Maternal, Neonatal and Child Health Programmes in Bangladesh
Review of good practices and lessons learned

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# TABLE OF CONTENTS

Acknowledgements v  
List of abbreviations vii  
Executive summary xi

**Introduction**  
Background 1  
Objectives 2  
Materials and methods 3

**The country-specific context of maternal, neonatal and child health**  
Demographic and socioeconomic profile 5  
Status of maternal health 7  
Status of child health 10  
Healthcare delivery system for maternal and child health 13

**Policy-making in the health and population sectors**  
Improving MNCH through health policy 16  
Major interventions on MNCH in Bangladesh 19

**MNCH interventions in the rural areas**  
Introduction 20  
RH: MCH-FP services of the Government of Bangladesh 21  
Role of NGOs in MCH-FP programme 25  
MCH-FP project of ICDDR,B at Matlab 25  
MCH-FP extension project 26  
BAMANEH’s MCH Project 27  
Birth and re-birth knowledge from BRAC 29  
Emergency obstetric care in rural Bangladesh 32  
Safe deliveries by skilled attendants 36  
Menstrual regulation programme in Bangladesh 39  
Child health interventions in Bangladesh 42  
The Saving Newborn Lives (SNL) Programme 43  
Kangaroo Mother Care (KMC) Programme 45  
USAID funded programme 46
MNCH interventions in the urban areas

Introduction 49
Urban RH: MCH-FP initiative 50
First urban primary health care project (UPHCP-I) 52
Second urban primary health care project (UPHCP-II) 54
The NGO service delivery programme 55
Urban community health programme of Gonoshasthaya Kendra 57
Child survival programme of CONCERN Bangladesh 59
Dusta Shasthya Kendra 60
BASIC I country programme: Bangladesh 62
EngenderHealth (Bangladesh) 63
UNFPA supported programme 64

Gaps and Barriers 66

Best practices and lessons learned 71
Implications and recommendations 94
References 97
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# LIST OF ABBREVIATIONS

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>AFB</td>
<td>Acute Flaccid Paralysis</td>
</tr>
<tr>
<td>ADB</td>
<td>Asian Development Bank</td>
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<td>ADF</td>
<td>Asian Development Fund</td>
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<tr>
<td>AHI</td>
<td>Assistant Health Inspector</td>
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<tr>
<td>AIDS</td>
<td>Acquired Immunodeficiency Syndrome</td>
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<td>ANC</td>
<td>Anti-Natal Care</td>
</tr>
<tr>
<td>APR</td>
<td>Annual Programme Review</td>
</tr>
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<td>ARH</td>
<td>Adolescent Reproductive Health</td>
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<tr>
<td>ARI</td>
<td>Acute Respiratory Infections</td>
</tr>
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<td>BAMANEH</td>
<td>Bangladesh Association for Maternal and Neonatal Health</td>
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<td>BAVS</td>
<td>Bangladesh Association for Voluntary Sterilization</td>
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<td>BCC</td>
<td>Behaviour Change Communication</td>
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<tr>
<td>BCCP</td>
<td>Behaviour Change Communication Programme</td>
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<tr>
<td>BCG</td>
<td>Bacilli Calmette Guerin</td>
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<tr>
<td>BDHS</td>
<td>Bangladesh Demographic and Health Survey</td>
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<td>BINP</td>
<td>Bangladesh Integrated Nutrition Programme</td>
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<tr>
<td>BPASA</td>
<td>Bangladesh Association for Prevention of Septic Abortion</td>
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<td>BRAC</td>
<td>Building Resources Across Communities</td>
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<td>BWHC</td>
<td>Bangladesh Women's Health Coalition</td>
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<tr>
<td>CDD</td>
<td>Control of Diarrhoeal Diseases</td>
</tr>
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<td>CDRS</td>
<td>Client Data Recording System</td>
</tr>
<tr>
<td>CEDAW</td>
<td>Convention on the Elimination of all forms of Discrimination Against Women</td>
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<td>CHW</td>
<td>Community Health Worker</td>
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<td>CKMC</td>
<td>Community-based Kangaroo Mother Care</td>
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<tr>
<td>CNP</td>
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</tr>
<tr>
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<td>DCC</td>
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<td>Deputy Director –Family Planning</td>
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<td>Department for International Development (UK)</td>
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<td>DGHS</td>
<td>Directorate General of Health Services</td>
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<tr>
<td>DPT</td>
<td>Diphtheria-Pertussis-Tetanus</td>
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<td>Full Form</td>
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<td>EPI</td>
<td>Expanded Programme on Immunization</td>
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<td>Essential Service Package</td>
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<td>Fifth Five-Year Plan</td>
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<td>Family Planning Inspector</td>
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<td>Government of Bangladesh</td>
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</tr>
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</tr>
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</tr>
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<td>HI/SI</td>
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<td>HIV</td>
<td>Human Immunodeficiency Virus</td>
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<td>International Centre for Diarrhoeal Disease Research, Bangladesh</td>
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<td>ICPD</td>
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<td>International Development Agency</td>
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<td>IEC</td>
<td>Information Education Communication</td>
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<td>IMCI</td>
<td>Integrated Management of Childhood Illnesses</td>
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<td>IPHN</td>
<td>Institute of Public Health Nutrition</td>
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<td>i-PRSP</td>
<td>Interim Poverty Reduction Strategy Paper</td>
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<td>IUD</td>
<td>Intra Uterine Device</td>
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<td>Low Birth Weight</td>
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<td>Local Government Division</td>
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<td>M&amp;E</td>
<td>Monitoring and Evaluation</td>
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<td>MIS</td>
<td>Management and Information System</td>
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<td>MMR</td>
<td>Maternal Mortality Rates</td>
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<td>Acronym</td>
<td>Full Form</td>
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<td>MNH</td>
<td>Maternal and Newborn Health</td>
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<td>MOLGRD&amp;C</td>
<td>Ministry of Local Government, Rural Development and Cooperatives</td>
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<td>MO</td>
<td>Medical Officer</td>
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<td>Ministry of Health and Family Welfare</td>
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<td>MR</td>
<td>Menstrual Regulation</td>
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<td>NGO</td>
<td>Non-Government Organization</td>
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<td>NID</td>
<td>National Immunization Day</td>
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<td>National Integrated Population and Health Programme</td>
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<td>NIPORT</td>
<td>National Institute of Population Research and Training</td>
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<td>NMR</td>
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<td>NNP</td>
<td>National Nutrition Programme</td>
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<td>NSDP</td>
<td>NGO Services Delivery Programme</td>
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<td>NSP</td>
<td>Nutritional Surveillance Project</td>
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<td>NSV</td>
<td>No Scalpel Vasectomy</td>
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<td>Obs/Gynae</td>
<td>Obstetric and Gynaecology</td>
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<td>ORS</td>
<td>Oral Rehydration Solution</td>
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<td>PA</td>
<td>Partnership Agreement</td>
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<td>PHC</td>
<td>Primary Health Care</td>
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<td>PIP</td>
<td>Project Implementation Plan</td>
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<td>QIP</td>
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<td>Quality of Care</td>
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<td>HCC</td>
<td>Reproductive Health Care Center</td>
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<td>RHDP</td>
<td>Reproductive Health and Disease Control Programme</td>
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<td>RSDP</td>
<td>Rural Service Delivery Programme</td>
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<td>RH-STEP</td>
<td>Reproductive Health Services Training and Education Programme</td>
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<td>RTI</td>
<td>Reproductive Tract Infection</td>
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<td>SBA</td>
<td>Skilled Birth Attendant</td>
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<td>SNL</td>
<td>Saving Newborn Live</td>
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<td>Sr. FWV</td>
<td>Senior Family Welfare Visitor</td>
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<td>SSC</td>
<td>Support Services and Coordination</td>
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<td>STI</td>
<td>Sexually Transmitted Infection</td>
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<td>TBA</td>
<td>Traditional Birth Attendant</td>
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<td>TTBA</td>
<td>Trained Traditional Birth Attendant</td>
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<td>TCC</td>
<td>Training Coordination Committee</td>
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<td>TFR</td>
<td>Total Fertility Rate</td>
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<td>Tetanus Toxoid</td>
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<td>Urban Community Health Programme</td>
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<td>UFFO</td>
<td>Upazila Family Planning Officer</td>
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<td>Urban Family Health Partnership</td>
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<td>UHC</td>
<td>Upazila Health Complex</td>
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<td>UHFWC</td>
<td>Union Health and Family Welfare Centre</td>
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<td>UHFPO</td>
<td>Upazila Health &amp; Family Planning Officer</td>
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<td>UNDP</td>
<td>United Nations Development Programme</td>
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<td>UNFPA</td>
<td>United Nations Population Fund</td>
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<td>UNICEF</td>
<td>United Nations Children’s Fund</td>
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<td>UPHCP</td>
<td>Urban Primary Health Care Project</td>
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<td>USAID</td>
<td>United States Agency for International Development</td>
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<td>VHPC</td>
<td>Village Health Post Committee</td>
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<td>WHDP</td>
<td>Women’s Health and Development Programme</td>
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<td>WHO</td>
<td>World Health Organization</td>
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<td>WRLH</td>
<td>Women’s Right to Life and Health</td>
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EXECUTIVE SUMMARY

Bangladesh has achieved substantial gains in the field of health during the last three decades despite modestly declining poverty and inadequate health services. However, Infant Mortality Rate (IMR) and maternal mortality ratio (MMR) continue to be unacceptably high compared to many other developing countries, with persisting socioeconomic differentials. While access to family planning is increasing, access to three other pillars of safe motherhood namely antenatal care, clean and safe delivery, and essential obstetric care, remain largely unfulfilled. The objective of this study is to review the major maternal, neonatal and child health (MNCH) interventions since independence for documenting best practices, revisiting lessons learned and identifying gaps for informed programme design in future.

