+ years; n: 5-7/8-9 years; o: 10-11/12+ years; p: 2 years/3 years. 2007 data are not yet available for Bangladesh and Sri Lanka.

Sources: Computed using data from *Bangladesh:* NIPORT et al., 2003; *India:* IIPS and ORC Macro, 2000; 2005-06 data as reported in IIPS and Macro International, 2007; *Nepal:* GON-MOH et al., 2002; GON-MOHP et al., 2007; *Pakistan:* NIPS and Macro International, 2008; *Sri Lanka:* GOSL-DCS, 2002a.

TABLE A3.11 Socio-Economic and Demographic Differentials in Infant Mortality, various years

	Bangladesh	India		Nepal		Pakistan		Lanka
	2001	1998-99	2005-06	2001	2006	2000-01	2006-07	2000
Total [a]	**71.5**	**67.6**	**57.0**	**64.4**	**48**	**85.0**	**78**	**19.2**
Maternal Education [b]								
None	82.7	86.5	69.7	84.6	69	102	84	25.5
Upto 5 yrs	71.7	58.5 [e]	66.0	61.0 [d]	58	78	66	21.9
6-9 years	69.0 [e]	48.1 [f]	49.5/41.5[n]	49.9	35	13	63	17.6 [g]
10+ years	49.2	32.8	36.5/25.9[o]	11.2 [h]	13	0	54	13.6 [i]
Economic Quintile								
Poorest	87.6	88.8 [j]	70.4	89.8	71	159	94	26.8
Second	80.9	–	68.5	86.9	62	95	87	22.8
Third	72.8	70.3	58.3	81.5	70	104	74	18.3
Fourth	58.6	–	44.0	73.7	51	78	67	16.7
Richest	45.3	42.7	29.2	46.5	40	29	53	14.6
Residence								
Rural	72.9	79.7	62.2	79.3	37	103	81	–
Urban	64.6	49.2	41.5	50.1	64	29.0-56.0	66	–
Birth Order								
1	60.9	74.9 [k]	64.1	88.8	67	–	97	19.8
2-3	41.3	65.7-61.7	46.5	71.6	48	–	73	17.0
4-6	41.0	73.1-76.2	61.9	69.4	62	–	69	24.0
7+	47.0	101.1	79.8	94.1	106	–	77	–
Previous Birth Interval								
< 2 years	71.9	109.5	85.7	124.4	96	85	101	34.5
2-3 years	34.8	58.1	50-30[p]	45-68	38-57	69	54	9.3
≥4 years	34.5	38.5	37.0	38.9	28	86	51	13.4
Sex of Child								
Male	52.4	74.8	56.3	79.2	60	95	80	–
Female	41.7	71.1	57.7	75.2	61	67	73	–
Age of Mother								
< 20 yrs	63.6	92.7	76.5	108.2	83	101 [l]	116	21.5 [m]
20-29 yrs	38.6	63.3	50.4	67.6	50	76	75	20.0
30-39 yrs	41.5	76.7	56.4	72.9	62	117	67	15.0
40-49 yrs	47.3	106.2	72.1	–	91	–	55	20.7

Notes: a: Total mortality rates are for the five years preceding the survey; b: Mortality rates for different socio-economic categories are for the ten years preceding the survey; c: 1-7 years of schooling; d: 1-4 years; e: 5-9 years; f: 8-9 years; g: 6-10 years; h: 11+ years; i: This figure is for GCE O-level; j: The data for India are for 'Low', 'Medium' and 'High' standard of living (not quintiles); k: Birth order categories are 1, 2, 3, 4, 5 and 6+, the first value is for the lower birth order and the second for the higher birth order; l: The age categories for Pakistan are <21 years, 21-34 years and 35-49 years; m: In Sri Lanka the age categories are <20 years, 20-29 years, 30-34 years and >35 years; n: 5-7/8-9 years; o: 10-11/12+ years; p: 2 y ears/3 years. 2007 data are not yet available for Bangladesh and Sri Lanka.

Sources: Computed using data from *Bangladesh:* NIPORT et al., 2003; *India:* IIPS and ORC Macro, 2000; 2005-06 data as reported in IIPS and Macro International, 2007; *Nepal:* GON-MOH et al., 2002; GON-MOHP et al., 2007; *Pakistan:* NIPS, 2001; NIPS and Macro International, 2008; *Sri Lanka:* GOSL-DCS, 2002a.

TABLE A3.12 Neonatal, Infant and Child Mortality Rates by Sex in Four Countries of South Asia, various years

	Bangladesh	India		Nepal		Pakistan	
	2001	1998-99	2005-06	2001	2006	2000-01	2006-07
Neonatal Mortality Rate							
Male	52.4	50.7	40.9	52.0	39	–	57
Female	41.7	44.6	36.8	43.3	37	–	48
Infant Mortality Rate							
Male	75.4	74.8	56.3	79.2	60	95	80
Female	67.3	71.1	57.7	75.2	61	67	73
Child Mortality Rate							
Male	22.5	24.9	14.2	27.8	21	–	14
Female	28.7	36.7	22.9	40.2	18	–	22

Sources: Computed using data from *Bangladesh:* NIPORT et al., 2003; *India:* IIPS and ORC Macro, 2000; 2005-06 as reported in IIPS and Macro International, 2007; *Nepal:* GON-MOH et al., 2002; GON-MOHP et al., 2007; *Pakistan:* NIPS, 2001; NIPS and Macro International, 2008.

Annex 4

The Essential Package of Reproductive Health Services

Reproductive Health Indicators	Interventions/Services
Adolescents	
Outcome Indicators • Age at marriage • Wanted/unwanted fertility rates • Prevalence of STIs • Induced abortion rate **Process Indicators** • HIV/AIDS: awareness, condom use, sexual behavior • Contraceptive awareness, use, sexual behavior	**Behavior Change Communication** • Access to information on sexuality, sex, sexual health, responsible sexual behavior, reproduction, abstinence, contraception abortion, RTIs/STIs, hygiene, nutrition and gender roles **Reproductive Health Services** • Iron folate supplementation to prevent/manage anemia • Access to contraception on demand • RTI/STI diagnosis and treatment • Safe abortion services and post-abortion care including contraception • HIV prevention: condom promotion • Peer counseling **Outside the Health Sector: Life-Skills Development Programs** • Skills to negotiate safe sex, prevent/address gender violence • Development of talents and self-esteem • Skills for economic activities
Sexually-Active Adults	
Outcome Indicators • Marital fertility rates by age group • Total fertility rate (TFR) • Wanted fertility rate • Prevalence of STIs • Induced abortion rate • Medical reproductive health problems: fistula, prolapse	**Safe Sex and Prevention and Treatment of RTIs/STIs and HIV/AIDS** • Information about sexuality and sexual health • Condoms or dual protection • Syndromic management of RTIs/STIs • HIV/AIDS targeted interventions for vulnerable groups

- Use of different contraceptive methods (by age group, parity, etc.)
- Infertility rate

Process Indicators

- HIV/AIDS: awareness, condom use, sexual behavior
- Contraceptive prevalence rate (CPR)

Family Planning

- IEC on birth control methods
- Access to FP services
- Expanded menu of FP options

Safe Abortion (where legal)

- Electrical or manual vacuum aspiration
- Non-invasive abortion methods (Mifepristone)
- Menstrual regulation
- Decentralization of abortion services
- Training paramedics in MVA
- Post-abortion care
- Counseling

Treatment of Subfertility

- Counseling of both men and women and discussion of alternatives
- Prevention and treatment of RTIs
- Prevention and treatment of post-abortion infection
- Prevention and treatment of post-partum infection (secondary infertility)

Treatment of Anemia

- Iron folate supplementation
- Treatment of hookworm infestation

Early Detection of Reproductive Organ Malignancies

- Screening for breast and cervical cancer

Mothers and Infants

Outcome Indicators

- Low birth weight
- Infant mortality rate
- Maternal mortality ratio
- Perinatal/Neonatal/Infant/Child deaths
- Pregnancy-related problems (including hemorrhage, obstructed labour, eclampsia) and specific needs for services (including blood transfusion, anesthesia, surgery, Cesarean sections, other EOC interventions)

Process Indicators

- Coverage of pregnant women with full/partial ANC
- Coverage of pregnant women with Tetanus Toxoid
- Coverage of pregnant women with Anemia Prophylaxis (Iron folate)
- Coverage of Deliveries with skilled attendance
- Institutional delivery rate

Antenatal Care

- Identification and management of risk factors
- HIV/AIDS testing and counseling
- Detection and management of anemia
- Treatment of hookworm infestation
- Immunization for primary prevention of maternal and neonatal tetanus
- Prophylaxis with antibiotics
- Calcium supplementation
- Administration of tocolytics to prevent premature contractions
- Vitamin A supplementation

Delivery and Post-Delivery Care

- Access to skilled birth attendance
- Access to essential, comprehensive and emergency obstetric care
- Referral services

- Met/Unmet need for essential obstetric care
- Referral rates
- Neonatal care, including health education for mothers, thermal control, management of birth asphyxia, routine eye prophylaxis, special care of pre-term and low birth weight babies
- Postnatal care
- Household/Women's access to health facilities of different types
- Women's use of health services at the institutional level (e.g., facility outputs, such as reproductive health services given to women, with denominators) – by type of facility and, e.g., percent of women allowed to go alone to a health center

Post-Partum Care

- Control of post-partum hemorrhage
- Control of post-partum infection
- Treatment of post-partum depression

Management of Newborn and Infants

- Integrated Management of Neonatal and Childhood Illness (IMNCI)

Older Women

Process Indicators

- Prevalence of cervical, uterine, ovarian and breast cancers
- Prevalence of post-menopausal problems

Care of Peri- and Post-Menopausal Women

- Breast and cervical cancer screening
- Counseling for menopause including care of reproductive tract
- Counseling for a healthy lifestyle
- Treatment of depression
- Prevention and treatment of osteoporosis

Annex 5

USE OF REPRODUCTIVE HEALTH SERVICES

TABLE A5.1 Socio-Economic and Demographic Differentials in Contraceptive Use, Year around 2000, percent

	Bangladesh	India	Nepal	Pakistan	Sri Lanka
	1999-2000	1998-99	2001	2000-01	2000
Total	**53.8** [a]	**42.9**	**35.4**	**27.8** [a]	**70** [a]
Maternal Education					
None	51.0	38.4	33.5	22.2	72.1
Up to 5 years	53.4 [b]	49.6 [b]	37.7	35.7	74.2
6-9 years	53.3 [c]	47.6 [c]	41.1	43.9 [e]	71.1
10+ years	67.4 [d]	46.5 [d]	46.4	46.9 [f]	66.0 [g]
N	*9700*	*84840*	*8342*	–	*5546*
Economic Quintile		**Rural Urban**			
Poorest	48.4	26.3 42.3	23.8	11.3 [h]	
Second	52.8	31.5 48.1	29.9		
Third	51.9	41.2 52.4	31.7	26.0	
Fourth	56.9	47.3 55.6	39.8		
Richest	63.3	52.5 56.9	54.7	43.2	
N	*9529*	*83958*	*8342*	–	
Residence					
Rural	–	39.9	33.2	21.7	
Urban	–	51.2	56.3	39.7	
N	–	*84862*	*8342*	–	
Employment/Work Status					
Non-working	51.7	–	32.3	–	–
Working	61.9	–	–	–	–
Agricultural work	–	–	34.0	–	–
Non-Agricultural work	–	–	57.2	–	–
N	*9717*	–	*8342*	–	–

Maternal Age					
15-19 years	36.7	4.7 [j]	9.3	–	52.8
20-24 years	47.1	32.9	20.7	–	61.2
25-29 years	58.1		35.5	–	65.0
30-34 years	64.1	58.3	48.0	–	72.8
35-39 years	59.6 [i]		51.8	–	77.5
40-44 years		56.7	47.8	–	75.2
45-49 years			36.9		63.8
N	*9721*	*84862*	*8342*	–	*5546*

Notes: a: This figure includes both modern and traditional contraceptive methods. b: This figure is for 1-4 years of schooling; c: 5-9 years; d: 12+ years; e: 6-10 years; f: 11+ years; g: This is the coverage level among GCE O- level; h: In Pakistan, data are for 'Low', 'Medium', 'Upper' standard of living and not by quintile; i: These data are for 35+ year-olds; j: The age groups for India are 15-19, 20-29, 30-39 and 40-49 years.

Sources: Computed using data from *Bangladesh:* NIPORT, 2001; *India:* IIPS and ORC Macro, 2000; *Nepal:* GON-MOH et al., 2002; *Pakistan:* NIPS, 2001; *Sri Lanka:* GOSL-DCS, 2002a.