This review is based on secondary data on MNCH interventions, and face-to-face interviews with key informants from different organizations implementing MNCH programmes. Both published and unpublished materials for the last ten years were selected which include materials on relevant health systems and interventions in the public and private sectors. While searching the website, key words such as maternal, child, neonatal, health, intervention, programmes, health status, traditional birth attendants (TBAs), midwives, Bangladesh, and emergency obstetric care (EmOC) were used. In-depth interviews were conducted with 10 stakeholders in different national and international organizations who are involved in planning, policy making and implementing MNCH interventions at local and national levels. The interviews focused on intervention components, strategies, targeted populations, expected outcomes, achievements so far and strengths and weaknesses of their programme. Data were collected during February-March 2006. Findings were organized separately for rural and urban areas respectively.

The rural scenario

To address the poor state of MNCH the government of Bangladesh has undertaken several initiatives since independence. In order to detect and refer complicated cases, the EmOC programme was undertaken in early 1990s and the rights-based comprehensive National Maternal Health Strategy was adopted in 2001. The strategy has been integrated into the Health and Population Sector Programme (HPSP 1998-2003) and the Health, Nutrition and Population Sector Programme (HNPSP 2004-2011). It provides essential services package comprising family planning and safe motherhood services, and adolescent and child care services at
Primary Health Care (PHC) level through domiciliary and facility-based service delivery points. Several bilateral agencies (UNICEF, UNFPA, WHO, EU, etc.) and non-government organizations (NGO) (BRAC, CARE Bangladesh, BPHC, EngenderHealth, ICDDR,B, NSDP, PSTC, etc.) are providing hospital or community-based services or both in order to supplement and complement government’s initiatives in this field.

Public MCH-FP service provision in Bangladesh has a number of distinguishing features. The pattern of service utilization is lopsided with low utilization of most facilities at the community level (upazila and below), and over utilization at the district and at teaching hospitals. The major reason for low utilization of primary level facilities is the poor service quality and negative perception of the community about the types of services available. Though the government EOC project has proven as an effective way of improved services for maternal care by using three delays model, not even the district hospital is fully capable of providing it in an effective manner.

Study findings from the Malab MCH-FP project show that family planning programme can be successful even under unfavorable socioeconomic conditions. The client-oriented services were also reported to be successful in reducing maternal mortality rates in the project areas. This is characterized by the presence of local female community health workers with 8-10 years of education and backed by a well developed support system of female paramedical and medical staff, and intensive field supervision. Given the basic training in household communication, family planning service techniques and supportive supervision, female workers could interact effectively with their village clientele. In addition, an organizational culture based on qualification and performance with quality of care has succeeded in raising the performance to levels much higher than those of the government programmes. Thus, the combined efforts of community sub-centre midwives, trained physicians at the Matlab maternity clinic, functional referral chain and proper transport arrangements have contributed to the reduction of maternal mortality in Matlab. The adaptation of Matlab model to the public sector has produced a new model of services in project areas that attempts to address some of the problems of the public sector.

Most government training programmes have attempted to improve the level of knowledge and skills of the TBA but have done little to bridge the wide socio-cultural gap between the traditional and the modern practitioners. On the other hand, several micro-level projects especially in the NGO sector have shown that when this gulf between the TBA and the formal health system is bridged, TBA training programmes can be much more effective. In the foreseeable future, they will continue to play a significant role until there is sufficient infrastructure to make high quality institutional delivery affordable and accessible to all women.
Although the two skilled birth attendants (SBA) models using community midwives in Chandpur (BAVS) and Chakaria (ICDDR,B) differ in their organization and implementation, they have independently shown promising results. However, they have only been tried to a limited extent. Also, issues of linkage with formal healthcare systems and sustainability questions should be addressed before scaling up these models.

Fertility decline of high-risk groups and use of safe menstrual regulation (MR) provided by the government undoubtedly also contribute to the reduced MMR. Many women in Bangladesh now enjoy access to menstrual regulation (MR) services to avoid unwanted pregnancies. Though studies on MR have found it to be generally safe, it raised concerns regarding the technical training and skills of the service providers. Approximately 71,800 women are hospitalized each year due to complications from unsafe procedure. Access to legal MR services is also poorer in rural areas than in the urban areas. Improved quality, accessibility, capacity building of providers, ensured supplies and advocacy are issues to be addressed rather than legality of abortion.

Besides, Expanded Programme on Immunization (EPI) and fertility regulation activities, Integrated management of Childhood Illnesses (IMCI) is also playing an important role in child survival through reducing child mortality and morbidity and promoting child growth, development and healthy practices. Effective implementation of IMCI case management guidelines improved quality of care in health facilities across various settings in Bangladesh. Considering its impact at a low cost, government plans gradual expansion of IMCI programme in the country. How well IMCI can work depends upon the strength of the health system responsible for its implementation. However, health system support for IMCI rarely reached adequate levels in Bangladesh.

Intra-partum, post-natal and neonatal cares have the potential to save 20-40% of newborn lives. However to date, post-natal care for mothers and newborns has received relatively little emphasis in public health programmes in Bangladesh, with only a tiny minority of mothers and babies in high-mortality settings receiving post-natal care. Care at birth and in the first days of life not only saves the lives of mothers and newborns, but also reduces serious complications that may have long-term effect. The Saving Newborn Lives (SNL) initiative demonstrated remarkable changes in all areas of maternal and newborn care, albeit still low.

There are controversies and challenges with the effectiveness of Kangaroo Mother Care (KMC) in reducing infant mortality. But KMC is at least as safe and effective as traditional care with incubator especially for the LBW infants who are unable to regulate their temperature, or may be associated with reduction of many neonatal infections. Moreover, as the
community-based KMC increases exclusive and predominant breastfeeding, the method would be expected to reduce the incidence of diarrhoea and possibly growth of neonate. Recently, the Population Council, BRAC and Mitra and Associates have conducted a community-based randomized control trial, the result of which is expected to design intervention strategies for rural communities in Bangladesh.

Considerable progress was achieved by the USAID-funded projects in expanding access to MCH services through capacity development of partner NGOs, quality assurance in service delivery, and unified logistics and supplies at local level. Project activities demonstrated that ensuring availability of integrated health, family planning, and MCH services through traditional service provision system could make changes in the lives of the mother and children.

**The urban scenario**

The urban population in Bangladesh is growing fast, at an annual rate of 6% (compared to national average around 2%). A major consequence of the surge in urban population is the rapid growth of slums and squatter settlements. While the urban poor population is not confined to slums, these do present an aggregation of the poorest section of the urban population. Due to overcrowded, unsanitary and sub-standard dwellings, these thus at high risk of contracting communicable diseases.

Urban health services have been the responsibility of the Ministry of Local Government, Rural Development and Cooperatives (MOLGRD&C) implemented through the city corporations and the municipalities. But due to limited resources and manpower, public sector health services could not keep up with increasing needs. The primary health care programme in urban areas began to improve after 1997, when the urban family health partnership (UFHP) project launched with the financial support of the USAID under the National Integrated Population and Health Programme (NIPHP). Thereafter in 1998, the government of Bangladesh and the Asian Development Bank (ADB) initiated the Urban Primary Health Care Project (UPHCP) in 1998. This project is implemented through the Local Government Division (LGD) of the MOLGRD&C and 4 city corporations, and supported contracting of NGOs to provide urban health services for the poor. After successful completion of the first phase in 2005, the project is now undergoing its second phase. Under the UPHCP, packages of high-impact primary health care services are provided to the urban population, particularly poor women and children.

These are complemented by a project for reproductive health services in metropolitan cities jointly funded by UNFPA, ADB and the Nordic Development Fund, which upgraded city corporation maternity centres
for comprehensive EOC, family planning, and RTI/STI (Reproductive Tract Infection/Sexually Transmitted Infection) detection and treatment. Other major providers of primary and secondary level healthcare in the urban areas are: NGO Service Delivery Programme (NSDP), Gonoshasthya Kendra (GK), Dustha Shasthya Kendra (DSK), Concern (Child Survival Programme), Bangladesh Women’s Health Coalition (BWHC), Marie Stopes, BASICS, and EngenderHealth.

The lowest tier of service delivery in the urban areas was doorstep delivery provided by the government and NGO fieldworkers. Currently, the doorstep services have been withdrawn by the NGOs and shifted toward static service-delivery sites. The fixed sites at the lowest tier are the satellite clinics organized by NGOs on once a month basis. The next tier of service delivery comprises clinics/ dispensaries managed by the NGOs, GoB, DCC and the private sector. Most of them are staffed with paramedics and/or qualified physicians, and very little coordination and referral systems exist among them.

**Best practices and lessons learned**

Public MCH-FP service provision in Bangladesh has a number of distinguishing features. First, the pattern of service utilization is unbalanced, with low utilization of most facilities at the community level (upazila and below) and over utilization of facilities at the district and at teaching hospitals. Though the government EOC project has been proven as an effective way of maternal care by using three delays model, none even the district hospital is able to provide it. Upgrading the quality and coverage of safe motherhood services at formal facilities to ensure 24-hour EOC may have the largest payoff in averting deaths and reducing disability in women and children in Bangladesh.

Study findings from Malab MCH-FP interventions demonstrated that family-planning programme can be successful even under unfavorable socioeconomic conditions. Particularly critical to the success of the Matlab experiment is the client-oriented services delivered through the female community health workers (CHW), with supportive supervision. In addition, experiences from the project suggest that the introduction of an organizational culture based on qualification and quality of care has succeeded in raising the performance of the CHWs to levels much higher than those of the Government program. The pattern of self-referral in Matlab MCH-FP areas strongly suggests that if quality emergency obstetric services are available, substantial numbers of people will use them, even in the absence of community interventions encouraging use.