TABLE A5.1A Socio-Economic and Demographic Differentials in Contraceptive Use, Year between 2005 and 2007, percent of currently married women using any method

	Bangladesh	India	Nepal	Pakistan	Sri Lanka
	2007	2005-06	2006	2006-07	2007
Total	**55.8**	**56.3**	**48.0**	**29.6**	**68.0**
Maternal Education					
None	54.6	52.1	49.3	25.3	72.7
Up to 5 years	57.5	63.0	45.5	34.4	70.8
6–9 years	54.3	58.7	42.9	37.2	68.7
10+ years	62.2	59.7+	53.0	39.1+	66.2
N	*10192*	*93085*	*8257*	*9556*	*13750*
Economic Quintile					
Poorest	–	42.2	32.9	15.6	–
Second	–	51.1	42.6	20.8	–
Third	–	56.8	49.2	30.1	–
Fourth	–	62.5	52.8	36.8	–
Richest	–	67.5	60.9	43.4	–
N	–	*93089*	*8257*	*9556*	–
Residence					
Rural	54.0	–	45.9	23.9	69.6
Urban	62.0	–	60.0	41.1	59.2
Estate	–	–	–	–	64.2
N	*10192*	–	*8257*	*9556*	*13751*

Maternal Age					
15–19 years	41.8	–	16.0	6.7	53.3
20–24 years	52.4	–	30.6	15.4	57.6
25–29 years	60.9	–	48.4	24.8	63.6
30–34 years	65.1	–	63.1	35.6	69.6
35–39 years	66.5	–	64.8	39.9	74.0
40–44 years	55.3	–	63.2	41.6	75.2
45–49 years	40.9	–	45.9	31.5	64.0
N	*10147*	–	*8257*	*9556*	*13751*

Sources: *Bangladesh:* NIPORT et al., 2007; *India:* IIPS and Macro International, 2007; *Nepal:* GON-MOHP et al., 2007; *Pakistan:* NIPS and Macro International, 2008; *Sri Lanka:* GOSL-DCS, 2008.

TABLE A5.2 Socio-Economic Determinants of Contraceptive Demand and Use

	Contraceptive Use	Unmet Need	Desire for No More Children
Maternal Education	There is a strong positive relationship in countries other than Sri Lanka (SL). In SL, maternal education has no direct role in contraceptive use.	There is an inverse relationship in Bangladesh (BD), Nepal (NP) and Pakistan (PK). In BD, unmet need is lower among women with secondary education than illiterate women. In SL, there is no relationship.	Compared to illiterate women, educated mothers have higher desire for no more children in all five countries except BD. In BD, women with secondary education have lower desire for no more children compared to illiterates, but other categories are not significantly different.
Economic Quintile	There is a positive relationship in all countries except SL. The gap in contraceptive use between the richest and poorest quintile is wider in NP and India (IN) compared to BD.	There is an inverse relationship in IN, NP and PK. The odds ratio is 4 for the poorest rural quintile in IN compared to the richest quintile. In the other countries, the odds ratio is 1.8 for the poorest quintile. In BD and SL, there is no relationship.	In IN and NP, economic status has a positive influence. In the other three countries, there is no influence.
Husband's Education	Has a positive role in NP and PK only.	Has an inverse relationship in PK and to some extent in NP, but is positive in IN.	Positive influence in BD and NP, negative in IN and no influence in PK and SL.

Residence	The likelihood of use is higher among urban women in NP, and women in major urban areas in PK, but independent in SL.	The likelihood of unmet need is higher in rural and other urban women compared to women in major urban areas in PK. In other countries, residence has no influence.	Significantly lower in rural compared to major urban areas in PK. In SL, compared to Colombo Metro, women in rural, other urban and estate areas have lower 'desire for no more children.'
Women's Autonomy	Has a positive influence in countries other than PK where autonomy was not analyzed.	Has a negative influence on unmet need in IN and SL. The odds ratio among those without autonomy is 8.2 compared to those with autonomy.	In BD, desire for no more children is higher among those who are allowed to go out alone compared to those not allowed. No significant difference is seen in the other countries.
Women's Employment	The odds ratios for contraceptive use among women working in agriculture and in non-agriculture sectors are 1.7 and 2.4, respectively, compared to non-working women in NP. In BD, the odds ratio is 1.3 for those who work compared to non-workers. There is no relationship in Pakistan.	In NP, the chances of 'unmet need' are lower among working women. In SL and PK, unmet need is independent of women's working status.	Positive influence in BD and NP; independent in PK and SL.
Exposure to Mass Media	Analyzed in IN, PK and SL and found to have a positive influence. Odds ratios are between 1.3 in PK to 2.4 in SL among those who are exposed to mass media compared to those who are not.	In SL and IN, exposure to mass media reduces unmet need. In SL, the odds ratio among those not exposed is 3.7 compared to those who were exposed.	No influence in IN, PK and SL, and not analyzed in the other two countries.
Maternal Age	Has an 'inverse U-shaped' relationship in IN, BD and PK. In SL, the likelihood of use with age is higher compared to the 15-19 year age-group.	Has an inverse relationship in countries other than SL. The odds ratio of unmet need among 15-19 year-olds is 7-8 in BD and IN compared to women over 40 years. In SL, age has no influence.	A positive relationship is observed in four countries (barring SL).
Number and Sex Composition of Living Children	In IN and NP, the likelihood of using contraception is higher among those with two or more sons, with or without a daughter. In BD, the chance of using contraceptives is lower among those with no	In IN, unmet need is likely to be higher among those with no child or one son or two daughters. In NP, it is lower among those without children or only one child.	In BD, IN and NP, women with two or more sons have a higher desire for no more children. In PK, parity has a positive relationship. In SL, women with one son and one daughter have the

	son or no daughter. In SL, it has no direct influence, while in PK, it was not analyzed.		highest desire for no more children.
Socio-Religious Group	There is a lower chance of use among Muslims and Christians compared to Hindus in IN. Among various social groups in IN the chances are lowest among Scheduled Castes. In SL, use is independent of religion or ethnic group.	In IN, the chances of unmet need are higher among Muslims, Christians and Scheduled Castes and Tribes. There is no influence in SL.	In IN, the desire for no more children is highest among non-SC/ST Hindus. In SL, there is no influence.

Note: Based on multivariate analysis of DHS data for year around 2000. Sources given earlier.

TABLE A5.3 Socio-Economic and Demographic Differentials in Use of Antenatal Care, Year around 2000, percent

	Bangladesh	India	Nepal	Pakistan	Sri Lanka
	1999-2000	1998-99	2001	2000-01	2000
Total	**37.0**	**65.7**	**49.1**	**48.8**	**83.4**
Maternal Education					
None	23.4	49.1	39.2	37.7	66.7
Up to 5 years	35.2	77.2 [a]	64.5	66.4	74.3
6-9 years	61.7	83.2 [b]	84.0	86.1 [d]	87.0
10+	94.8	96.5 [c]	94.8	95.8 [e]	79-86 [f]
N	*5179*	*33016*	*4746*	*5844*	*2432*
Economic Quintile		**Rural Urban**			
Poorest	25.8	40.7 72.6	33.3	24.6	80.2
Second	22.7	48.2 82.2	42.9	34.1	83.7
Third	32.7	62.3 90.5	44.2	39.3	87.9
Fourth	48.9	71.8 95.4	59.0	51.7	90.1
Richest	76.3	84.9 98.5	82.9	76.3	81.6
N	*5078*	*32657*	*4745*	*5845*	*2935*
Residence					
Rural	31.9	59.8	46.6	36.6	90.1
Urban	63.4	86.2	82.4	63.6-80.0 [g]	72.9-83.4 [h]
Estate	–	–		–	45.5
N	*5188*	*33026*	*4746*	*5845*	*2431*
Work Status					
Non-working	37.3	–	68.7	–	
Working	35.1	–		–	
Agricultural work		–	42.9	–	
Non-Agricultural work	–		76.2	–	
N	*5144*		*4745*		

Maternal Age					
15-19 years	39.7	67.5	59.3	48.2[j]	75.9
20-24 years	38.7	68.2	50.2	54.1	84.2
25-29 years	41.3				
30-34 years	33.8	52.3			
35-39 years	22.2[i]		28.4	41.8	85.5
40-44 years		39.5			
45-49 years					
N	*5188*	*33026*	*4745*	*5844*	*2935*

Notes: a: This figure is for 1-4 years of schooling; b: 5-9 years; c: 12+ years; d: 6-10 years; e: 11+ years; f: The higher value is for GCE O-level and lower for A-level and higher; g: The lower is for 'Other Urban' and higher for 'Major Urban'; h: The lower value is for 'Colombo Metro' and higher value for 'Other Urban'; i: This value is for 35+; j: Age categories in Pakistan are <21, 21-34, 35+ years.

Sources: Computed using data from *Bangladesh:* NIPORT, 2001; *India:* IIPS and ORC Macro, 2000; *Nepal:* GON-MOH et al., 2002; *Pakistan:* NIPS, 2001; *Sri Lanka:* GOSL-DCS, 2002a.

TABLE A5.3A Socio-Economic and Demographic Differentials in Use of Antenatal Care, Year between 2005 and 2007, percent

	Bangladesh	India	Nepal	Pakistan	Sri Lanka
	2007	2005-06	2006	2006-07	2007
Total	**51.7**	**74.2**	**43.7**	**60.9**	**99.4**
Maternal Education					
None	28.8	58.0	28.5	50.0	97.4
Up to 5 years	41.2	78.6[a]	51.9	70.0	98.6
6-9 years	65.8	86.8[b]	68.1	81.9	99.5
10+	91.2	95.9[c]	89.7	91.5	99.5
N	*4845*	*39676*	*4065*	*5677*	*6046*
Economic Quintile					
Poorest	–	53.9	17.7	36.9	–
Second	–	65.9	30.5	48.3	–
Third	–	77.3	38.4	61.3	–
Fourth	–	88.1	60.7	73.7	–
Richest	–	96.5	84.1	91.9	–
N	–	*39677*	*4065*	*5677*	–
Residence					
Rural	46.3	68.8	37.5	53.4	99.4
Urban	71.3	89.4	84.6	78.1	99.4
Estate	–	–	–	–	98.7
N	*4905*	*39677*	*4065*	*5676*	*6047*
Maternal Age					
15-19 years	55.8	–	50.8	59.0	98.9
20-34 years	51.5	–	44.9	63.7	99.5
35-49 years	34.1	–	20.4	48.9	99.2
N	*4905*	–	*4066*	*5677*	*6047*

Notes: a: This figure is for 1-4 years of schooling; b: 5-9 years; c: 12+ years.

Sources: *Bangladesh:* NIPORT et al., 2007; *India:* IIPS and Macro International, 2007; *Nepal:* GON-MOHP et al., 2007; *Pakistan:* NIPS and Macro International, 2008; *Sri Lanka:* GOSL-DCS, 2008.

TABLE A5.4 Use of Maternal Health Services among Different Social/Religious Groups, India, 1998-99 and 2005-06, percent

	At least One Antenatal Visit		At least One TT Vaccination		Institutional Delivery		At least One Post-natal Check-up	
	1998-99	2005-06	1998-99	2005-06	1998-99	2005-06	1998-99	2005-06
Religion								
Hindu[5]	65.2	73.7	74.9	78.3	33.1	39.0	29.1-38.2	42.9
Muslim	63.4	70.5	73.6	75.2	31.6	33.0	31.9	35.9
Christian	84.2	80.1	84.8	76.3	54.5	53.4	58.2	60.6
N	*32990*	*38595*	*33026*	*38595*	*32814*	*38595*	*32882*	*38595*
Social Group								
Scheduled Caste	61.4	70.1	73.5	75.1	27.0	32.9	32.2	37.1
Scheduled Tribe	56.3	61.1	60.2	63.1	17.1	17.7	23.3	31.4
Other	46.3	81.3	78.1	83.6	38.4	51.0	39.6	52.6
N	*32753*	*23481*	*33026*	*23481*	*32579*	*23481*	*32646*	*23481*

Sources: IIPS and ORC Macro, 2000; IIPS and Macro International, 2007.

TABLE A5.5 Socio-Economic Determinants of Antenatal and Natal Care

	Antenatal Visit	TT Immunization	Institutional Delivery	Delivery Conducted by Skilled Birth Attendant
Maternal Education	A positive relationship in countries other than SL.	A positive relationship in countries other than SL.	A positive relationship in all countries except SL. In NP and BD, the odds ratio is higher among secondary and higher educated women compared to illiterate women, while in the other countries, an increase is seen even at the primary level.	A positive relationship in all countries. In NP, BD and SL, the odds are higher among secondary and higher educated women compared to illiterate women, while in the other countries, the increase starts with primary education.
Economic Quintiles	A positive influence in countries other than SL. In SL, the likelihood of ANC is higher in the fourth quintile than the richest quintile.	A positive influence. In BD and NP, the poorest one or two quintiles have lower chances of being immunized than the richest quintile. There is no influence in SL.	A positive relationship in countries other than SL. The odds ratio is around 0.5 for the fourth quintile compared to the richest.	A positive relationship in countries except SL. The odds ratio is around 0.5 for the fourth quintile compared to the richest.