The design of the BRAC’s programme was based on comprehensive primary health care model. It was structured in a way to be integrated with the rural development programme and the non-formal primary
education programme, as BRAC believes addressing health and development issues holistically. *Shasthya Shebikas* or Community Health Volunteers are at the core of BRAC’s health interventions, including MNCH interventions. The latter programme is designed based upon BRAC’s long experiences in the MCH areas (e.g., Women’s Health and Development Programme (WHDP)) and integrates MCH activities with interventions aimed at saving the lives of neonates through community-based interventions.

Considerable progress was achieved by the USAID funded projects in expanding access to MCH services through capacity development of partner NGOs, quality assurance in service delivery, and unified logistics and supplies at local level. These projects showed that emphasis need to be put on health and family-planning infrastructure and staff, improving service quality, involving traditional health system, and changing attitudes and behaviours with respect to service utilization among potential clients.

Though there is an increasing trend for the proportion of births delivered by the SBA, still three-fourth of the births are assisted by the TBAs. Most government TBA training programmes have attempted to improve their level of knowledge and skills but have done little to bridge the wide socio-cultural gap between the traditional and the modern practitioners, and met with limited success. On the other hand, several micro-level projects especially in the NGO sector have shown that when this gulf between the TBA and the formal health system is bridged, TBA training programmes can be much more effective. In the foreseeable future, they will continue to play a significant role until there is sufficient infrastructure to make high quality institutional delivery affordable and accessible to all women. Several community-based SBA pilots of the government and others (e.g., Chakaria community-based midwifery project, Chandpur community mid-wifery project) worked with trained midwives and were found to be successful in raising skilled birth attendance. These SBAs are trained for providing clean home delivery services, recognizing danger signs and mobilizing community support for those women who are unable to go for institutional delivery.

Intra-partum, post-natal and neonatal cares have the potential to save 20-40% of newborn lives. Care at birth and in the first days of life not only saves the lives of mothers and newborns, but also reduces serious complications that may have long-term effect. The SNL (Saving Newborn Lives) initiative demonstrates remarkable changes in all areas of maternal and newborn care. Training CHWs in Essential Newborn Care (ENC) has increased the proportion of women receiving early ante- and post-natal care. Trained TBAs are important providers of delivery and PNC services in the community. However, they need regular monitoring and supervision. Experience from pilot studies in Bangladesh suggest
integrating Kangaroo Mother Care (KMC) with the post-natal care services to enable regulation of body temperature of the low birth weight (LBW) infants weighing 2000 g or less.

The most dramatic achievement in child health has been children’s immunization, which has greatly augmented the chances of their survival. IMCI strategy offers a promising set of interventions to address the child survival problems in Bangladesh. Effective implementation of IMCI case management guidelines improved quality of care in health facilities across various settings. How well IMCI can work depends upon the strength of the health system responsible for its implementation, which rarely reached adequate levels in Bangladesh.

The Bangladesh Urban Primary Health Care Project (UPHCP) targets primary health care services in urban areas of Bangladesh where the government contracts NGOs to provide services. Involving NGOs for providing healthcare through clinics run by city corporations yielded a landmark policy success in establishing GO-NGO collaboration in healthcare service provision. NSDP (NGO Service Delivery Programme) has demonstrated solid progress in expanding essential family planning and health services to about 20 million urban and rural poor in six divisions of Bangladesh. There are other projects in urban areas by various NGOs (e.g., GK, DSK, SHAHAR, CONCERN Bangladesh, BWHC, EngenderHealth etc.) who experimented with different innovative approaches to provide quality services to the poor.

**Conclusion**

Taking experiences of low resource setting into account, upgrading the quality and coverage of safe motherhood services (including neonatal care) will have the largest payoff in averting deaths and reducing disability among women and children in Bangladesh. For scaling up of these tasks, building a functioning primary healthcare system from community level to the first referral-level facilities is essential. Particular emphasis should be placed on developing human resources for health (HRH) in this sector, e.g., the trained TBAs/midwives for skilled assistance during delivery at home and community health volunteers/workers for raising awareness, motivation, neonatal and IMCI care, etc. Coverage of essential obstetric care should be made universal and functional at the sub-district and the district level. The public and the private sectors, especially the not-for-profit NGOs and local level clinics, should come together in effective partnerships in this endeavour.
INTRODUCTION

Background

Bangladesh has seen impressive achievements in maternal and child health (MCH) in the past three decades, thanks to the success of targeted public health and education interventions and investments. Such interventions include immunization, family planning, nutrition supplementation, the national oral rehydration solution (ORS) programme, stipend and other support for female education, and increased public expenditure on health (from 0.7% of GDP in 1990 to 1.5% in 1999-2001) and education (from 1.5% of GDP in 1990 to 2.3% in 1999-2001). However, indicators related to safe motherhood suggest that the progress has been slow in crucial areas of reproductive health. Infant (IMR), neonatal (NMR) and maternal (MMR) mortality continue to be unacceptably high compared to many other developing countries, with persisting socioeconomic differentials. (NIPORT, ORC Macro, John Hopkins University, ICDDR,B 2003). Bangladesh is also a poor performer with respect to skilled attendance at birth and essential obstetric care. While access to family planning is increasing, access to the three other pillars of safe motherhood namely antenatal care, clean and safe delivery, and emergency obstetric care (EOC) remain largely unfulfilled (NIPORT, ORC Macro, John Hopkins University, ICDDR,B 2003). Whatever government health facilities are available at various levels, these are not adequately utilized (UNDP 2004).

Women’s movements like International Conference on Population and Development (ICPD) in Cairo and Women’s conference in Beijing sought to mainstream reproductive health and gender issues in the development discourse to establish women’s rights, ameliorate their poor health status and to empower them (International Conference on population and Development, 1994; Beijing declaration and Platform for action, 1995). On the other hand, the Child Survival Revolution, the World Summit for Children, the Child Right Movement and the United Nation’s ‘The World Fit for Children’ give priority to child health committing to reducing under-five mortality (Child Survival Partnership 2004). More recently, the UN calls for achieving the Millennium Development Goals (MDG) (Table 1) by 2015 with special attention to the reinforcement of safe motherhood initiatives and child survival programmes (The United Nations Millennium Goals 2000).

In response to the prevailing state of maternal, neonatal and child health, the government of Bangladesh has taken a sectorwide approach (SWAP)
together with poverty reduction strategies to focus on maternal and child health, for attaining the MDGs (Ministry of Health and Family Welfare 2003; Planning Commission, GOB 2004). Keeping pace with the MDG targets and the national strategies, different governmental and non-governmental organizations (NGO), bilateral agencies and donors have been implementing health interventions individually or in partnership with government to reduce maternal, neonatal and child mortality, particularly amongst the poor. BRAC, the largest NGO in the world (www.brac.net) is also not lagging behind. Consolidating more than 30 years of experience in health interventions, BRAC Health Programme (BHP) has launched a comprehensive maternal, neonatal and child health (MNCH) programme, customized for rural and urban slum populations.

**Table 1. Millennium development goals for maternal and child health**

<table>
<thead>
<tr>
<th>Health targets</th>
<th>Health indicators</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Goal 4: Reduce child mortality</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Goal 5: Improve maternal mortality</strong></td>
<td></td>
</tr>
<tr>
<td>Target 6 16. Maternal mortality ratio 17. Proportion of births attended by skilled health personnel</td>
<td></td>
</tr>
</tbody>
</table>


As a prologue to these activities, the Research and Evaluation Division of BRAC (www.bracresearch.org) has carried out a review of the existing MNCH programmes in Bangladesh undertaken by the government, NGOs and private sectors to identify best practices and the factors behind successes and failures, thereby pinpointing gaps and challenges. This provides an evidence base to develop informed intervention components, approaches and strategies for the MNCH initiatives in the country and endow with directions for future advocacy efforts.

**Objectives**

The objective of this review is to map the programmatic landscape by documenting best practices, revisiting lessons learned, and identify gaps for informed programme design in future. Thus, the review particularly focused on:
1. The current state of maternal, neonatal and child health (MNCH);
2. The existing MNCH programmes with regard to the intervention components, coverage, responsiveness and achievements;
3. Best practices and lessons learned;
4. Implications for future programme design.

Materials and methods

This review is based on available secondary materials on MNCH-related issues, and where deemed necessary, face-to-face interviews with key informants from different organizations implementing MNCH programmes.

Review

The main method followed for this review included searching by snowballing and pubmed, collecting and reviewing published and unpublished materials on MNCH interventions. Recent evaluations and relevant documentations of different MNCH programmes were also consulted. Around 100 published articles from books, booklets, journals, reports, leaflets and web pages were reviewed. Both published and unpublished materials for the last ten years were selected including materials on relevant health systems and interventions in the public, not-for-profit non-governmental and for-profit private sectors. While searching the web, key words such as maternal, child, neonatal, health, intervention, programmes, health status, Bangladesh, and EOC were used.

Qualitative interviews with stakeholders

We identified 13 national and international agencies including UNICEF, NGO Service Delivery Programme (NSDP), Urban Primary Health Care project (UPHCP), Bangladesh Association for Voluntary Sterilization (BAVS), Bangladesh Association for Maternal and Neonatal Health (BAMANEH), ICDDR,B, IPHN, BRAC, Bangladesh Women’s Health Coalition (BWHC), Concern Bangladesh, BASICS, Gonoshasthya Kendra (GK) and CARE Bangladesh for stakeholders’ interviews. These agencies contribute significantly in the improvement of MNCH, have had wider coverage and sustainable programmes in Bangladesh. In-depth interviews were conducted with 10 stakeholders who have been involved in planning, policy-making and implementing MNCH interventions at local and national level. The interviews focused on intervention components, strategies, targeted populations, expected outcome, achievements so far and strength and weakness of their programme. Data were collected during February-May 2006.
Data analysis and report

The interviews were coded line by line and categories were identified. Analysis was done under the themes of current states of MNCH; status of existing MNCH interventions vis-à-vis intervention components, relevance on policy, achievements so far and responsiveness; best practices; lessons learned; and directions for future planning.
THE COUNTRY-SPECIFIC CONTEXT OF MATERNAL, NEONATAL AND CHILD HEALTH

This section contextualizes the present states of the MNCH situation in Bangladesh. It considers a range of historical, demographic, economic, socio-cultural and behavioural factors influencing MNCH programmes. The subsequent sections of the review are informed and analyzed in relation to this section.

Demographic and socioeconomic profile

Poverty

Bangladesh is one of the most densely populated country with a land mass of 147,570 sq. km and a population of more than 140 million, 70% of whom live in rural areas (BDHS 2004). The population growth rate is 1.7% per annum and it ranks 139th position (out of 173 countries) in UNDP's Human Development Index (HDI) with an estimated per capita GDP of US$ 1,900 of which 22% is generated by agriculture (UNDP 2005). According to UNDP, around 83% of the population live on less than US$ 2 a day and 36% on less than US$ 1 a day. Through continuous effort of the government and the non-government sectors, income poverty has declined from an estimated 58% of the population during 1983-84 to just below 50% in 2000 with one percent reduction every year (GoB 2004).

Access to education

The adult literacy rate in 2004 was 49.6% with 55.5% for males and 43.4% for females (BBS 2004). Although the female/male ratio in primary school was 100:115, in secondary schools and universities this gap increased to 100:131 and 100:322 respectively (Ministry of Education 2002). In addition to gender inequalities, inequalities also exist by geographical areas. Only 36% of the rural women are literate, compared to 60% of urban women.

However, this situation is rapidly changing in recent years. Now the net enrolment of female students has surpassed males at both the primary and secondary levels (UNICEF 2007). This is because the government has a ‘food for education’ programme, which provides wheat to female students, and at secondary level, another programme provides scholarships to girls (UNICEF 2000). NGOs, meanwhile, have established
non-formal education programmes, concentrating on children 8-15 years with a special emphasis on girls.

**Gender relations and status of women**

Despite some progress in ranking of HDI, the status of women still remains low. The UNDP gender-related development index (GDI) ranks Bangladesh very low, at 105th position (out of 146 countries) (2003). It implies social inequalities i.e. inequalities in income and education between men and women (Country Menu 2003). Women experience greater deprivation and vulnerability due to their subordinate position and low status in the society with patriarchal value system. Women are largely involved in the informal sector and subsistence activities. Violence against women in the form of rape, assault, trafficking and acid throwing is prevalent (UNICEF 2000; UNFPA 2003). Gender-based violence in the country aggravates the built-in gender discrimination. Several measures have been adopted to safeguard women’s legal rights. For instance, special initiatives like girls’ stipend, free schooling for girls, and food for education, etc. have been undertaken to increase enrollment. Despite these provisions, loopholes in the existing laws, and lack of proper implementation are some of the impediments encountered. Women's participation at the policy-making level and politics is still very low. Few women hold high positions in the government and private sector. Bangladesh however has a gender strategy, which is based on the National Policy and Action Plan on Women, coordinated by the Ministry of Women and Children’s Affairs (ADB 2001).

Women in Bangladesh have to continue to fight for basic rights and status in terms of political participation, education, healthcare (specially reproductive and sexual health), labour force participation, mobility, food security, freedom from violence and the recognition and respect for their sexuality.

**Demographic and health indicators**

Although there has been considerable improvement in the health indicators, still more than 60% of the population has very little access to basic healthcare (MOHFW 2003). The number of qualified physicians and nurses in Bangladesh is quite low, compared to other low-income counties (Cockcroft et al. 2004). Around 26% of professional posts in rural areas remain vacant (Chaudhury and Hanner 2003). Despite modestly declining poverty and inadequate health services, Bangladesh has achieved substantial gains in the field of health in the three decades since independence in the ‘70s (GoB 2004; Mahmud 2004), as evidenced in mortality and fertility declines in this low income country compared to other South Asian countries.
Over the last three decades, Bangladesh has undergone remarkable improvements in social indicators (life expectancy at birth to 64.9 years in 2005, among others) and graduated to the 'medium human development' group of countries (UNDP 2004). The value of HDI for Bangladesh increased at an average rate of 8.8% per annum during the 1990s, the fastest growing HDI in South Asia (BDHDR 2000). These data suggest that Bangladesh is favourably placed to achieve the MDGs related to health and education.

About a quarter of the population consists of adolescents and youths. Some of the problems concerning adolescents include early age at marriage, high fertility and low levels of secondary and tertiary education. The higher death rate among girls compared to boys aged 15-19 (1.81 as against 1.55 per 1,000 population) is mainly due to maternal causes. Access to appropriate reproductive health information and services for this group is inadequate.

**Status of maternal health**

Although improving, in terms of national averages, maternal health status for many Bangladeshi women remains poor. Around 50% of Bangladeshi women were found to be chronically malnourished with a body mass index less than 18.5. Over 43% of pregnant women were iodine deficient and more than 2.7% developed night blindness during pregnancy (BDHS 2001). Despite very low levels of the use of antenatal and skilled delivery services, the situation with respect to Tetanus Toxoid (TT) vaccination among women was found satisfactory in 2004, with 2 in 3 women receiving two doses of tetanus toxoid and 21% receiving one dose, a 19% improvement since 1995-1999 (BDHS 2004). Due to past efforts of both the government and the development partners, the total fertility rate (TFR) has declined from 6.3 in 1975 to 3.0 in 2004, coinciding with impressive increases in the contraceptive prevalence rate (CPR) from 9.6% in 1975 to 58% in 2004 (BDHS 2004).

**Maternal death**

The maternal mortality ratio (MMR) in Bangladesh has declined from nearly 574 per 100,000 live births in 1990 to between 320 and 400 in 2004 (NIPORT 2001; BDHS 2004). Considering the trend, maternal health status is apparently approaching the targets set for the MDGs. Despite

<table>
<thead>
<tr>
<th>Causes of maternal mortality per 1000</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Haemorrhage</td>
<td>0.105</td>
</tr>
<tr>
<td>Eclampsia</td>
<td>0.088</td>
</tr>
<tr>
<td>Abortion</td>
<td>0.018</td>
</tr>
<tr>
<td>Sepsis</td>
<td>0.013</td>
</tr>
<tr>
<td>Obstructed labour</td>
<td>0.019</td>
</tr>
<tr>
<td>Other obstetric causes</td>
<td>0.11</td>
</tr>
<tr>
<td>Anemia</td>
<td>0.014</td>
</tr>
<tr>
<td>Cardiovascular causes</td>
<td>0.002</td>
</tr>
<tr>
<td>Respiratory causes</td>
<td>0.013</td>
</tr>
<tr>
<td>Unspecified</td>
<td>0.026</td>
</tr>
</tbody>
</table>

Source: BMMS, 2003
this progress, at present about 12,000 women die each year from maternal causes. The estimated lifetime risk of dying from pregnancy and child birth-related causes in Bangladesh is about 100 times higher than that in developed countries (NIPORT 2003). A tragic consequence of these deaths is that about 75% of the babies born to these women are also likely to die within the first week of their life (WHO 2004).

**Causes of maternal death**

Maternal death is caused by direct, indirect and other related factors. The major direct causes of maternal deaths in Bangladesh are post-partum haemorrhage, eclampsia, complications of unsafe abortion, obstructed labour, postpartum sepsis, and violence and injuries (Fauveau 1994, NIPORT et al. 2003, MOHFW 2003). About one-fourth of the total maternal death in rural Bangladesh is due to unsafe abortion and related complications (Alauddin 1986; MOHFW 2003). However, a recent survey found this proportion to be lower (NIPORT et al. 2003). Unmarried women accounted for 36% of all complications of induced abortion e.g., sepsis (Fauveau et al. 1991). Percentages of maternal death from eclampsia varies from 12 to 53% in different studies (Fauveau et al. 1994). Haemorrhage comprises 20 to 29% of all direct obstetric causes (Fauveau et al. 1994; NIPORT, Mitra and Associates & Macro International Inc, 2003). Death due to obstructed labour varies from 6.5 to 17% which comprises complications of malpresentation, cephalopelvic disproportion, inability to expel fetus, retained placenta (Fauveau et al. 1994; Khan et al. 1985). Around 14% of deaths of pregnant women are associated with injury and violence (WHO 2004).

Different studies identified a number of indirect causes of maternal death in Bangladesh, such as anaemia, malaria, tuberculosis, etc. The risk factors for maternal mortality include women’s low status in society, poor quality of maternity care services, lack of trained health professionals, lack of EOC services, low uptake of services by women, infrastructure and administrative difficulties (Haque et al. 1997; Streatfield et al. 2003). Sometimes distance of the health service facility from home and lack of transportation facilities in rural area act as obstacles to seeking care (NIPORT, Mitra and Associates, & Macro International Inc. 2003).

Early childbearing is another important risk factor for maternal death. MMR is much higher among females aged 15-19 years (7.3% 1,000 live births) compared to those in the low-risk age group of 20-34 years (4.3 per 1,000 live births) (WHO, 2004). Approximately, half of women marry under the age of 18 and 58% become mother of first child under the age of 20 (BDHS 2004).