Husband's Education	A positive relationship in BD, NP and PK. In IN, higher education of husbands has a negative influence. In SL it is independent.	A positive association in countries other than BD and SL, but only for higher levels of education in NP and PK.	A positive influence in IN, NP and PK only. The odds ratio is 5 for higher secondary and more educated men compared to illiterate men.	The chances of a skilled attendant are higher among those families whose men have higher secondary or more education in IN, NP and PK. No significant influence is seen in BD and SL.
Women's Working Status	No significant influence.	A positive influence in PK, but negative in SL. No influence in BD and not analyzed in IN and NP.	A negative influence in PK, and no influence in BD and SL.	In SL, the chances of SBA are lower among those who have ever worked. In BD and PK, there is no influence.
Residence	In SL, compared to Colombo Metro, the chances of ANC are higher in other urban and rural areas but lower in the estates. In PK, they are lower in 'other urban' compared to 'major urban' areas. In NP, there is no influence. BD was not analyzed.	In PK chances are lower in rural and other urban areas compared to major urban. In NP they are higher in rural areas compared to urban areas. No influence was found in BD and SL.	In NP and PK, chances are lower in rural areas compared to urban and major urban, respectively. No significant influence in SL, and not analyzed in BD.	Higher odds for urban women in BD. In PK, rural and other urban women have lower chances than women from major urban areas. Compared to Colombo Metro, chances are lower in rural and estate areas of SL.
Women's Autonomy	A positive association was found in BD, IN and PK; no influence in SL; NP not analyzed.	A positive influence in BD and IN. No influence in SL, and not analyzed in NP and PK.	There is a positive influence in IN but no influence in BD, PK and SL.	No influence in BD, but positive relationship in IN and SL.
Number of ANC visits		Not analyzed	A positive influence in BD, IN and NP. Not analyzed in PK and not significant in SL. The odds ratio is 9 in IN and 15.6 in BD for 3+ANC visits compared to no visit.	A positive relationship with ANC visits in BD, IN and NP. Has no relationship in SL. Not analyzed in PK.
Maternal Age	Not strongly related. In IN, PK and SL, the chances of ANC were lower among 15-19 year-olds compared to older women. There was no influence in BD and NP.	Chances are higher among 15-19 year-olds than women above 40 years in BD and lower in PK compared to 20-29 year-olds. Independent in the other countries.	There are lower odds among 15-19 year-olds in countries other than SL. In SL there was no influence.	No influence in BD, NP and SL. In IN and PK, women aged 15-19 years had significantly lower chances compared to older women.

Number of Living Children/ Parity	Negative influence in BD, IN and PK, and an inverse U-shaped relationship in SL. No influence in NP.	Negative influence in IN and PK; independent in NP and SL.	Birth order has an inverse relationship in IN. In SL compared to birth order over 4, the chances are higher for lower birth orders. In PK, parity has a negative influence. In BD, the odds ratio is lower for women with three or more living children compared to those with no living children.	Chances decrease with an increase in birth order in IN. In BD, PK and SL, there is a negative influence. No significant influence was observed in NP.
Preceding Birth Interval	The chances increase with an increase in the birth interval in SL. There is no influence in IN and NP, and it was not analyzed in BD and PK.	No influence.	In PK, a birth interval of over 48 months had a higher odds ratio. In NP and SL, it had no influence.	In PK, a birth interval of over 36 months had a higher odds ratio compared to 8-12 months. In NP and SL, there was no influence.
Socio-Religious Group	In SL, the chances were higher among Sinhalese compared with other groups. There were no differences in IN.	SC women in IN had lower odds than others. In SL, Moors and others had lower odds compared to the Sinhalese.	In IN, Scheduled Castes had lower odds than higher castes and other backward castes. No influence in SL.	Scheduled Tribes had lower odds compared even to Scheduled Castes in IN.

Note: Based on multivariate analysis of DHS data for year around 2000 for each country. Sources given earlier.

TABLE A5.6 Socio-Economic Determinants of Postnatal and Child Health Care

	Postnatal Care	Child Immunization
Maternal Education	Positive relationship in IN. In BD, the odds ratio was significantly higher for secondary and higher education. In NP and PK, there was a negative influence. No influence in SL.	A positive relationship in countries other than SL.
Economic Quintile	In IN, the chances were higher among the third and fourth rural quintiles compared to the richest urban quintile. There was a positive influence in NP. In PK the odds ratio was higher for all quintiles compared to the richest.	A positive relationship in countries other than SL. In NP and PK, the odds ratio for the poorest quintile was 0.3 compared to the richest quintile, while in BD it was 0.57.
Husband's Education	Analyzed in BD, NP and PK and no significant influence found.	A positive influence in NP and PK, but independent in BD and SL.
Women's Employment	Analyzed in BD, SL and PK and no influence found.	Chances were higher among working women in BD. No influence in PK and SL.
Residence	In PK, chances were lower in rural and other urban areas compared to major urban areas. No influence in NP and SL.	Not analyzed.
Women's Autonomy	A positive influence in BD and IN. In BD, chances were higher for those who were allowed to go out with their children and husband compared to those who were not allowed to go out at all.	The odds ratio was 1.4 for women who could go out with their children or husband compared to those who could not in BD. In IN, autonomy had a positive influence.
ANC Visit	A positive influence in BD, IN and SL. Not analyzed in the other two countries.	A positive influence in IN. The odds ratio for 4+ visits was 4.3 compared to no visit.
Maternal Age	No significant influence.	With reference to 15-19 year-olds, 20-24 year-olds had higher odds. In BD, the odds ratio was lower for those between 15-39 years compared to those above 39 years. In PK, chances were lower among 40-49 year-olds compared to 20-29 year-olds. In SL, children of adolescent women had higher chances compared to those of 40-49 year-olds.
Birth Order/ Parity/Number of Living Children	Chances were lower for birth orders 1-3 compared to 4+ in SL. In IN, the odds ratio was lower for women with living children compared to those without any, while in PK, the odds ratio was higher for high parity women compared to those with parity 1.	Negative relationship in BD, SL and IN, but independent in the other two countries.
Preceding Birth Interval	Chances were lower for longer birth intervals compared to those with intervals < 2 years in SL. No influence in NP, and not analyzed in the other countries.	Analyzed in IN and found to have no influence.
Socio-religious Groups	In IN, compared to SCs, chances were lower among STs. No influence in SL.	Compared to SCs, the odds ratios were lower among STs, Muslims and Christians in IN. In SL, compared to Buddhists, the odds were lower among other groups.

Annex 6

Public Health Systems in South Asia

Most reproductive health services can be delivered at the primary level of care, but strong back-up is required from secondary facilities for some diagnostic tests, surgical interventions, treatment of complications, and so on. The two levels must be linked by good referral and mechanisms that facilitate appropriate use of each level, including information to communities, patient records, transport (especially for emergencies), follow-up of clients, supportive supervision of frontline workers, and financial support, most of which are still unavailable to poor South Asian women.

Primary Care

The primary level is that at which the first contact is expected to occur between health providers and individuals, families and communities. It is the level at which 'essential' health care is provided. Primary services can be delivered by field or outreach paramedical workers, or at health facilities by paramedics or more highly-trained staff such as nurses and doctors. Some hybrid approaches have been developed to provide clinical care in an outreach mode – for example, family planning 'camps' for male/female sterilization and mobile vans for diagnosis and treatment of serious medical problems.

Fieldworkers. Fieldworkers are the 'frontline' of the health system. They are either based in villages or visit them and homes, playing the key role of establishing contact between individuals and the health system. Their functions are usually quite basic but range across a spectrum of health needs. In Sri Lanka, for example, Public Health Midwives (PHMs) are the main fieldworkers in the preventive health network, providing domiciliary maternal and child health (MCH) and family planning (FP) services in well-defined areas of 2,000 to 4,000 people. The PHM initiates reproductive health care by registering eligible families (those with members in the reproductive age group and with children under five) within her area. She provides FP services including counseling and contraceptives (pills and condoms) to couples, and regularly follows up her clients. Through systematic home visits, she ensures care of pregnant women, infants and pre-school children in her area. She also provides reproductive health information and advice to adolescents when necessary, and educates women on the importance of early screening for reproductive organ malignancies, motivating them to attend 'Well Woman Clinics'

in the area. The PHM's activities are guided by a system of record-keeping which enables her to plan and monitor her routine work. She is supervised by a Public Health Nursing Sister or Supervising Public Health Midwife.

In the other four countries also, fieldworkers focus on the provision of basic health care, MCH and FP services (although, for example, in India, they may also be asked to carry out other frontline tasks such as those entailed by disease control programs). The Sri Lankan focus on adolescent health and on the reproductive health of older women is largely absent, although some initiatives have begun. In Bangladesh, Health Assistants (HA) and Family Welfare Assistants (FWA) are 'mobile' health and FP service providers. They provide basic domiciliary care, visiting every household in their area every four to eight weeks. In Pakistan, Lady Health Workers (LHW) offer similar basic health and FP services, based in their homes and through household visits. The LHWs' primary responsibilities are antenatal and postnatal care. They do not conduct deliveries but liaise with local birth attendants. The LHW program has had a significant impact on the delivery of MCH services, and the Government of Pakistan is committed to strengthening it. Pakistan also has Male Family Planning Workers who provide counseling, health education and contraceptive services specifically to men. In India, the Auxiliary Nurse Midwife (ANM) (also known as the Female Multi-Purpose Worker, MPWF or Health Assistant Female (HAF)) is the main provider of RCH services. (Male MPWs are in short supply and have been involved largely in disease control programs.) Under the National Rural Health Mission 'Accredited Social Health Activists' (ASHAs) are being engaged and trained to act as an 'interface' between communities and the government health system. They are volunteers, selected by and accountable to local village governments (*gram panchayats)*. Their main responsibilities are to increase awareness of and promote institutional delivery, immunization, other health programs, and construction and use of household toilets, and to support contact with the health system by escorting women clients to health centers for RCH care (GOI-MOHFW, 2005).

In addition to the formal fieldworkers mentioned above, *dais* or traditional birth attendants (TBAs) continue to assist home deliveries in Bangladesh, India, Nepal and Pakistan. Efforts have been made to 'modernize' their delivery skills and to formalize their role as health providers by training and supplying them with delivery kits. In India, for example, *dai*-training was carried out over several decades with the aim of ensuring at least one trained birth attendant in every village. However, commitment to the program varied over time, and it failed to achieve its objectives. It is currently at low ebb as professional bodies advocate having more skilled birth attendants. In Bangladesh, an evaluation of the TBA training program that was initiated in the 1970s found little impact on maternal mortality. More recently, a competency-based six-month program, the Skilled Birth Attendant Training Pilot, was started to train FWAs, HAs and NGO workers in basic midwifery. If scaled up, this effort would increase the supply of certified providers of domiciliary maternal and neonatal services, safe home deliveries

and newborn care. In Nepal, *dais* work alongside Female Community Health Volunteers (FCHVs) to distribute condoms and oral contraceptive pills.

Outreach Clinics. Outreach clinics – usually the responsibility of the nearest health facility – provide services (often on specific days) in villages which have no health center. In Sri Lanka, for example, MCH-FP clinics are conducted fortnightly in every village. Another approach is the provision of a specific service at a health facility on a periodic basis. For example, the Well Woman Clinics (WWCs) in Sri Lanka carry out screening for reproductive organ malignancies and certain other conditions every two to four weeks. Women over 35 years of age are checked by trained Medical Officers (MOs) for conditions such as hypertension, diabetes, breast malignancies and cervical cancer. The WWC program is a best practice in the region, but similar specific attention to the health needs of older women is still not part of outreach or clinic-based efforts in the other four countries.

In Nepal, outreach clinics are run by field staff from Sub-Health Posts and Health Posts on fixed days of each month. They provide minor first aid treatment and basic health care, and 'basic' FP and MCH services such as condom and oral pill distribution and provision of iron tablets to pregnant women. They also offer education on topics such as breastfeeding, nutrition, and prevention of communicable diseases. Under the 1998–2003 Health and Population Sector Programme (HPSP) in Bangladesh, Community Clinics were started at the village level, 'owned' by local communities. These clinics are intended to be one-stop centers providing integrated health care services: HAs and FWAs are expected to deliver an Essential Service Package comprising interventions for reproductive and child health, communicable disease control, curative care, and behavior change communication. In India, Anganwadi Centers established under the Integrated Child Development Services' Programme (ICDS) are a village locus for the provision of basic maternal and child health care by ANMs or MPWFs who visit periodically (e.g., once a month). The focus has been on immunization, identification of pregnant women, supplementary nutrition, and child health check-ups. Pakistan has adopted a different approach to outreach care in addition to the efforts of LHWs. Mobile Service Units reach out to remote areas where no family planning or health facilities exist. Each unit is expected to organize 10 to 12 camps per month and provide basic curative health care and family planning services. Similar mobile units exist in some states of India, primarily to reach into isolated tribal, forest or hilly areas.