Inadequate financial resource is a prominent barrier in meeting the MDGs. Only 6.9% of the total budget is allocated for expenditure in
health sector. In 1998 the total government health expenditure per capita was US$4 only (NIPORT, Mitra and Associates and ORC Macro 2005). Referral system for obstetric emergencies is non-existent or very weak in rural area due to the lack of second level facilities and trained staff to handle them. The GoB has a maternal health strategy which is rolling out nationally. The suggested strategy for developing comprehensive EOC in public facilities is still lower than the actual need. Most functional health facilities do not have sufficient essential drugs to meet actual needs, since the budgetary allocation for the procurement of drugs is very small. In 1997, a sample of remote health facilities revealed that only 8% of essential drugs needed at those levels were available (UNICEF/WHO 1997). In Upazilla level, the qualified medical doctors (MBBS) are posted, but obstetric first aid is virtually absent at that level (UNICEF/WHO/UNFPA 1996).

Service utilization

To improve the health status of mothers, ante-natal, delivery and post-natal care from skilled providers is important. This section explores the state of service utilization by mothers during ante-natal, delivery and post-natal periods.

Ante-natal care

Antenatal care coverage, especially by a trained provider, has increased over time although remains low. One-third of women received an ante-natal check-up from a medically trained provider in 1999-2000 compared to one-half (49%) in 2004 (BDHS 2004). Thirty-one percent of women receive ante-natal care from a doctor and 17% receive from a nurse, midwife or paramedic. Ante-natal coverage increases with level of mothers’ education and household economic status, but decreases with birth order. The percentage of women who had three or more ante-natal visits with any provider increased from 16 to 27% between the 1999-2000 and 2004, the medical number of visits being increased from 1.8 to 2.9. The urban-rural difference in antenatal care coverage is also quite large (71% vs. 43% respectively) (BDHS 2004).

Delivery care

Nationally nine in every ten births in the last five years took place at home while only 9% occurred in a health facility (BDHS 2004). Delivery in health facility is substantially higher among women who have completed secondary education (44%) and among those in the highest wealth quintile (30%). Around 13% of babies are delivered by doctors, trained nurses, or midwives. TBAs continue to play a major role, with 12% mothers reporting assistance from trained TBAs and 63% reporting assistance form untrained TBAs. Nine to eleven percent of deliveries are
assisted by relatives or friends (NIPORT, Mitra and Associates, & Macro International Inc. 2003; BDHS 2004).

Post-natal care

Care after birth is seriously inadequate. Only 18% of mothers receive post-natal care (PNC) from a trained provider within six weeks after delivery. Among mothers who do not deliver at a health facility, only 8% receive PNC. The likelihood of receiving PNC for mothers has improved slightly, from 14% in 1999-2000 to 18% in 2004 (BDHS 2004). Only 15% of mothers with a birth in the past five years reported receiving a vitamin A dose during post-partum period.

Family planning services

There has been significant improvement over the years in access to family planning services. Overall, 58% of the currently married women in Bangladesh are using a contraceptive method and 11% are relying on traditional methods. Pill is by far the most widely used method (26%), followed by injectables (10%), periodic abstinence (7%), female sterilization (5%) and condoms and withdrawal (4%) (BDHS 2004).

Status of child health

Infant and child mortality rates reflect a country’s level of socioeconomic development and quality of life. The neonatal and under-5 mortality rates are still higher in Bangladesh. Bangladesh ranks seventh among the 42 countries contributing to the 90% of all childhood deaths worldwide (Black et al. 200). This section addresses the state of child death, their nutritional status, childhood illnesses and service utilization in Bangladesh.

Child death

A comparison of neonatal, post-neonatal, infant, child and under-5 mortality rates from the demographic and health surveys shows changes over the last decade (Table 2). The comparison shows continued declines in child (1-4 years) and under-5 mortality rates. Between the most recent five-year periods, there was a 20% improvement in child (1-4 years) survival, but there is no evidence of change in infant survival in recent years. No change is observed in neonatal mortality during the last 10 years. Thus, any child health intervention may need to focus on reducing neonatal deaths since most infant deaths occur during the first month of life.
Table 2. Neonatal, post-neonatal, infant, child and under-5 mortality rates for five-year periods preceding the 2004 BDHS

<table>
<thead>
<tr>
<th>Data source</th>
<th>Approximate reference period</th>
<th>Neo-natal mortality</th>
<th>Post-neonatal mortality</th>
<th>Infant mortality</th>
<th>Child mortality</th>
<th>Under-5 mortality</th>
</tr>
</thead>
<tbody>
<tr>
<td>BDHS 2004</td>
<td>1999-2003</td>
<td>41</td>
<td>24</td>
<td>65</td>
<td>24</td>
<td>88</td>
</tr>
<tr>
<td>BDHS 1995</td>
<td>1989-1993</td>
<td>52</td>
<td>35</td>
<td>87</td>
<td>50</td>
<td>133</td>
</tr>
</tbody>
</table>

Source: Bangladesh Demographic and Health Survey 2004

The perinatal mortality rate is 65 per 1,000 pregnancies (BDHS 2004) which is slightly higher than it was in 1999-2000 BDHS (57 per 1,000 pregnancies). Perinatal mortality is higher among teenage mothers and during first pregnancies. There are virtually no urban-rural differences in perinatal mortality and very little difference in infant mortality. Child mortality, however, is positively associated with no/low maternal education, rural residence and short birth interval.

Causes of death

The two most important causes for under-5 children’s death are serious infections (31%) from ARI and diarrhea (BDHS 2004; Baqui et al. 2001; Fauveau et al. 1994). Comparison of surveys revealed that deaths due to almost all causes, especially infectious diseases, declined (Baqui et al. 2001). The reduction of ARI related deaths was almost entirely limited to children 1-4 years old; there was almost no decline in ARI deaths in the neonatal and post-neonatal period. ARI particularly affect children aged 1-11 months (21%). Birth asphyxia (12%) which occurs in the first 28 days, diarrhoea (7%), pre maturity/low birth weight (7%) and malnutrition were responsible for most of the newborn deaths (BDHS 2004; Baqui et al. 1998; Baqui et al. 2001; Fauveau et al. 1994).

Nutritional status

More than one-third of the 3.33 million infants born annually weigh less than 2.5 kg, the cut-off point for low birth weight (LBW) (Baqui et al. 1998). About 43% of Bangladeshi children under-five are stunted and 17% are severely stunted. The prevalence of stunting increases with age from 10% of children under 6 months of age to 51% of children aged 48-59 months. Additionally, 13% of children are wasted and 1% is severely wasted. Weight-for-age show that 48% of children under-5 are underweight with 13% severely under-weight. Child nutrition levels showed a substantial improvement from 1996-97 to 1999-2000. Since then no noticeable improvement has occurred except that the severe stunting has
slightly decreased and overall wasting has increased from 10 to 13% (WHO 2004).

Service utilization

Immunization

The government's policy for childhood immunization which follows the WHO guidelines calls for all children to receive: a BCG vaccination against tuberculosis; three doses of DPT vaccine to prevent diphtheria, pertussis and tetanus; three doses of polio vaccine; and a measles vaccine. A pilot programme on Hepatitis B vaccination has recently commenced. As many as 73% of Bangladeshi children aged 12-23 months can be considered fully immunized (BDHS 2004).

Although the level of coverage for BCG and the first two doses of DPT and polio is above or around 90%, the proportions who go on to complete the third dose of these two vaccines fall around 81-82%, while a much lower percent (76%) receive the measles vaccine. Only 3% of children aged 12-23 months do not receive any childhood vaccinations (BDHS 2004). This success came from appropriate mass media campaign, service delivery and community mobilization of the EPI programme.

Intake of vitamin A

Deficiency of vitamin A can be avoided by giving children vitamin A capsule usually every six months. Vitamin A supplementation among children aged 12-59 months increased from 80 to 84% between the 1999-2000 BDHS and the 2004 BDHS but dropped by half for children aged 9-11 months (from 73 to 38%).

Childhood illnesses

There has been a shift toward greater use of commercially available packets of oral rehydration salt (ORS), from 61% in 1999-2000 to 67% in 2004 (BDHS 2004). Overall 83% of the children with diarrhoea received ORS, recommended home fluid or increased fluids. Of the 21% of under-5 children who suffered from acute respiratory infection, only one-fifth were taken to a health facility or provider for treatment. The proportion seeking care from a trained provider for children with ARI declined over the period i.e. 20% in 2004 compared to 27% in 1999-2000 (BDHS 2004). Among 40% under-5 children having fever, nearly two-thirds were taken to a provider for treatment, but only 19% were taken to a medically trained provider/facility (BDHS 2004).
Healthcare delivery system for maternal and child health

Maternal and child health care in Bangladesh is provided by government and non-governmental agencies. The Ministry of Health and Family Welfare (MOHFW) is responsible for health policy formulation, planning and decision-making at the macro level. Under MOHFW, there are two implementation wings: the Directorate General of Health Services (DGHS) and Directorate General of Family Planning (DGFP). The DGHS is responsible for implementation of all health programmes and technical support to the ministry. The DGFP is responsible for implementing family planning (FP) programmes and providing FP-related technical assistance to the ministry. DGHS and DGFP work independently. The DGHS advises and supports medical college hospitals, district hospitals and upazila health complexes (UHC), while DGFP oversees operations of district-level maternal and child welfare centres (MCWC) and union-level Union Health and Family Welfare Centres (UHFWC). At the most peripheral level both wings work at the domiciliary level to bring essential services to the people’s doorstep.