Primary Health Facilities. Facilities for primary care vary from those that provide only basic ambulatory care, including some MCH and FP services, to others with beds for patients with common illnesses or for normal deliveries, to some with emergency obstetric care (EmOC) facilities.[7] In Sri Lanka, primary health facilities are of two broad types. In the first category are Central Dispensaries, Maternity Homes and Rural Hospitals, managed by non-MBBS Registered or Assistant Medical Officers (RMOs/AMOs) and without nurses on the staff. While Central Dispensaries offer only ambulatory care for minor ailments and some basic

family health clinics, the Maternity Homes and Rural Hospitals provide some essential in-patient care. The RMOs/AMOs are given basic training for three years and intern in obstetric units. Facilities for uncomplicated deliveries are available at these institutions and backed-up by referral and ambulance services. In the second category are Peripheral Units and District Hospitals which are managed by medical graduates, provide nursing care, and have a wider range of services for indoor patients, in addition to maternity facilities and, in some cases, paediatric care.[8] These facilities are also expected to provide Basic EmOC (BEmOC) but, in practice, cases requiring assisted vaginal delivery or removal of retained products (which are part of BEmOC) are transferred by ambulance to a higher-level institution within one-half to two hours reach. The availability of BEmOC facilities in Sri Lanka is 0.9 facilities per 500,000 people – about one-fourth that advocated by UN process indicators. (There are 1.25 Comprehensive EmOC institutions per 500,000.) About 24 percent of institutional deliveries in Sri Lanka take place at primary care institutions and 70 percent at secondary or tertiary facilities. In India, according to the second National Family Health Survey (1998-99), only 16 percent of institutional deliveries were conducted at public facilities although intra-natal care was available at 34 percent of PHCs, 84 percent of CHCs and 91 percent of District Hospitals. In 2005-06, 18 percent of births over the five years preceding the survey were found to have occurred in public institutions, and 21 percent in private institutions.

In Nepal, Sub-Health Posts provide basic health care, MCH and FP services. The MCH workers are trained and conduct normal home deliveries. Health Posts provide basic health care, comprehensive MCH care, and additional FP services, such as IUD insertion, if trained ANMs are available. Health Posts also run a Community Drug Program in which drugs provided by the Ministry of Health and Population are sold at reduced prices or provided free to eligible poor patients. Above these Posts are Primary Health Care Centers which have doctors to provide a higher level of medical care. In 2005-06, comprehensive abortion care (CAC) facilities were expanded to 69 districts through the public or private sectors. Utilization of these services has increased steadily. Basic or Comprehensive EmOC services were established at 67 sites in 47 districts and 36 sites in 32 districts, respectively. A newly-introduced maternity incentive scheme is expected to contribute to increases in the utilization of EmOC services, but formal monitoring of the use of funds and the scheme's effectiveness has yet to occur. The National Policy on Skilled Birth Attendants was finalized and approved by MOHP in 2005-06, and a Safe Motherhood and Neonatal Health Long-term Plan (2006-2017) was formulated. Human resource policies for skilled birth attendants – their production, capacity building, accreditation, deployment and retention – will be crucial to reduce maternal and neonatal mortality. Maternal and Neonatal Tetanus Elimination was confirmed at the end of 2005, and school TT immunizations started. Nationwide programs for vitamin A and deworming continue. The Community-based Integrated Management of Childhood Illnesses program has substantially increased the number of Acute Respiratory Illness cases treated.

In Bangladesh, Union Health and Family Welfare Centers (UHFWCs) provide basic health care, FP and MCH services. Efforts are underway to make Basic EmOC available at all UHFWCs. The *Upazilla* or *Thana* Health Complexes are the bedrock of primary health care and are the first referral units. They have three specialists (in Medicine, Surgery, and Obstetrics and Gynecology) and another Medical Officer in charge of MCH care. It is proposed to make Comprehensive EmOC available at this level.

In Pakistan, at the primary level, Family Welfare Centers, managed by female family planning workers provide counseling and services (for non-surgical contraceptives). MCH centers managed by Lady Health Visitors provide basic health care, antenatal care, normal delivery, postnatal care and FP services. Basic Health Units (BHUs) above these provide services to the same areas as the MCH centers but are better staffed and equipped. The BHUs are linked to larger Rural Health Centers with in-patient facilities.

In India, Sub-Health Centers (SHCs) are the most peripheral facilities, providing basic MCH care, including immunization and family planning, to populations of 5,000 in rural areas (or 3,000 in tribal or hilly areas). There are proposals to improve SHCs to carry out IUD insertions and simple laboratory investigations. Primary Health Centers (PHCs), one per 30,000 people, have a few beds for in-patient care and normal deliveries, and offer basic health and MCH-FP services. They supervise SHCs and have some facilities for training field staff. The on-going Reproductive and Child Health Programme is enabling 24-hour services for deliveries at PHCs and at the next level up, Community Health Centers (CHCs), one per 'block' of 120,000 people in the plains and 80,000 in hilly areas.[9] PHCs are being upgraded to provide paediatric care and perform selected surgical procedures (such as medical termination of pregnancy, and male and female sterilization). CHCs have specialists in Medicine, Surgery, Pediatrics, and Obstetrics and Gynecology. As they are the first referral units for cases from SHCs and PHCs but are also points of direct contact they function as primary as well as secondary health facilities. In order to promote preventive health care, a new non-medical post of Community Health Officer has been established at each CHC.

Secondary and Tertiary Facilities

Secondary health facilities provide obstetric, pediatric, other specialist care, and Comprehensive EmOC, including Cesarean section and blood transfusion. In Pakistan the *Taluka/Tehsil* Headquarter Hospitals offer this specialized care and 40 to 60 beds. They are the first referral unit for complicated cases from peripheral facilities. A wider range of specialists is available at larger District Headquarter Hospitals. In India, secondary and specialist care is provided at CHCs, *Taluka/Tehsil*/Rural Hospitals, District and Sub-divisional Hospitals.[10] Under the earlier Child Survival and Safe Motherhood (CSSM) Programme, FRUs were set up at CHCs or Sub-district hospitals. However, many of the FRUs planned have not become fully operational due to a lack of skilled medical manpower (especially anesthetists and gynecologists), inadequate

infrastructure (such as operation theaters or labor rooms), or a lack of blood-banking facilities. These shortcomings are to be addressed under the RCH program, and CEmOC services at CHCs strengthened to provide round-the-clock services for obstetric emergencies and newborn care. A number of innovative schemes have been implemented to address the shortages of specialists. For example, some CHCs contract private anesthetists to assist in emergency operations, while elsewhere MBBS doctors are being trained to administer anesthesia for this purpose.

In all five countries, tertiary institutions provide specialized medical care that involves advanced or complex procedures or treatment by highly-qualified medical practitioners. In reproductive health they would, for example, perform intricate cancer surgery or carry out *in vitro* fertilization. These institutions are usually located in large cities and may have regional or national standing. Those in the government sector are often linked to teaching institutions and hence are used as a base for training doctors, nurses and a range of technical staff.

Annex 7

Promising Practices for Better Reproductive Health in South Asia

Table A7.1 below provides a list of practices that could be adopted or scaled up in South Asia. The boxes that follow give a brief description of the practice (or refer to information included in the main text). While the practices in the list are organized by their appropriateness to the different stages of the life cycle, the descriptions in Boxes A7.1 to A7.4 are arranged according to their relevance to demand, access, quality and cross-sectoral needs, respectively, to enable more specific selection. The descriptions briefly present some aspects of 'how' improvements have been achieved. The examples have been chosen after a thorough review, with the chief aim of illustrating the potential to identify and apply practices from one area to another, even across borders and continents.

TABLE A7.1 Some Promising Practices to Address Needs at Different Stages of the Life Cycle

Specific Needs	Examples
Overall Reproductive Health	
Strengthen the enabling environment (including political commitment to women's health) and develop a rights-based approach to reproductive health	**Bolivia:** A national commitment to improve the quality of maternal and child health care **Bangladesh:** *Kishori Sanghas* to empower adolescent girls **South Africa:** Training in gender awareness and gender violence for primary health care nurses in rural areas **Senegal:** Private administration and public financing of community nutrition programs **Sri Lanka:** Investing in maternal health. *See Chapter 3, page 100.* **Ethiopia:** Combining social mobilization and community-based distribution
Increase awareness of reproductive health and target underserved populations	**Ethiopia:** Combining social mobilization and community-based distribution **India:** Using community health workers to deliver simple curative care: SEARCH, Maharashtra **Thailand:** 100 percent condom-use program
Enhance quality of care, including through monitoring	**South Africa:** National adolescent friendly clinic initiative **Egypt:** Quality improvement program. *See Chapter 3, page 95.* **India:** Using monitoring and evaluation for program management

	Sri Lanka: Total quality management. *See Chapter 3, page 94.* **Bangladesh:** Multi-angle approach to improving the quality of family planning services **Sri Lanka:** Improving quality through maternal death audits. *See Chapter 3, page 94.* **Pakistan:** Monitoring through mystery clients: Key Social Marketing
Involve men in reproductive health	**Cambodia:** Increasing utilization through male involvement **India:** Enhancing men's roles and responsibilities in women's health: SEWA Rural, Gujarat. *See Chapter 3, page 92.* **India:** Increasing access by involving men: the *Shramik Bharti* program in UP. **Pakistan:** A public-private partnership
Adolescent Reproductive Health	
Increase awareness and access to services and reduce adolescent fertility	**Belize:** Planet Youth: Of young people, by young people, and for young people **Nicaragua:** Reaching youth through a magazine, radio show, and TV drama **Zambia:** Peer-based education and communication for service utilization **India:** Making sexual and reproductive health a youth affair: 'Young Inspirers' **Uganda:** Innovative publications and programs for adolescents **South Africa:** National adolescent friendly clinic initiative **India:** Empowering communities to improve adolescent reproductive health through social entrepreneurship: *Deepalaya*, Delhi
Reduce adolescent fertility through actions in other sectors	**Bangladesh:** *Kishori Sanghas* to empower adolescent girls **Thailand:** Innovative approach to involve adolescents **Bangladesh:** Female secondary school stipend program
Address gender violence	**South Africa:** Training in gender awareness and gender violence for primary health care nurses in rural areas
Sexually-Active Adults	
Reduce the proportion of unwanted pregnancies	**India:** Enhancing men's roles and responsibilities in women's health: SEWA Rural **Cambodia:** Increasing utilization through male involvement **Pakistan:** Franchising family planning for the poor: the Green Star program **Pakistan:** A public-private partnership. *See Chapter 3, page 92.* **Ethiopia:** Social mobilization and community-based distribution to overcome social and geographic barriers to family planning
Prevent and manage RTIs/STIs/HIV (including among adolescents)	**Kenya:** Identifying RTIs among family planning and antenatal clients **Tanzania:** Simple package of quality improvements **Zambia:** Peer-based education and communication for service utilization **Thailand:** 100 percent condom use **Pakistan:** A public-private partnership. *See Chapter 3, page 92.* **Cambodia:** Identifying needs and developing IEC materials
Address infertility	**India:** Integrated infertility and family planning services at the FPAI
Improve the quality of family planning services	**Bangladesh:** Multi-angle approach to improving the quality of FP services **China:** Introducing interpersonal communication and counseling skills into a family planning training program

Maternal and Child Health	
Improve use of antenatal care	**Senegal:** Playing the 3W Safe Motherhood Game **India:** Involving men in antenatal care: the *Pati Sampark* program in Gujarat. *See Chapter 3, page 92.* **India:** A successful camp approach in Maharashtra
Increase institutional delivery, availability of EmOC, and provide effective postpartum and newborn care	**Malaysia:** Increasing access to maternity care through birth centers **India:** Community-based health insurance scheme, Karnataka. *See Box 3.1, page 93.* **India:** Enhancing men's roles and responsibilities in women's health **Pakistan:** Strengthening service delivery through LHWs. *See Chapter 3, page 98.* **India:** Using community health workers to deliver simple curative care
Improve quality of care	**India:** Tamil Nadu health sector reform. S*ee Box 3.4, page 103.*
Menopausal Women	
Expand services to include older women	**Malaysia:** Launching special reproductive health services for women moving through menopause at Well Women Clinics **Thailand:** Using mobile units to improve cervical cancer screening **India:** A cervical cancer screening project effectively using a network of community resources

BOX A7.1 Promising Practices to Improve Demand for Reproductive Health Services

Belize: *Planet Youth.* The program aims to educate young people about sexual and reproductive health, increase their awareness of safe sexual behavior, and provide a place where they can get information and access to contraceptives and related services. It has youth-friendly clinics and drop-in educational/recreational centers called 'Planet Youth' at which school-going and out-of-school youth can exchange information and share ideas. The promise of Planet Youth lies in its neighborhood basis; use of entertainment and simple, informal and up-to-date messages to keep its audience engaged; and committed staff. It is a program 'of young people, by young people, and for young people' (IPPF, 2000).

Zambia: *Peer-based Education and Communication for Service Utilization.* Peer-based education is combined with communication campaigns in local languages to explain, for example, the signs and symptoms of STIs and give information on the locations of treatment centers. The program has been effective in combating misconceptions about STIs and increasing treatment rates, particularly for HIV (Longfield et al., 2003). Peer educator programs (PEP) are sometimes combined with other activities such as condom distribution or STI testing. Although this makes it difficult to isolate the impact of PEPs, they are believed to be successful in enhancing adolescents' knowledge, decreasing risk behaviors, and preventing pregnancy and STIs. Several other African and Asian countries including Ghana, Cameroon, Kenya, Ethiopia, Botswana, Cambodia, Thailand, China, Philippines, India and Sri Lanka also report success (UNESCO, 2003).

Cambodia: *Identifying Needs and Developing IEC Material.* Young people living with HIV/AIDS (PLHA) were involved in conducting their own workshops for communication and group formation. They identified their needs and developed their own innovative approaches to IEC, most notably using songs, drama, role plays, quizzes, puppet-shows and karaoke. They have subsequently organized community forums to expand their PLHA networks and are producing their own IEC materials

which include simple, colorful booklets addressing self-care, anti-retroviral therapy, rights, prevention and treatment of opportunistic infections, stigma and discrimination.

Thailand: *An Innovative Approach to Involve Adolescents.* The Foundation for Women produced an impressive booklet based on drawings and clippings compiled by adolescent girls who participated in a series of camps. The adolescents themselves identified the materials and activities that they found most beneficial. This approach has helped to engage adolescents in a sustained manner.

India: *Empowering Communities to Improve Adolescent Reproductive Health through Social Entrepreneurship. Deepalaya*, an NGO, educates adolescents and young married couples in reproductive health using community 'social entrepreneurs.' They register young couples and provide them information and contraceptives, counsel them, make home visits, and mobilize target clients for various health camps and education programs. Adolescent peer educators provide information.

Nicaragua: *Reaching Youth through a Magazine, Radio Show and TV Drama.* The program recognizes that it is not enough to have short-lived media campaigns but that education efforts must be continuous and widespread. It combines a magazine, radio show and TV program and links the messages to the lives of youth.

Senegal: *Playing the 3W Safe Motherhood Game.* The game increases women's awareness of maternal and child health risks by associating these risks with local cultural images, beliefs and proverbs. The winners are those who successfully identify solutions to a risk or problem.

Cambodia: *Increasing Utilization through Male Involvement.* Peer-group discussions have changed the attitudes and behaviors of men, who are the primary decisionmakers in matters related to sexuality and reproductive health in Cambodia. After several months of discussions, participants were found to use condoms more frequently, seek prompt treatment for STIs, and were better able to resist peer pressure to visit brothels.

India: *Enhancing Men's Roles and Responsibilities in Women's Health.* In SEWA Rural, health workers' visits are tailored to men's schedules so that they can be involved in the discussions. This has led to a 40 percent increase in men seeking out health workers to register their wives for early antenatal care. For family planning, workers organize discussions with newly-married couples, as well as with elders in their families. Male health workers assist in motivating male members of the community and are vital in adolescent groups.

BOX A7.2 Promising Practices to Improve Access to Health Care

Thailand: *100 percent Condom Use.* The main target group is men who are clients of sex workers, and the key strategies are condom promotion through mass media, ensuring continuous supplies, and enforcing universal condom use at commercial sex establishments.

Pakistan: *A Public-Private Partnership.* Engender Health initiated a project that established partnerships between several public- and private-sector facilities to create demonstration sites for comprehensive men's reproductive health services. Each site developed its own unique strategies to promote services for men. At one site, community religious leaders became very involved. At another site rickshaw drivers were trained to answer basic questions about the clinic and men's services.

Pakistan: *Franchising Family Planning for the Poor* (see Box 3.2, page 96).

Ethiopia: *Social Mobilization and Community-based Distribution to Overcome Social and Geographic Barriers to Family Planning in Villages.* Extension agents lived in villages for six months and worked intensively with the communities to organize them and develop community-based service systems (e.g., to distribute pills and condoms). After three months, the villagers selected local volunteers who were

trained and gradually took over the duties of the extension agents including counseling, group education and distribution of contraceptives.

India: *Increasing Access by Involving Men.* PRIME II and *Shramik Bharti*, a local NGO, reach out to men to increase the number of pregnant women who prepare for births. Community health committees register pregnant women, facilitate access to prenatal and postpartum care during visits by ANMs, help identify transport, and set up emergency loan mechanisms. Home birth teams – often the pregnant woman and her mother-in-law – attend training led by village health guides, in which they learn to recognize and respond to complications of labor, delivery and newborn care. Home-based life-saving skills sessions changed the nature of household decision-making about birth planning and action in case of complications. Men stated that they felt responsible not only for pragmatic tasks such as arranging transport and finance in the event of an emergency but also for taking action as a member of their home birth team. Integration of postpartum family planning counseling and services with improved maternal health care is also emphasized.

Malaysia: *Increasing Access to Maternity Care through Birth Centers.* These low-risk birth centers have four to six beds attached to a health clinic. They are staffed by doctors, nurses and midwives from the clinics. Women who are high-risk are also allowed to deliver at the centers if they do not want to go to a hospital, but in the event of an emergency are sent to the nearest hospital by ambulance.

India: *Using Community Health Workers to Deliver Simple Curative Care.* SEARCH in Maharashtra trains village health workers and TBAs to diagnose childhood pneumonia and treat it with antibiotics under the supervision of a medical team. This has helped to reduce case fatality and has consequently lowered infant and child mortality.

India: *A Successful Camp Approach.* Another effort in Maharashtra made the full range of antenatal services available through mother and child protection camps held once a month on a specific day in each village with a population of 1000 or more. Advance scheduling, an acceptable fixed venue, and ensuring that supervisors and workers, both male and female, were available at each camp led to a 30 percent increase in coverage of pregnant women with ANC.

Kenya: *Identifying RTIs among FP and ANC Clients.* The program focuses on primary prevention of RTIs, including provider-led identification of symptoms, leading to syndromic management of STIs. It includes peer education activities for sex workers, youth in schools, and factory workers, and has successfully integrated STI diagnosis and treatment into existing FP and ANC service.

India: *Cervical Screening using a Network of Resources.* An institute of oncology teamed up with NGOs and the public health system to disseminate information about cervical cancer, encourage women to seek screening, and train health workers to do basic screening and referral. The program found that the interest of female health workers was crucial to its success, and that men needed to be actively engaged in order for women to undergo the health tests.

Thailand: *Using Mobile Units to Improve Cervical Cancer Screening among Rural Women.* The program includes education through trained village communicators who mobilize women to come for screening, and free screening at the village school or health center. It has effectively reached older women.

Malaysia: *Launching Special Reproductive Health Services for Women Moving through Menopause at Well Women's Clinics.* The Federation of Family Planning Associations (FFPAM) offers special services to older women to learn about menopause, adapt to this change, and maintain a healthy life. It uses a variety of IEC strategies, sponsors client forums where specialists educate women about menopause and hormone replacement therapy (HRT), and holds public seminars to raise awareness and publicize the range of reproductive health services available at the clinics, including menopause services. Associated Well Women's Clinics offer HRT, counseling, treatment of menopausal symptoms and gynecological problems, cancer screening, and referral if needed.

BOX A7.3 Promising Practices to Improve the Quality of Care

China: *Enhancing Interpersonal Communication and Counseling Skills for Family Planning.* To improve the quality of its family planning program, China decided to upgrade the skills and knowledge of its FP workers through a five-year Counseling Training project in 20 of its 30 provinces. It focused on the quality of information and counseling given to clients, and on interpersonal relations between providers and clients. National project staff learned about local realities by conducting KAP surveys. They designed a four-tiered training program, reaching down to village-level workers, in which participatory techniques were found particularly effective. FP managers and local government officials who had been trained in interpersonal communication and/or oriented to the project were more likely to support the local workers in their efforts to improve the quality of services.

Bolivia: *National Commitment to Improve the Quality of Maternal Care.* The commitment is manifest in the adoption of national standards of care for pregnant women and their newborn, as well as FP standards, and Basic Health Insurance. The epidemiological surveillance system has been revitalized to gather data on maternal and neonatal mortality. A uniform death certificate – specifically indicating maternal deaths – is being used. Community health advocates are trained to involve communities in monitoring the quality of care. A working group was set up to study cross-cultural issues to ensure that services are culturally-sensitive.

Tanzania: *A Simple Package of Quality Improvements.* The package included capacity-building (continuing education, training in quality concepts, strengthened management systems, and enhanced community links), improving infrastructure, regular provision of supplies and drugs, quality monitoring (through regular management meetings and quality assurance techniques), service integration, community participation, and additional service provision through the private sector. The improvements led to a several-fold increase in RTI treatment and family planning, greater patient satisfaction, and increased community participation within two years (Atherton et al., 1999).

Malaysia: *Quality Assurance in Maternal Health.* The approach uses hospital indicators in consultation with obstetricians. Data are compiled every year and 'outliers' are obliged to investigate the reasons for their performance.

South Africa: *National Adolescent Friendly Clinic Initiative.* This is an accreditation program to establish national standards and criteria for adolescent health care in clinics and to build the capacities of health workers to provide quality services. The accreditation process includes clinic self-appraisals and improvement, followed by external assessments and award of achievement stars.

Pakistan: *Monitoring through Mystery Clients.* Key Social Marketing employs 'mystery clients' to visit the doctors and paramedics they have trained to find out whether the training has led to good practices. The feedback enables them to improve both the providers' skills and their training programs.

Bangladesh: *Multi-angle Approach to Improve the Quality of Family Planning Services.* Engender Health addressed the quality of family planning services and introduced wide choice by strengthening planning at the local level, supervision, training and referral services. It used COPE, Client-Oriented Provider-Efficient services, to improve the understanding and responsiveness of providers to client needs, their behaviors and ultimately the provision of services, and client satisfaction with them.

India: *Using Monitoring and Evaluation for Program Management.* The AIDS Prevention and Control Project (APAC) has served as a model for several agencies, including the Tamil Nadu State AIDS Control Society (SACS) and Andhra Pradesh SACS. In addition to regular monthly reporting, NGOs

benefit from three types of monitoring: six-monthly thematic meetings where those implementing the same interventions share their experiences, get special technical inputs, review progress and plan the next six months; six-monthly geographic area meetings where those in the same area meet with the same objectives as above; and consultant visits in which enlisted experts visit for three days to review all aspects of the NGO's performance and provide a report and de-briefing. The NGO is expected to provide an Action Taken Report within three months, covering all the points raised.

BOX A7.4 Promising Cross-Sectoral Efforts

South Africa: *Training in Gender Awareness and Gender Violence for Primary Health Care Nurses in Rural Areas*. See Chapter 3, page 84.

Bangladesh: *Kishori Sanghas to Empower Adolescent Girls*. Adolescent girls' groups are formed and mentored by experienced NGOs who provide education, training and post-literacy activities. The *Kishori Sanghas* have spurred or become forums for the implementation of other national programs, as the Ministry of Women and Children's Affairs targets other activities to communities which have these groups. For example, the Ministry implements various sensitization and training activities for elected members of local government, parents and adolescent boys to help create an enabling environment for adolescent girls to be socially and economically empowered.

Uganda: *Innovative Publications and Programs for Adolescents*. Beginning with a newspaper for adolescents, focusing on HIV/AIDS in the context of their sexuality, the Straight Talk Foundation reaches over a hundred thousand schools, community-based organizations, religious groups and individuals. School-based clubs have been organized and a program in which doctors and counselors visit schools.

India: *Making Sexual and Reproductive Health a Youth Affair: the 'Young Inspirers' Program*. The program actively involves 12-20 year-olds in competitions, exhibitions, dramas, etc. to disseminate information about sexuality and reproductive health, and trains peer counselors. Workshops are held at schools and colleges, and information is tailored to the age of the students and their socio-economic backgrounds.

Bangladesh: *Female Secondary School Stipend Program*. See Box 3.5, page 104.

Senegal: *Private Administration and Public Financing of Community Nutrition*. The program includes monthly growth monitoring, weekly nutrition and health education sessions, referral and follow-up of home visits, food supplementation to malnourished children, and improved access to water standpipes.

India: *Integrated Infertility and Family Planning Services at the Family Planning Association of India*. Medical officers are trained specially to evaluate and treat infertile couples. They teach them about reproduction and counsel them about maintaining health, diagnostic tests and treatment options. Couples are referred to adoption agencies, particularly if they need more sophisticated interventions to conceive but cannot afford them.

Annex 8

Reproductive Health Expenditures

TABLE A8.1 Donor Expenditures on Reproductive Health by Component, South Asia, percent

	Bangladesh (2000-01)	Nepal (1999-2000)	Sri Lanka (1997)
Maternal Health	28	5	11
Childbirth and Pregnancy Complications	5		0
Infant Care	37	0	15
Family Planning	28	92	62
Prevention and Control of STDs	1	< 1	8
Other Inpatient Reproductive Health Expenditures	1	0	0
Other Outpatient Reproductive Health Expenditures	1	0	0
General RH	0	3	5

Note: 'General Reproductive Health' consists of donor projects that involve two or more reproductive health activities which could not be classified into one of the other reproductive health categories.