Level of care and type of health facilities

Most of the country’s health infrastructure and health service system are under the government’s management and control. The health service delivery system in the public sector is divided into primary, secondary and tertiary levels. Table 3 provides a summary of health facilities available at different levels.

At the local level, 3,275 UHFWCs exist to serve 4,470 unions. There are UHC with 31 beds in 391 rural upazilas, 64 district hospitals, and 16 government medical college hospitals, 6 post-graduate hospitals, and 25 specialized hospitals at tertiary level in the country. A further 89 MCWCs have been upgraded to provide EOC services, and other services (ANC, normal delivery, PNC and clinical contraception) at district, upazila and union level, one for every one to two million population. Nine more MCWCs are under construction at the district level. In addition, the government recently undertook an initiative to establish community clinics, one for every 6,000 peoples at the village level.

Fifty-four MCWCs at the district level and six at the upazila level are equipped to provide 24-hour comprehensive EOC; the rest provide 24-hour basic EOC. In addition to the basic reproductive health and family planning (RH-FP) services, UHFWCs at present are offering surgical contraceptives, norplant, safe delivery, obstetric first aid\(^1\), newborn care, and adolescent healthcare.

\(^{1}\) The services under obstetric first aid include administering parenteral oxytocic drugs, antibiotics, sedatives, anticonvulsants and referral.
Table 3. Type of health facilities according to the level of care

<table>
<thead>
<tr>
<th>Level of care</th>
<th>Administrative unit</th>
<th>Health facility</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary level</td>
<td>Village</td>
<td>Satellite clinic (8 per month per union)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Community clinic (11,500)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Skilled birth attendants</td>
</tr>
<tr>
<td></td>
<td>Union</td>
<td>NGO workers</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Community groups</td>
</tr>
<tr>
<td></td>
<td>Upazila</td>
<td>Union Health &amp; Family Welfare Centre (3275)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>MCWC (23)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Hired clinic (300)</td>
</tr>
<tr>
<td>Secondary level</td>
<td>District</td>
<td>District hospital (59): 50-150 beds each</td>
</tr>
<tr>
<td></td>
<td></td>
<td>MCWC (54): 13 beds each</td>
</tr>
<tr>
<td></td>
<td></td>
<td>MCWC (9): under construction</td>
</tr>
<tr>
<td></td>
<td>Tertiary level</td>
<td>Maternal &amp; Child Health Training Institute (3)</td>
</tr>
<tr>
<td></td>
<td>Division or national or capital</td>
<td>Teaching hospital/institute (16): 250-1050 beds each</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Maternal &amp; Child Health Training Institute (3)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Mohammadpur Fertility Services and Training Centre (1)</td>
</tr>
</tbody>
</table>

Source: Programme implementation plan (PIP), HNPSP, 2003; Pp 133-157.

The district hospitals in the district headquarters provide maternal services through an outpatient consultation centre and labour ward. Between 25-40% of hospital beds are reserved for maternity patients in every hospital. Many of the district hospitals are not providing 24-hour essential EOC services due to lack of trained staff and related support facilities. Similarly more than 80% of the UHCs are not ready to provide 24-hour EOC services.

The Maternal and Child Health Training Institutes (MCHTI), Azimpur, Dhaka is a 173 beded hospital cum training centre. MCHTI provides safe motherhood services including comprehensive EOC, gynecological services including hysterectomy, newborn care, child health care and FP services. They also provide training on EOC, SBA, midwifery and newborn care. There are two more MCHTIs in Rajshai and Barisal. EOC services would also be started and expanded in phases in Mohammadpur Fertility Services and Training Centre, Dhaka.

Besides the public sector, the private for-profit providers and private not-for-profit providers or NGOs also play great role in the Bangladesh health sector. NGOs are mostly involved in the provision of primary healthcare in both rural and urban areas. A significant number of tertiary hospitals are run on a not-for profit basis. NGOs run a total of 613 health facilities, which have 11,271 beds (DGHS 2000).
The child health and nutrition component of the essential services package (ESP) including control of vaccine preventable diseases through the EPI programme, management and control of acute respiratory infection (ARI) and childhood diarrhoeal diseases, and supplementation of vitamin A capsules are being provided at all levels.

GO-NGO collaboration

NGOs are playing complementary and supplementary role to the overall performance of the national MCH-FP programme. During 2002-2003, three NGOs namely 1) BWHC in collaboration with RH-STEP and BPASA, 2) BAVS, and 3) BRAC were selected through bidding following International Development Agency (IDA) guidelines for providing selected health services. The areas of NGOs collaboration were – (1) permanent and longer acting family planning method, (2) safe MR services and training, and (3) increasing coverage of family planning, safe motherhood and adolescent healthcare in low performing areas. Since continuation of services by these NGOs is necessary, the process of negotiation with bilateral donors is in progress for funding. During HNPSP, as per decision of the government, BAVS continues to provide family planning clinical services.

There are about 400 NGOs working at national and local level across the country in the field of MCH-FP through domiciliary and clinic-based services, and community mobilization. During HNPSP, it is intended to record and map NGO service areas and the scope of MCH-FP services provided by NGOs in the geo-referenced databases of the Family Planning and Health Services Directorates in order to avoid overlapping with the GoB services.

Linkages and collaboration with other development ministries and agencies

Within the health sector, linkages have been established with different programme directors for proper and effective implementation of MCH-FP services at different level. Collaboration has been made with DG, NIPORT for capacity building of personnel working for delivering and management of MCH-FP services, demographic and health survey, and research. Similar linkages were made with NNP and DGHS for nutritional promotion of pregnant and lactating mothers, children and adolescents, and for case management of violence against women respectively. In order to implement interventions effectively at the local level, coordination has been made with NGOs, private sector and local government bodies. To ensure smooth implementation at central and peripheral level, collaboration with development ministries including Education, Information, Women and Children Affairs, Agriculture, Fisheries and Livestock, Forest and Environment, Local Government, and Home and Defense has been established.
POLICY-MAKING IN THE HEALTH AND POPULATION SECTORS

In order to address the poor state of MNCH, the government of Bangladesh has undertaken several initiatives since independence. In 1985, safe delivery became a key component in the GoB’s MCH strategy. The first assessment of maternal health services was done in 1988. The recommendations based on it were translated into the planning process for the Fourth Population and Health Programme, which continued up to 1998. In order to detect early and refer complicated cases, the EOC programme was undertaken in early 1990s and the rights-based comprehensive National Maternal Health Strategy was adopted in 2001. The strategy has been integrated into the Health and Population Sector Programme, (HPSP 1998-2003) and into its follow-up the Health, Nutrition and Population Sector Programme, (HNPSP 2003-2006).

NGOs and bilateral agencies have played a vital role behind the success of the population sector as they provided specific policy recommendations based on research-based intervention programmes. This section of the report reflects the key questions surrounding enabling policy environment, and responses in the MCH arena in Bangladesh in terms of sufficiency, achievements, gaps and challenges and future directions. To facilitate the review, following areas have been identified:

- Improving maternal and child health through health policy
- Major interventions on MNCH, and achievement of beneficial impacts
- Gaps between policy and implementation
- Lessons learned.

**Improving MNCH through health policy**

Historically, health and population sectors in Bangladesh have been viewed as distinct policy areas for public action and investment. The Health and Population Sector Strategy (HPSS) was formulated within this background in consultation with donors, UN agencies (UNDP, WHO, UNICEF and UNFPA) and important stakeholders (GoB/HPSS 1997). The HPSS has a long-term vision of a sector that is responsive to the needs of clients, especially women, provides quality services, has adequate delivery capacity and is financially sustainable specially addressing the needs of the poor. It aimed at provision of one-stop full-range essential reproductive health and family planning services through an integrated service delivery mechanism. The shift to the sector-wide management was assumed to promote more efficient service delivery and better
coordination among donors, besides cutting down wastages. Subsequently, the Health and Population Sector Programme (HPSP) was formulated which is expected to reduce maternal mortality and morbidity. Project Implementation Plan (PIP) of HPSP was also put in place since July 1998. The major component-wise outcome of the programme included 1) a well defined Essential Service Package (ESP)\(^2\), 2) unified, restructured and decentralized service delivery mechanism, 3) integrated support system, 4) focused hospital level services, 5) strengthened policy and regulatory framework, and 6) strengthened public health services. Some major milestone activities were also proposed in the HPSP such as establishment of community clinics, provision of comprehensive EOC in UHCs and basic EOC in all UHFWCs, ensuring more funds for medicines and other surgical requisites, improving management of hospitals, and improving accounting and financing of the sector (HNPSP 2004).

But the imperative to provide good quality curative healthcare such as EOC would require expensive technology and costly human and physical infrastructure. The issue of financial sustainability in the context of reforms initiated under the HPSP was of particular concern in view of the rising programme costs and a likely reduction in donor financing. On the programmatic side, the pooling of donor funds into a common pool had, quite predictably, created considerable additional barriers to implementation by delaying aid disbursement.

Although the stated goals of the HPSP reflect the government’s development goals of poverty alleviation and human development, its performance has been undermined by the inability to reorganize service delivery, a consequence no doubt of the broader governance challenge facing Bangladesh. Initially public health services were not targeted specifically to the poor. However, the fact that services were provided free indicated an implicit concern that the poor should not be excluded.

The Fifth Five-Year Plan (FFYP) (1997-2002) of the GoB was formulated in 1998, and aimed at creating a greater degree of public awareness of the population issue through a social movement to reach replacement level of fertility by the year 2005. The focus of FFYP was on a reproductive health sub-programme aimed at extending the coverage of reproductive health services, including efforts to improve safe motherhood, quality obstetric care, clinical methods of contraception, and the management of reproductive tract infections (RTI) and sexually transmitted infections (STI). Issues of gender equity and equality and reproductive rights were introduced in the programmes of education, law enforcement, religious affairs, the garments, tea plantation industries, and

\(^2\) The elements of ESP are grouped into following five areas: reproductive health care, child health care, communicable disease control, limited curative care and behaviour change communication.

17
and other sectors. The FFYP also completed a phased programme to upgrade a network of 64 MCWCs to ensure that they have the needed equipment and training staff in EOC so that these can offer a package of comprehensive maternal health services.

The HPSP came to an end on June 2003. The GoB revised the HPSP and formulated the new Health, Nutrition and Population Sector Programme (HNPS) 2003-2006. The vision and target outlined in the i-PRSP have been taken as an overarching long-term policy framework and a signal of the political commitment of the government upon which the HNPS is developed and contributes to poverty reduction in the country. The goal of the HNPS is sustainable improvement of health, nutrition and family welfare status of the country’s population, especially the vulnerable, e.g., the poor, the women, the children and the elderly. The purpose will be to increase the availability and utilization of user-centered, effective, efficient, equitable, affordable and accessible quality services for a defined ESP plus other selected services. The HNPS is committed to reduce fertility, maternal and under-5 mortality under the broader context of reproductive health. The priority objectives and achievements so far of this effort are described in Table 4. By re-invigorating programme efforts directed at improved maternal health, reduced child mortality and malnutrition, reduced fertility and disease control, HNPS is expected to contribute significantly to the achievement of MCH-related MDGs.

Table 4. Target and progress of HNPS to meet MDGs

<table>
<thead>
<tr>
<th>MDGs (1990-2015)</th>
<th>HNPS priority objectives</th>
<th>Unit of measurement</th>
<th>Bench-mark</th>
<th>Projected target</th>
<th>Required annual rate of progress</th>
<th>Projected rate of progress during HNPS</th>
<th>HNPS performance targets on track for MDG</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reduce % of MMR</td>
<td>Reduce TFR</td>
<td>Met need for EOC</td>
<td>12.6%</td>
<td>13.0%</td>
<td>25%</td>
<td>Annual reduction of MMR by 7.5 per 100,000</td>
<td>Annual reduction of MMR by 6.7 per 100,000</td>
</tr>
<tr>
<td>Reduce % of Maternal death/1000 live births</td>
<td>Lifetime # of births per woman</td>
<td>3.24</td>
<td>2.95</td>
<td>2.75</td>
<td>2.8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reduce % of Infant death/1000 live births</td>
<td>66.3%</td>
<td>56</td>
<td>48</td>
<td>5</td>
<td>3.6 per 1000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Under-5 mortality</td>
<td>Under-5 deaths/1000 live births</td>
<td>94.0%</td>
<td>80</td>
<td>70</td>
<td>3.3 per 1000</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

3 UMIS estimate based on EOC report from 218 GOB facilities
4 BMMS, 2001
5 BDHS, 1999-2000
6 Bangladesh child nutrition survey, 2001

18
**Major interventions on MNCH in Bangladesh**

Rates of morbidity and mortality among pregnant women, mothers and newborns remain high in Bangladesh, particularly among poorer groups. Access to skilled and timely care is the key to reduce the toll of maternal and neonatal deaths. The MDGs on maternal health and child mortality helps circumscribe the MNCH in Bangladesh. Under HNPSP, the government has undertaken five sub-programmes including a) family planning services, b) clinical family planning services, c) MCH care and services, d) adolescent healthcare, and e) support services and coordination, which are being implemented through countrywide facility network as describe in Table 3. Several bilateral agencies (UNICEF, UNFPA, WHO, EU, etc.) and NGOs (BRAC, CARE Bangladesh, BPHC, Engender Health, ICDDR,B, NSDP, PSTC, etc.) are providing hospital or community-based services or both in order to supplement and complement government's initiatives in this field. International and national human rights and health advocacy are also playing a major role in this regard.

Some major MNCH interventions are as follows:

A) Maternal health intervention
   - Reproductive health: MCH-FP services
   - Emergency obstetric care
   - Menstrual regulation programme
   - Skilled birth attendant programme
   - Community midwifery programme
   - Urban primary health care project
   - NGO service delivery programme

B) Child health intervention

C) Saving newborn lives programme

D) Kangaroo mother care project

E) National communication campaign programme

F) National nutrition programme for mother and child
MNCH INTERVENTIONS IN THE RURAL AREAS

Introduction

Despite unfavourable socioeconomic situation such as low literacy rate, poverty, low status of women, religious barrier, gender disparity, the MCH-FP programme has made remarkable successes over time. Table 5 shows the achievement of the MCH-FP programme during the last three decades.

Table 5. Success in the field of MCH-FP over time

<table>
<thead>
<tr>
<th>Indicators</th>
<th>71-75</th>
<th>82</th>
<th>85-88</th>
<th>93-97</th>
<th>96-97</th>
<th>99-00</th>
<th>2004</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contraceptive Prevalence Rate (CPR)</td>
<td>7.7</td>
<td>25.3</td>
<td>39.9</td>
<td>49.2</td>
<td>53.8</td>
<td>58.1</td>
<td></td>
</tr>
<tr>
<td>Total Fertility Rate (15-49 yr. aged woman)</td>
<td>6.3</td>
<td>4.8</td>
<td>3.4</td>
<td>3.3</td>
<td>3.1</td>
<td>3.0</td>
<td></td>
</tr>
<tr>
<td>Infant Mortality Rate (per 1000 live births)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>87.4</td>
<td>82.2</td>
<td>66.3</td>
<td>65</td>
</tr>
<tr>
<td>Under-5 Mortality Rate (per 1000 live births)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>113.1</td>
<td>115.7</td>
<td>94</td>
<td>88</td>
</tr>
<tr>
<td>Maternal Mortality Rate (per 100,000 live births)</td>
<td>-</td>
<td>620</td>
<td>-</td>
<td>-</td>
<td>320</td>
<td>(2001)</td>
<td></td>
</tr>
<tr>
<td>Unmet need for contraception</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>19.4</td>
<td>15.8</td>
<td>15.3</td>
<td>11.3</td>
</tr>
</tbody>
</table>

(Source: BDHS 2004 & BMMS 2003)

The contraceptive prevalence rate (CPR) has increased from 7.7% in 1975 to 58.1% in 2004 and total fertility rate (TFR) declined from 6.3 in 1971 to 3.0 in 2004 (BDHS 2004). The population growth rate decreased from 3% in 1971 to 1.47% in 2001 (BBS 2001). Life expectancy at birth has increased to 64.5 years for males and 65.4 years for females in 2003 (BBS 2004). The infant and under-5 child mortality rates have declined from 87 per 1,000 live births and 133 per 1,000 live births in 1993 to 65 and 88 in 2003 respectively (BDHS 2004). The MMR has also fallen from 620 per 100,000 live births in 1982 to 320 in 2001 (NIPORT, ORC Macro, John Hopkins University, ICDDR,B, 2003). Considering progressive
improvements, maternal and child health status is seemingly reaching close to the stated outcome set for the MDGs.

In this chapter, we explore in detail the different MCH-FP interventions that have been running during these times, both in the public as well as in the private sectors including the not-for-profit NGO sector.

**Reproductive health (RH): MCH-FP services of the government of Bangladesh**

Under the Directorate of Family Planning, MCH-FP services are provided within the broad framework of reproductive health through strengthening field and institutional service delivery system capabilities to facilitate decline in fertility, maternal, infant and child mortality and morbidity. The RH:MCH-FP unit has provided relevant services through Maternity and Child Health Training Institute (MCHTI), Azimpur, Mohammadpur Fertility Services and Training Center (MFSTC), 95 MCWCs including 67 EOCs, 402 UHCs’ MCH-FP units, and about 3,500 UHFWCs.

**Interventions**

The RH:MCH-FP services are the components of ESP under the HNPSP. The prioritized services are:

1. Safe motherhood services comprising ANC, safe delivery by SBA, EOC, safe MR services and post-abortion care, PNC with vitamin A supplementation, maternal nutrition through iron and folic acid and vitamin A supplementation, syndromic management of RTI/STI, counseling on HIV/AIDS and condom promotion, prevention of unwanted pregnancy through introduction of emergency contraception, screening for cervical cancer, services for violence against women and gender equity, and essential newborn care;

2. Family planning services including injectable, IUD, norplant, vasectomy, tubectomy, condom, oral pill, recanalisation, and infertility;

3. Adolescent healthcare for girls and boys comprising development of adolescent health strategy; counseling and developing awareness on sexual and reproductive health issues including awareness on HIV/AIDS, management of minor gynaecological problem (dysmenorhea and menorrhagia); syndromic management of RTI/STI; condom promotion for married adolescents; and full immunization of adolescent girls with five doses of TT vaccine;

4. Child health care services including IMCI, routine and expanding immunization, vitamin A supplementation, management of drowning, injury and accident, and limited care for eye, ear and skin infection.

Source: HNPSP, PIP 2004
Service delivery mechanism

Both domiciliary and facility-based approaches are followed for delivering MCH services in rural areas. At the community level the door-step MCH services are provided by the family welfare assistants (FWA) and health assistants (HA). Each FWA visits 20-25 households in each working day and covers her catchment area 2-3 months for follow-up, supply of oral contraceptive pills, condoms, vitamin A capsules, ORS, and health education on ANC, PNC, newborn care, EPI, longer acting FP methods, nutrition, hygiene practices, adolescent health, etc. Besides, 30,000 satellite clinics (SC) (8 SC per union) are arranged every month by the local health-FP workers for providing ANC, PNC, FP including follow-up and side-effect management, EPI, child healthcare, and adolescent healthcare to the poor at the grassroots (WHO 2004, HNPSP 2003).