TABLE A8.2 Average Expenditures per Child Born by Location of Birth in the Past Year, Andhra Pradesh, India, 1995-96

	Rural				Urban			
	Home	Hospital/ PHC/ Maternity Home/ Nursing Home	Other	Total	Home	Hospital/ PHC/ Maternity Home/ Nursing Home	Other	Total
Cost per Childbirth (constant 2000 US$)	6	44	11	16	10	34	7	27
Cost per Childbirth (share of per capita GDP, percent)	1.2	9.1	2.2	3.3	2.1	7.1	1.4	5.6

Source: Computed from NSS 1995-96.

TABLE A8.3 Mean Out-of-Pocket Cost per Immunization by Type of Provider, Pakistan, 1998-99

	Govt. Hospital, Dispen-sary/ Doctor	Health Unit, Rural Health Center	Mother Child Health Center	NGO/ Health Worker	Lady Health Worker	Vacci-nation Teams	Private Practi-tioner/ Provider	Other
Cost per Visit (US$, constant 2000 prices)	0.49	0.22	0.18	0.01	0.00	0.03	1.79	0.81
Cost per Visit (share of per capita GDP, percent)	0.11	0.05	0.04	0.00	0.00	0.01	0.40	0.18

Notes: Calculated from households that reported expenditures for the last immunization visit; includes transport costs.

Source: Computed from PIHS 1998-1999.

TABLE A8.4 Incidence of Household Consumption and Household Expenditures on Health and Reproductive Health, Bangladesh, 1999-2000

Expenditure-based Quintile	Average Household Consumption per Person (Taka)	Quintile Share of Household Consump-tion, percent	Average Household Health Expenditure per Person (Taka)	Quintile Share of Household Health Expenditures, percent	Average Household Reproductive Health Expenditure per Person (Taka)	Quintile Share of Household Reproductive Health Expenditures, percent
Poorest	2,923	7	39	13	3.01	10
Second	4,565	11	50	16	3.64	11
Third	6,008	15	53	17	2.42	8
Fourth	8,026	19	60	19	3.47	11
Richest	19,181	47	106	34	19.34	61
All	8,115	100	62	100	6.36	100

Source: Computed from HDS 1999-2000.

TABLE A8.5 Household Expenditures on Childbirth during the Past Year as a Share of Annual Household Consumption, Andhra Pradesh, India, 1995-96, percent

Expenditure-based Quintile	Rural Households				Urban Households			
	Home	Hospital/ PHC/ Maternity Home/ Nursing Home	Other	Average	Home	Hospital/ PHC/ Maternity Home/ Nursing Home	Other	Average
Poorest	8	13	21	8	8	22	0	16
Second	6	14	0	8	8	14	0	12
Third	7	17	8	10	7	16	20	13
Fourth	5	32	9	15	8	23	4	21
Richest	3	51	0	24	11	17	0	17
All	5	38	9	14	6	18	4	15

Source: Computed from NSS 1995-96.

TABLE A8.6 Household Expenditures on Childbirth during the Past Year as a Share of Annual Household Consumption, India, 1995-96, percent

Expenditure-based Quintile	Rural Households				Urban Households			
	Home	Hospital/ PHC/ Maternity Home/ Nursing Home	Other	Average	Home	Hospital/ PHC/ Maternity Home/ Nursing Home	Other	Average
Poorest	7	16	13	8	8	15	18	12
Second	8	17	11	9	8	18	14	13
Third	8	23	9	10	10	22	18	17
Fourth	8	24	18	12	10	24	35	21
Richest	7	30	9	14	9	28	10	25
All	7	28	11	11	7	25	16	18

Source: Computed from NSS 1995-96.

Annex 9

Policies Related to Reproductive Health

Bangladesh	India	Nepal	Pakistan	Sri Lanka
Part A. Comprehensive Reproductive Health Care				
		Essential Package		
• National RH Strategy prioritized four services: FP, MCH, abortion-related and RTIs/STIs. • Health and Population Sector Strategy (HPSS) developed Essential Services Package which includes: (a) basic RH care (i.e. safe motherhood, malnutrition, neonatal care, FP, adolescent health, RTIs/STIs and infertility); (b) child health care, including immunization; (c) control of some basic communicable diseases; (d) limited curative care (basic first aid, pain	• National Population Policy 2000 refers to basic rather than comprehensive package of RCH services, i.e., MCH and management of RTIs and STIs. • Suggests delivery through *Anganwadi* centers and self-help groups in addition to health system, and includes village-level registration of births, deaths, marriages and pregnancies.	• National RH strategy (1998) refers to a comprehensive RH package (including FP, MCH, abortion, STIs/RTIs, subfertility, adolescent RH and care of elderly women). • The Health Sector Strategy (HSS) focuses in an Essential Health Services Package with five priority elements: safe motherhood, FP, child health, control of communicable diseases, and strengthening of outpatient care. • 10th five year plan focuses on MCH.	• National RH services package (1991) includes FP, maternal and infant health care, adolescent health, elderly women, RTIs/STIs, abortion and health-related issues of men.	• Population and Reproductive Health policy is committed to provide comprehensive reproductive health care and suggests the following as areas to be addressed: (a) anemia, (b) subfertility, (c) unwanted pregnancy, (d) induced abortion, (e) RTIs/STIs, (f) HIV/AIDS, and (g) reproductive system malignancies (breast, pelvic and prostate cancers).

relief, and so on); and (e) behavior change communication. The ESP is to be delivered through static community clinics rather than the earlier domiciliary approach. Health and family planning workers merged to deliver package.				
Adolescents				
• No comprehensive national policy but the HPSP and HNPSP recognize adolescents as an under-served priority group. • The adolescent health program in the HPSP is mainly concerned with increasing awareness of the reproductive process, STIs, safe sex, etc.; and the treatment of anemia and gynecological problems.	• Special reference in the NPP to adolescent needs, especially in rural areas where there is a high prevalence of adolescent marriages and pregnancies.	• Separate adolescent health and development strategy (2000) with a focus on IEC programs to increase health information. • Amendment passed in 2002 making abortion legal. • Policy endorses provision of FP services to adolescents irrespective of marital status (earlier provided only if married).	• The National RH Policy's (2000) guiding principle is to identify and meet RH needs of people at all stages including adolescence but it does not elaborate on specific measures to be implemented for adolescents.	• Adolescent health is an independent goal in the Population and RH policy. • Broad-based strategies are proposed to address drug abuse, sexual harassment, child prostitution, pregnancies and rise of HIV/AIDS.
Abortion				
• Amendment passed in 2002 that allows menstrual regulation up to eight weeks of pregnancy, on request up to 12 weeks, or more if	• Fairly liberal MTP Act (1971). Allows termination up to 20 weeks under any condition construing a grave risk to the physical or mental condition of the	• After 2002, any woman allowed to terminate pregnancy up to 12 weeks; up to 18 weeks if the pregnancy resulted from rape or incest; and at any	• Allowed when needed to save a woman's life, or if considered 'necessary treatment' to preserve her physical or mental health.	• Illegal, except to save the mother's life. Menstrual regulation is permitted.

rape or incest is involved and by qualified physicians in hospitals, if approved by two physicians and necessary to save a woman's life.	mother, when conception results from contraceptive failure or rape, or is likely to result in a physically or mentally abnormal child. • The Act has been further amended to increase the number of centers which can conduct abortions.	time if recommended by a qualified medical practitioner.		
HIV/AIDS				
• National Aids Committee formed in 1995. • National Policy on HIV/AIDS and STI-related issues formulated in 1997 is concerned with public health aspects (surveillance, counseling and testing) and identifies vulnerable groups.	• HIV/AIDS addressed in National RH Policy. • RCH program proposes 'Camp and Campaign' mode. • National Aids Control Organization (NACO) oversees the management and prevention of transmission of HIV/AIDS. • The NACO program is implemented through State and District AIDS Control Societies and NGOs, independently of other RH activities.	• National Policy on AIDS and STD Control (1995) promotes HIV/AIDS prevention, including safe sex; no focus on gender dimension. • HIV/AIDS is only loosely integrated with the RH package in the National RH strategy. • HIV/AIDS strategy (2003): identifies high-risk groups; focuses on prevention; and promotes a multi-sector approach involving society, NGOs and donors.	• National Population Policy discusses prevention and service delivery to high-risk groups. • National Health Policy (2001) discusses a program for HIV/AIDS that is vertical, i.e., not integrated with RH. • HIV/AIDS Strategy Framework (2001-06) developed.	• National Commission on HIV pre-dates ICPD. A National Taskforce was set up in 1989. • Multi-sector National AIDS Committee set up in 1991 and included in the National Health Council agenda headed by the Prime Minister. • Included in the Population and Reproductive Health policy as an area of concern in the RH services package.
Part B: Policies related to Equity and Quality of Care and Health Sector Reforms				
Equity				
• The HPSS identifies poor and vulnerable groups, especially women and children.	• The National Health Policy is primarily concerned with equity between rural and urban	• Equity is the first objective of the Long-Term Health Plan. The focus is on poor/under-privi-	• The National Health Policy points to the need to address urban bias in health.	• The Population and Reproductive Health Policy proposes the provision of good

• The HNPSP targets the poor, examines the financing of services; channeling of health services; ensuring participation and representation in local-level planning; and monitoring trends in inequality.	areas, different socio-economic groups and states. To address equity, a major portion of public expenditure is to be allocated to improving PHCs. • The National Population Policy identifies underserved groups: urban slums, tribal communities, hill areas, displaced and migrant communities. These are to be served by mobile clinics.	leged/marginalized women and children. • The HSS focus is on the poor and those in remote areas. Direct public finance is proposed for primary health care in these areas. Private sector regulation is proposed to ensure that the poor get more value for their out-of-pocket expenditure.	• The National Population Policy talks of serving the underserved and vulnerable groups in the context of HIV/AIDS.	family planning services to urban slums, plantations, internally-displaced people, factory laborers and migrants. • Other policies focus on health education in urban areas in view of changed life styles.
Integration of Services				
• Integration of local-level Health and Family Welfare workers is part of the HPSS.	• Integration of vertical program is proposed by the National Population Policy (2000).	• Initiated in 1991. Further integration of disease control programs is proposed under the HSS.	• The National Health Policy (2001) continues to promote disease-specific vertical programs. The National Population Policy (2002) proposed a merger of Lady Health Visitors with Family Planning Workers.	• Integration of Family Planning with existing MCH was done in 1965. Other RH services are integrated at the field level.
Decentralization				
• Initiated in administration in 1983. • HPSS suggests major reorganization and restructuring of service delivery organs at the *thana-/upazilla*-level for decentralization.	• Initiated at the administrative level in 1993, but only gradually being operationalized in the health sector. District societies formed under various vertical programs are being merged under NRHM, and lower level	• Local self-government act passed in 1999, in which local authorities are to be made fully responsible for the delivery of public services (including health) by 2007.	• Proposed in the National Health Policy (2001) and in Interim Population Sector Perspective Plan (2002). • Still at a preliminary stage in the health sector.	• On-going since 1987. No particular emphasis in post-ICPD policies.

	health facilities are also becoming autonomous under health reforms. • The National Population Policy (2000) proposes strengthening *Panchayati Raj* Institutions and forming a sub-committee to take responsibility for health. Committees are also responsible for RCH and other health programs but need capacity building.			
Public-Private Partnerships				
• The HPSS proposes a balance between the public and private sectors in financing and delivery of health services. • The Essential Services Package operates through the public sector, but other services (especially hospital-based ones) involve NGOs and the private sector on a contractual basis. • There has been significant NGO involvement in health service delivery in the past.	• The National Health and Population Policies both encourage the involvement of NGOs, private sector and civil society to complement the government's health efforts. Many NGOs have been involved in public programs to date,. but together cover only a very small percent of the population. • A network of accredited public, private and NGO centers is proposed with payment through a system of coupons. • NGOs are seen in both policies as being particularly important in the provision of care to the under-served (hill areas,	• The National Reproductive Health Strategy promotes NGO and private sector collaboration with the public sector. • One of the guiding principles of the Long-Term Health Plan is the involvement of the private sector. • The HSS elaborates on the interactions envisaged between the public and private sectors.	• The National Health Policy proposes that provincial governments should develop policies favorable to public-private partnerships. • The National Population Policy provides incentives for the private sector to work in rural areas. • The Interim Population Perspective Plan involves NGOs, civil society and the private sector in family planning.	• Long-standing involvement of NGOs in family planning. • Successful public-private partnerships exist through channeling centers. • The Population and Reproductive Health Policy proposes the cooperation of NGOs and civil society in the counseling of youth, care of the elderly, and provision of family planning information. • The National Health Policy talks of the regulation of the private sector and its co-ordination with the public sector.

	displaced, migrant population and tribal communities). • There is inadequate recognition of the size of the private sector but its heterogeneity is recognized.			
Financing				
• The HPSS proposes an increased reliance on cost recovery for public sector services. • Health insurance coverage is also promoted.	• The National Health Policy (2000) proposes private insurance and social health insurance schemes to allow the use of private care, and the institution of user charges in secondary and tertiary public health services. • The NPP (2002) proposes health insurance schemes to serve as incentives for family planning.	• The HSS proposes alternative financing to ensure that the poor get the best value for their out-of-pocket expenditure. This includes social and community insurance mechanisms with an intermediary institution as an 'informed purchaser'; and cost-sharing schemes in public facilities with pro-poor exemption and user charges.	• The National Health Policy (2001) proposes community involvement and financing.	• The National Health Policy (1996) suggests the need for alternative mechanisms of funding, especially in the areas of health promotion and prevention.
Inter-Sectoral Coordination				
• A significant aspect of the HNPSP is inter-sectoral coordination to provide nutrition.	• The NPP provides for inter-sectoral coordination with departments dealing with water, sanitation, housing, transport, women and child development, and education. It recommends a co-ordination cell in the Planning Commission. • Coordination with women and child nutrition occurs under the ICDS program.	• The National HIV/AIDS strategy focuses on multi-sectoral involvement (especially with the education sector). • The National Reproductive Health Policy proposes strengthening links with education, women's development, legal and justice system, and advocates the development of a national IEC strategy.	• The National Health Policy (2001) recognizes the need for a multi-sectoral approach and especially mentions the areas of nutrition and education.	• There is emphasis in health-related policies on coordination, especially with the education sector. • A parallel preventive health structure exists with inter-sectoral linkages.

	• The NRHM supports the preparation of district health plans, including water, sanitation, hygiene and nutrition.	• The HSS aims to ensure access to clean water, sanitation and education.		
Part C: Women's Empowerment Dimensions				
• The National Strategy for Maternal Health (2001) focuses on essential services for maternal health. It aims to change the perceptions of communities on safe motherhood, violence and discrimination. • The National Population Policy (2002) addresses the elimination of gender disparities in education, health and nutrition. The principal objectives are to ensure gender equity, create income-generation opportunities, and ensure more active male involvement.	• The 2000 NPP emphasizes women's empowerment. Its concerns are broader than family planning, e.g., education, delaying girls' marriage, IMR, MMR and meeting the need for basic RH services. • The Policy proposes to increase female participation in paid employment; and active involvement of men in FP and other aspects of safe motherhood and childcare. • The 2002 NHP recognizes the role of women's empowerment in improving overall health. It commits the central government to giving priority to funding programs related to women's health. • The National Policy for the Empowerment of Women (2001) refers to the NPP, and to women's need for health care, FP and nutrition.	• The National Safe Motherhood Policy (1998) takes a broad view of safe motherhood. It suggests the provision of free education and completion of primary education for girls. It proposes a literacy program for empowerment. • The National Reproductive Health Strategy (1998) recognizes the role of women in population stabilization. • A Ministry of Women and Social Welfare and a National Commission for Women have been established. • Programs for food supplementation, scholarships, sensitization of parents to the need for education, and an action plan to stop trafficking of women and children are proposed.	• One of the ten key areas of the National Health Policy (2001) is the promotion of gender equity in the health sector. • In the Draft National Reproductive Health Policy (2000) there is a clear shift from targets to empowerment of women, using a rights-based perspective. • The National Policy for the Empowerment of Women (2002) includes access to good quality health services for the poor as one of its objectives. • The Interim Population Sector Perspective Plan 2012 (2002) calls for male involvement in the context of achieving family planning goals.	• The Penal Code (1995) makes marital rape, sexual and verbal harassment a criminal offence. • The National Population and Reproductive Health Policy (1998) addresses gender-based violence, intimidation and harassment of women. It also discusses the increased participation of women in decision-making and public life, and proposes initiation of measures to ensure equal access for women to the labor market. The policy promotes the equal participation of males in all areas of family and household responsibilities.

Annex 10

Key Actions to Improve Reproductive Health

Reproductive Health Problem	Proximal Causes Amenable to Health Service Interventions	Health Interventions	Interventions in Coordination with Other Sectors
Adolescent Girls			
Poor knowledge of reproduction and sex	• Lack of access to information due to isolation and cultural norms (e.g., 'shame', constrained mobility and low contact with institutions) • Inadequate availability of accurate information	• Behavior Change Communication (BCC): Provide accurate information through health workers, peer counseling, mass media and other channels (such as schools) • Address adolescent boys' behavior as well • Education and counseling of parents	• Sex/Reproductive Health Education in schools (Education department primarily responsible, Health department to identify contents, provide staff for inputs)
Sexual abuse or unsafe behavior	• Lack of knowledge of sex/sexuality • Lack of communication within households • Low status of women within households and society	• Improve access to information on sex, sexuality and safe sexual behavior through BCC (as above) • Improve knowledge of and access to contraception and RTI/STI services	• Female schooling • Development of self-esteem and ability to handle sexual advances, etc. • Improve status ofwomen through community education on laws, women's rights, etc. • Improve access to grievance and legal cells • Skills and economic opportunities for women (employment, credit, etc.)
Inadequate physical growth and hygiene	• Gender discrimination in nutrition/health care from childhood	• Counseling of families in proper nutrition and prevention of anemia	• Access to safe water and sanitation

	• Lack of knowledge of nutritional needs and impacts • Lack of information on/ observance of hygiene	• Weekly IFA supplements in adolescence and management of frank anemia; create demand for IFA in pregnancy • Hygiene education	• Nutrition and hygiene education in schools (Education and Health departments to collaborate) • Anti-poverty/Rural Development programs to increase household food availability
Early marriage	• Cultural norms (including increasing dowry with age) • Fear of sexual abuse or consensual sexual activity • Poor knowledge of risks associated with early marriage	• BCC – 'Aggressive' education of communities about risks, laws and penalties	• Skill development for economic activity • Female secondary education • Politicians and other opinion leaders to stop condoning practices such as child marriage • Enforcement of laws
Early childbearing	• Pressure to prove fertility • Poor knowledge of associated risks • Lack of access to family planning information and services • Lack of access to safe abortion	• BCC, e.g., newly-wed couple programs; address older family members • Provide quality family planning services close to client (counseling and outreach) • Involve private entities and NGOs/CBOs/SHGs in contraceptive social marketing • Provide information about abortion and safe services, services within reach, and post-abortion care, including contraception	• Reproductive health education in schools and communities • Departments fostering CBOs to collaborate with Health department to provide information and supplies essentially to adolescents
Closely-spaced pregnancies	• Inadequate knowledge of or reluctance to use contraception • Inaccessible family planning services • Discontinuation of contraception due to lack of follow-up or management of side-effects • Lack of access to safe abortion	• Provide quality family planning services close to client, especially counseling and regular supplies • Involve private entities and NGOs/CBOs/SHGs in contraceptive social marketing • Strengthen client follow-up mechanisms • Provide information on contraindications for different contraceptives	• Departments fostering CBOs to collaborate with Health department to provide information, and supplies to adolescents and older women

		• Manage side-effects • Strengthen postpartum care and adoption of contraception • Provide information about abortion and safe services, services within reach, and post-abortion care, including contraception	
RTIs/STIs and HIV/AIDS	• *See below*	• *See below*	• *See below*
Sexually-Active Women			
RTIs/STIs	• Poor knowledge of RTIs/STIs and their prevention/treatment • Poor personal hygiene • Lack of ability to negotiate safe sex • Lack of access to health services for detection/treatment of RTIs/STIs	• Peer counseling • Develop ability to negotiate safe sex • Ensure regular supply of condoms; promote social marketing of condoms through private entities and NGOs/CBOs/SHGs • RTI/STI diagnosis and treatment/syndromic management through 'single window' at field level	• Departments fostering community programs, women's groups, etc. could include health information in IEC/BCC activities, and distribute condoms through local agents
HIV/AIDS	• Poor knowledge of HIV/AIDS and its prevention/treatment • Lack of ability to negotiate safe sex • Increased risk due to untreated RTIs/STIs and other diseases (e.g., TB) • Risks associated with multiple partners or spouse with multiple partners	• Peer counseling • Develop ability to negotiate safe sex • Ensure regular supply of condoms; promote social marketing of condoms through private entities and NGOs/CBOs/SHGs • Provide testing facilities and treatment of HIV+ • Targeted interventions for vulnerable groups • Improve general health care and diagnosis and treatment of RTIs/STIs	• Departments fostering public programs, women's groups, etc. could include HIV/AIDS information in IEC/BCC activities, and distribute condoms through local agents
Low use of contraceptives	• Lack of access to information • Lack of autonomy to make decisions about contraception	• Provide good public information • Provide quality family planning services close to clients	• Relevant departments could help empower women through education, information, organization, voice; and

	• Lack of access to family planning services (including spouse counseling) • High desired family size	• Expand menu of contraceptive options • Distribute condoms, oral pills, other simple methods through private entities and NGOs/CBOs/SHGs	promote/distribute condoms and other simple methods through private entities and NGOs/ CBOs/SHGs
Unsafe abortion	• No or low use of contraception increases risk • Illegal status of abortion • Even where legal, access to and confidentiality of safe services is inadequate • Cultural norms constrain use of safe services	• Provide quality family planning services with expanded menu close to clients • Where legal, provide quality facilities and post abortion care; PPPs could help ensure safe procedures • Crack down on 'quack' abortion providers	• Other departments such as Police and Law should be involved in these actions
Pregnant/Lactating Mothers and Their Infants			
Poor nutrition (including anemia) during pregnancy	• Lack of knowledge of nutritional (including iron) needs during pregnancy • Cultural beliefs cause 'eating down' • Lack of understanding of the risks to mother and fetus/infant	• Active dissemination of knowledge to communities, and counseling of pregnant women on nutrition and IFA supplementation • Provision of IFA and follow-up to ensure compliance • Home visits to counsel other family members	• Provide knowledge in schools and link to adolescent supplementation programs • Ensure food availability in the households of poor pregnant women especially
Low level of birth preparedness	• Poor knowledge of needs and risks of pregnancy and delivery	• ANC counseling on pregnancy care, risks and danger signs during pregnancy and delivery • Wider information to communities • Ensure birth planning	• Women's programs/ groups to disseminate information on preparation for birth and delivery and provide support • Local institutions can organize emergency transport facilities and funds
Home deliveries attended by unskilled birth attendant	• Poor knowledge of needs and risks of pregnancy and delivery • Low access to skilled birth attendant or institution • Delay in getting to skilled attendant or institution	• Provide quality antenatal check-up • Encourage use and provide access to skilled birth attendants	• Women's programs/ groups to disseminate information on skilled birth attendance and institutional delivery and provide support

		• Encourage institutional delivery – involve local community members including traditional birth attendants and other practitioners to refer and support women for institutional delivery • Public education about labor and danger signs • Provide financial, physical and human support to women to make decision and travel to institution in time (e.g., transport, reimbursement, vouchers, escorts)	• Local institutions can organize emergency transport facilities and funds
Antenatal, intra-natal and postpartum complications	• Lack of knowledge of or belief in ANC and skilled birth attendance • Failure to recognize and manage complications • Few facilities providing basic/comprehensive emergency obstetric care	• Counseling to have complete ANC and PNC and ensure detection and referral of complicated cases • Improve access to appropriate facilities • Ensure early postnatal visits and skilled care • Provide funds for referral transport • Ensure timely management of complications at institution	• Women's programs/ groups to disseminate information on ANC and PNC • Local organizations to assist in transport for women opting for institutional births and referred cases
Late initiation and non-exclusive breastfeeding	• Cultural norms and poor knowledge of the benefits of early and exclusive breastfeeding	• Counseling on all aspects of breastfeeding during antenatal and postnatal check-ups • Teach correct positioning and attachment during postnatal visit	• Women's programs/ groups to disseminate information on breastfeeding and other aspects of child nutrition and health care
Menopausal Women			
Menopausal problems	• Poor knowledge of menopause and associated problems • Cultural norm to 'hide' problems	• Counseling for menopause and health	• Women's programs/ groups to disseminate information on menopause and other health problems

Reproductive tract cancers	• Poor knowledge of symptoms and problems • Cultural norm to 'suffer in silence' • Lack of screening and treatment facilities	• Provide information on symptoms and services; demonstrate breast self-examination • Ensure availability of cervical/breast cancer screening facilities at appropriate level, and equip facilities to treat detected cancers	• Women's programs/ groups to disseminate information on reproductive tract cancers and on availability of screening facilities and treatment

Annex 11

Health Sector Reforms related to Reproductive Health

Bangladesh

Past and Ongoing Reforms

- The Government has involved stakeholders, including clients (poor women, men and young people) and providers, in the health sector reform process that began in 1998. It invited stakeholders to help prepare the Health and Population Sector Program (HPSP).
- MOHFW has piloted demand-side subsidies, i.e., a voucher scheme for antenatal care and safe delivery, as a way to reach the poor.
- MOHFW established a Management Accounting Unit, revised delegation of financial powers, initiated staff training, and formed a Budget Committee to improve financial management. Despite commendable progress, overall public financial management systems remain highly regulation-bound, and input- and process-oriented rather than results- or outcome-focused.

Proposed Reforms

- Shifting resource allocations to poorer districts (or districts with poor health outcomes) on the basis of revised norms for per capita allocations to districts, weighted by a poverty-related index of health needs. These allocations are to be used to provide incentives to practitioners to attend to the needs of the poor, and for efforts at demand-side financing.
- Diversification of service provision through public-private partnerships. The pattern of service provision will be adjusted over time by increasing the use of contracts and commissions for NGOs to provide primary and secondary care in areas where they have a comparative advantage, and for private providers to offer secondary and tertiary services to poor people where they can do so cost-effectively at high quality.
- Creating links with other ministries and programs that have a direct impact on the health status of the poor.

- Improving the quality and scope of health, nutrition and population services through regulation and quality control measures such as registration and accreditation of practitioners.
- Restructuring service delivery through free provision of emergency services to those in need, and expanding HNP services in urban areas for provision of coordinated primary, secondary and tertiary care.
- Options will be explored to mobilize more resources through social insurance, community financing schemes, religious taxation, charitable contributions through corporate social responsibility, service fees and private insurance. Wherever appropriate, these will be scaled up.
- Improving service efficiencies by enhancing workforce motivation and productivity and by the use of service providers in accordance with their comparative advantages.
- Improving sector management to focus on better institutional and personal skills in planning and monitoring in close collaboration with the Financial Management and Audit Unit; budget management through a Medium-Term Expenditure Framework; management of pooled and non-pooled aid funds; information management to identify priority interventions to increase efficiency, equity and effectiveness.
- Decentralization and local-level planning will be piloted in six districts as a first step in the decentralization process.
- For promoting 'voice', community and stakeholder participation, MOHFW and civil society will together facilitate the establishment of a Health Service Users' Forum at local and national levels to strengthen a rights-based approach to service delivery.

India

Past Reforms

The following reforms are mainly national initiatives. There has been a gradual shift in the organizational structure and delivery of health care services. Some of the important policy shifts envisaged and implemented in the VIII, IX and X Five-Year Plan periods were:

- Introduction of user charges for diagnostic and curative services for those above the poverty line, while these remained free or were highly-subsidized for the poor.
- Increased involvement of voluntary, private organizations and self-help groups in the provision of health care, and inter-sectoral coordination in the implementation of health programs.
- Enabling *Panchayati Raj* Institutions (PRI) to plan and monitor health programs at the local level to bring greater responsiveness to the health needs of people and greater accountability, and to utilize local and community resources for health care.

- Making the national family planning program target-free (done in 1996). This meant that centrally-determined targets were no longer the driving force behind the program. Instead, community needs were to determine program priorities.
- In 1998, the family planning program was 'included' in the reproductive and child health program (RCH).[11]

Ongoing and Proposed Reforms

- Contractual appointments of staff for maternal health, e.g., Public Health Nurses/Staff Nurses at PHCs/CHCs that have adequate infrastructure for deliveries.
- To enhance NGO involvement in RCH, a 'Mother NGO (MNGO) scheme' was introduced. Under this, the Department of Family Welfare identifies and sanctions grants to select MNGOs, which in turn issue grants to smaller 'field NGOs' (FNGOs). The functions of MNGOs include: identification and selection of FNGOs; capacity building; providing technical support; networking with State and District health services, PRIs and other NGOs; and monitoring the performance of FNGOs. The FNGOs are required to provide RCH services based on community needs, to orient PRI members to RCH, and so on.
- To achieve actual decentralization and increase state ownership, the Government of India offers technical assistance to strengthen capacity to prepare realistic and specific state plans. Flexibility to incorporate community needs is an important aspect of the RCH program.
- To overcome the fragmented approach (different activities and initiatives), various partners' activities/projects will be converged.
- There will be lateral infusion of personnel to improve management capacity at the national, state and district levels, with functional responsibilities and clear roles.
- To improve the utilization of services and quality of care, the steps proposed are: to hire contractual staff; include quality standards in the core minimum package; outsource service delivery; and demand-generation through behaviour change communication. To bring about a more comprehensive sector approach, public-private partnerships will begin with service delivery and will gradually expand to include preventive/promotive health.
- Infrastructure will be strengthened and operationalized through focused investment in the delivery of the essential package, including more integrated management of the safe motherhood and child survival strategies.
- The RCH Program will have performance-based financing. Financial management systems will be built into the program management structure, and professionals will be appointed to speed-up the flow of funds. To improve equity, RCH will explore innovative ways of 'demand-side financing,' particularly assessing the feasibility of introducing RCH services into existing health insurance and community-financing schemes.

- Improved drug procurement and supply systems (such as that established in Tamil Nadu) will be set-up in non-EAG (Empowered Action Group) states.[12]

Nepal

Ongoing Reforms

- *Decentralization:* The government sector program will support capacity-building for decentralized management of health services. It aims to hand over responsibility and authority over Health Posts and Sub-health Posts throughout the country. Large district/zonal hospitals will be made autonomous. Government health officials will be oriented to support local bodies. Districts will have authority to purchase drugs and equipment. Local bodies will acquire new skills in personnel management to modify compensation in order to attract staff to underserved areas.
- *Sector management:* Government will review the roles and functions of different sectors including its own to remove gaps and overlaps, clarify responsibilities and improve accountability. A management training program will be implemented to develop vision, strategy, budget, and implementation management.
- *Sustainable health financing:* A sector-wide approach will be adopted to provide greater transparency in resource allocation. A financial allocation formula adjusted for poverty, morbidity patterns, population size and density will be developed for allocations to districts. A review of national experience with user fees, community insurance and the community drug program will be finalized to design a path for scaling-up. Development partners have agreed to pool their contribution to finance the health sector program.
- *Monitoring and evaluation:* Household and facility surveys will disaggregate results by socio-economic status and gender to address differences in service utilization and health outcomes among socially-excluded groups.

Pakistan

Ongoing and Proposed Reforms

- Increased investment in the social sectors is a central element of the government's agenda, reflected in Pakistan's Poverty Reduction Strategy Papers (PRSP) I and II. Overall health expenditures have grown significantly over the past decade in nominal and real terms. PRSP II aims to double the share of public health spending as part of GDE from the current level of 0.5 percent.
- A National Maternal and Child Health (NMCH) Strategic Framework was developed for 2005-15. In the first five years, the strategy is to be implemented through an NMCH Program. Program priorities include: introduction of a cadre of community-based skilled birth attendants, basic and comprehensive EmOC services, nutrition interventions (including breastfeeding, appropriate and timely complementary feeding) and other child

and neonatal health interventions. The program places strong emphasis on creating demand through advocacy, community mobilization and health education, and on piloting incentives for mothers to deliver at health facilities. It also envisages improving services through management and program innovations, strengthening and upgrading training schools, and strong monitoring and evaluation.

- Expansion of the Lady Health Workers' Program: The numbers of LHWs rose from 70,000 in 2004 to 100,000 in 2006. The additional 30,000 LHWs were deployed in relatively underserved areas, indicating a greater poverty focus in the program. Some innovations have been introduced, including a direct role for LHWs in immunization. Further program and management reforms will be informed by an external evaluation planned in 2007.
- Population Policy 2002: The overall vision of the policy is to achieve population stabilization by 2020. The key priorities include: a multi-sectoral approach and coordination across all levels of government; public-private partnerships; advocacy campaigns with policymakers and opinion leaders, and effective use of the media; expansion of social marketing in urban and semi-urban areas, and in rural areas by associating registered medical practitioners, hakims, homeopaths, chemists and community-based organizations; promoting male involvement through a cadre of male workers recruited in the rural areas to engage in regular dialogue with male community members and to sensitize elders and parents to the benefits of small families. Key reforms include: decentralization of administrative, financial and program powers to the province and further to the district level; provision of family planning services in the primary health structure. These reforms are in various stages of implementation.
- Public-private partnerships and a strong focus on monitoring and evaluation are key aspects of reform that cut across most programs. An extensive effort to contract out primary health services to NGOs has been initiated following the success of a pilot in one district of Punjab which showed significant improvements in service utilization and client satisfaction. Other models are also being tested including contracting in technical assistance to build district capacity. The HIV/AIDS program relies entirely on NGOs to deliver services to high-risk populations. Strengthening monitoring and evaluation is central to the NMCH Strategy, the Population Policy, the Lady Health Workers' Program and the HIV/AIDS Program.

Sri Lanka

Past Reforms

- Responsibility for health services was devolved to eight Provincial Councils in 1987 (following the Thirteenth Amendment and a Ninth Council later). A further decentralization process took place in 1992 when the administration of health services was devolved to the Divisions. However, budget responsibility was not devolved.

- A system of National Health Accounts was established to report and monitor health expenditure data for the country. Government released the first estimates in 2001.
- The National Health Policy recognizes community participation as an important component of the health development process. About 15,000 young volunteer health workers assist in PHC activities.

Ongoing and Proposed Reforms

- Although Sri Lanka has achieved success in maternal and child health, the interventions and internal organization still reflect the needs of a population at the early stage of the epidemiological transition. Therefore, to better address the present needs of the population, the managerial and technical capacity of the Family Health Bureau will be strengthened. The objectives, strategies and guidelines of the existing maternal and child health program will be revised in collaboration with professional medical associations, and delivery of preventive health services will be strengthened.
- Annual Health Forums will be constituted to encourage participation of different stakeholders in the policymaking process, including the private sector, civil society, development partners and clients.
- To become entitled to a larger allocation, districts will need to be accredited as Program Management Centers based on availability of planning and accounting teams and other financial criteria.
- An environmentally-sustainable health waste management system will be developed and implemented.
- Hospital management including the information system will be modernized and country-wide service delivery networks that provide responsive services to clients within and across provinces will be developed.
- The preparation of the Health Sector Strategy is an initial step to clarify budgeting for the health sector in Sri Lanka. The process of strengthening a 'results orientation' for the public expenditure and budget framework of the central Ministry of Health (MOH) will be piloted in the Ministry of Health of one Provincial Council.
- To strengthen knowledge-based decision-making, a Monitoring and Evaluation cell will be developed within the Management Development and Planning Unit of the MOH by strengthening the capacity of the Health Information Directorate.

NOTES

1. The sources for the surveys (in the order listed) are as follows: *Bangladesh:* NIPORT, 2001; NIPORT and ORC Macro, 2004; NIPORT et al., 2007; NIPORT et al., 2003; *India:* IIPS, 1995; IIPS and ORC Macro, 2000; IIPS and Macro International, 2007; GOI, 2002; GOI-MOSPI, 1996; 2002; GOI-RGI, 2004; *Nepal:*

GON-MOH et al., 2002; GON-MOHP et al., 2007; GON-CBS, 2004; Pradhan et al., 1997; GON-MOH et al., 1998; *Pakistan:* NIPS and Macro International, 2008; GOP-FBS, 2005; NIPS, 2003; 2001; PIDE, 2002; NIPS, 1998; Population Council, 2003; 2004; *Sri Lanka:* GOSL-DCS, 1994; 2002a; 2008; GOSL-DCS, 1993; 1998; 2003.

2. The reproductive health indices of all states were calculated on the basis of five indicators: percent female literacy; percent of pregnant women who received complete antenatal care; percent of deliveries conducted by health professionals; percent of children fully immunized; and percent of couples using modern contraceptive methods.
3. The six indicators were: total fertility rate, contraceptive prevalence rate for women aged 15-49 years, pregnancies with at least one antenatal visit, deliveries with assistance from a medically-trained person, mothers who received antenatal care, and infant mortality rate.
4. The criteria used for the selection of 'poor' women were as follows: member of a household that resides in the village, has less than 50 decimals of land, and whose head of household works as a day laborer for 100 days out of 365 days. The women were aged 15-45 years, married with at least one child (or pregnant), and used the local health services.
5. This assumption was based on estimates by the Netherlands Interdisciplinary Demographic Institute, 1999.
6. Coverage for PNC among Hindus is assessed separately for SC/ST and General Category.
7. Basic EmOC includes the ability to administer parenteral antibiotics, oxytocics and anticonvulsants; perform manual removal of the placenta or removal of retained products; and perform assisted vaginal deliveries. Comprehensive EmOC includes, in addition to the Basic EmOC activities, the ability to perform Cesarean sections and blood transfusions.
8. District hospitals in the other four countries are classified under Secondary Health Care.
9. There are about 6,000 blocks in India.
10. A district has a population of 1.5 to 3 million.
11. In addition to reforms initiated at the national level, several states have initiated health sector reforms (and some have obtained external assistance to increase their resources). Some of the broad areas that they have addressed are: decentralization, public-private partnerships, contracting of services, and health care financing.
12. The EAG states are the ten most backward states in the country.