At the union level a family welfare visitor (FWV) and a Sub-Assistant Community Medical Officer (SACMO) or medical assistant are providing services through UHFWC. In addition, about 250 graduate medical officers are posted in 3,275 UHFWCs for managing complicated and referred cases. The government is committed at least one skilled birth attendants (SBA) at every UHFCW (4,500 SBAs) to complement the facility approach to obstetric care. The SBAs are to provide normal safe delivery in homes and referral to the EOC sites if needed. As of 2004, 390 SBAs were trained and 4100 still need to be trained (HNPSP 2004). The existing FWAs and female HAs in the government sector were trained as SBAs. In order to ensure SBA at deliveries and managing obstetric complications, FWVs (SSC qualified) go through a 18-month midwifery training (WHO 2004) and are posted at the UHFWCs in midwifery as well as in supervision. The last training was in 1999 and in 2006 government decided 6 months refreshers training to FWVs to ensure safe normal delivery.

At the upazilla level, the MCH unit of UHC, headed by a graduate medical officer (MO-MCH) provides MCH services. The gynaecological junior consultant, MBBS plus at least one year training on gynaecology, attends all births at the UHC, emergencies, complicated and referred maternal cases. FWAs are responsible for family planning services. Nursing and midwifery care is provided by the senior staff nurses who have one-year midwifery training. These activities at MCH unit of UHC are supervised by the UHFPO.

At the district level, in the MCWCs, a medical graduate (MO-clinic) having training on gynaecology provides maternal and neonatal care, and the medical officer (MCH-FP) provides support as anesthetist. The gynaecology consultant of the MCH unit at district hospital (DH) renders services for normal, complicated and referred maternity cases. In DH, there are nine other specialized units (pediatrics, anesthesia, medicine, surgery and others) also serving if necessary.
Human resource development

Table 6 provides an outline of the essential training requirements by the year 2010 that is necessary to ensure that maternal health care is able to be provided for on daily basis at the current staffing levels for the various levels of the health system. A detailed annual training plan has been prepared based on the required skill mix, existing skills of service providers, capacity of available training facilities, and priority of training activities. This plan prioritizes the EOC training needs and will also highlight the long term plan for ensuring availability of skilled birth attendance within and close to the community. In addition, it is necessary to develop a comprehensive master plan which will take account of the staffing and training requirements necessary for ensuring in the long-term full coverage of mental health care, particularly in those centers that are or will be required to provide 24 hour coverage. This would also take into account additional staffing that would be required as performance increases.

**Table 6. Human resource development plan by 2010**

<table>
<thead>
<tr>
<th>Type of training</th>
<th>Activities</th>
<th>Target approximate number</th>
<th>Output</th>
<th>Duration of training</th>
</tr>
</thead>
<tbody>
<tr>
<td>Management and Development</td>
<td>District level manager</td>
<td>200</td>
<td>90% received training</td>
<td>8 days</td>
</tr>
<tr>
<td></td>
<td>Upazila level manager</td>
<td>900</td>
<td>Do</td>
<td>6 days</td>
</tr>
<tr>
<td></td>
<td>TOT for comprehensive orientation programme</td>
<td>900</td>
<td>Do</td>
<td>6 days</td>
</tr>
<tr>
<td></td>
<td>Logistic management (upazila level manager)</td>
<td>150</td>
<td>Do</td>
<td>6 days</td>
</tr>
<tr>
<td></td>
<td>Store management for pharmacists</td>
<td>450</td>
<td>Do</td>
<td>6 days</td>
</tr>
<tr>
<td></td>
<td>Monitoring and supervision for union level supervisor (SI, FPI, Sr. FWV)</td>
<td>5000</td>
<td>90% received training</td>
<td>6 days</td>
</tr>
<tr>
<td></td>
<td>FWV basic training</td>
<td>1585+550</td>
<td>90% received training</td>
<td>18 months</td>
</tr>
<tr>
<td></td>
<td>FWV refresher training on midwifery skill practice</td>
<td>1320</td>
<td>Do</td>
<td>6 months</td>
</tr>
<tr>
<td></td>
<td>SBA training</td>
<td>2400</td>
<td>Do</td>
<td>6 months</td>
</tr>
<tr>
<td></td>
<td>1 week refresher training of FWV (modular training)</td>
<td>3900</td>
<td>Do</td>
<td>6 days</td>
</tr>
</tbody>
</table>

Continued…

23
<table>
<thead>
<tr>
<th>Type of training</th>
<th>Activities</th>
<th>Target approximate number</th>
<th>Output</th>
<th>Duration of training</th>
</tr>
</thead>
<tbody>
<tr>
<td>Comprehensive norplant and VSC training for doctors</td>
<td>400</td>
<td>90% received training</td>
<td>4 weeks</td>
<td></td>
</tr>
<tr>
<td>Refresher training on NSV for doctors</td>
<td>300</td>
<td>Do</td>
<td>2 weeks</td>
<td></td>
</tr>
<tr>
<td>EOC training for anesthetist, obstetrician, FWV</td>
<td>200</td>
<td>90% received training</td>
<td>6 months</td>
<td></td>
</tr>
<tr>
<td>Training on clinical contraception for FWV and SACMO of 1500 upgraded UHFWCs</td>
<td>1500</td>
<td>0</td>
<td>2 weeks</td>
<td></td>
</tr>
<tr>
<td>Refresher training on IUD for FWV</td>
<td>2500</td>
<td>Do</td>
<td>6 days</td>
<td></td>
</tr>
<tr>
<td>Basic training on MR for doctor</td>
<td>450</td>
<td>Do</td>
<td>12 days</td>
<td></td>
</tr>
<tr>
<td>Basic training on MR for paramedics (FWVs and female SACMO)</td>
<td>750</td>
<td>Do</td>
<td>14 days</td>
<td></td>
</tr>
<tr>
<td>Refresher training on MR for doctor</td>
<td>520</td>
<td>Do</td>
<td>4 days</td>
<td></td>
</tr>
<tr>
<td>Refresher training on MR for paramedics</td>
<td>750</td>
<td>Do</td>
<td>6 days</td>
<td></td>
</tr>
<tr>
<td>Training on essential newborn care for doctors of MCWC</td>
<td>250</td>
<td>Do</td>
<td>6 days</td>
<td></td>
</tr>
<tr>
<td>Training on essential newborn care for paramedics</td>
<td>1100</td>
<td>0</td>
<td>6 days</td>
<td></td>
</tr>
<tr>
<td>Basic training</td>
<td>6100</td>
<td>90% received training</td>
<td>1 month</td>
<td></td>
</tr>
<tr>
<td>Team training</td>
<td>6000</td>
<td>90% received training</td>
<td>6 days</td>
<td></td>
</tr>
<tr>
<td>Team training of FWA</td>
<td>3500</td>
<td>0</td>
<td>6 days</td>
<td></td>
</tr>
<tr>
<td>Team training of SI, AFPO, Sr. FWV</td>
<td>500</td>
<td>Do</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Orientation on planning process for newly recruited doctors and UFPOs</td>
<td>600</td>
<td>Do</td>
<td>6 days</td>
<td></td>
</tr>
<tr>
<td>Orientation</td>
<td>6000</td>
<td>90% received training</td>
<td>2 days</td>
<td></td>
</tr>
</tbody>
</table>

Source: HNPSP 2003
Role of NGOs in MCH-FP programme

In Bangladesh, NGOs have played a significant role in the development of the MCH-FP programme across the country. At present, over 400 NGOs operate in various areas of the country covering different aspects of MCH-FP related activities. The NGOs operate with government approval and as per the government's guidelines to complement and supplement the national programme. Most are involved in community-based distribution of contraceptives, clinical family planning services integrated with income generating activities, MCH and nutritional activities, research and evaluation, and social marketing of contraceptives. In the following sections, major successful NGO projects in Bangladesh are described.

MCH-FP project of ICDDR,B at Matlab

In 1977, ICDDR,B started an experimental MCH-FP programme at Matlab, a riverine rural sub-district (upazila) of Bangladesh. Special services were introduced in 70 villages with a population of 89,350 (study area) and demographic dynamics were monitored in a neighbouring 79 villages (comparison area) with a population of 85,596. In the comparison area where usual government services were provided, socioeconomic and demographic conditions were otherwise comparable to those in the treatment area. In the treatment area, female community health workers (CHW) visited all currently married women twice a month, consulted about their contraceptive needs and provided contraceptive care. Basic health problems were addressed by MCH outreach, and referral services were available at nearby clinics. In the initial project period, health interventions were family planning support oriented. However, with time the service regimen has expanded to incorporate immunization, oral rehydration therapy, training of TBAs, provision of safe delivery kits, and nutrition education, etc. (Bhatia et al. 1980 and Rahman 1986). Moreover, ICDDR,B developed a scheme for the placement of trained midwives in the villages to provide services for pregnancy, delivery and referrals as required. The midwives were linked to CHWs, who referred pregnancy and delivery cases to these midwives (Maine et al, 1996). A midwife is a CHW/FWV with 8-10 years of schooling or having secondary school certificate received 18 months midwifery training. In 1996, the programme was resigned for facility-based birthing by midwives (Marge et al. 2006, Elahi et al. 2006). Between 1996 to 2001, all four health centres were upgraded and equipped to perform basic obstetric care, home births with midwives were no longer offered.

The government-trained nurses or midwives provided ante-natal, home-delivery, and post-natal care; identified and treated complications; organized referrals and accompanied patients to the central clinic at Matlab. The midwives are supported by two other components of the
programme namely, development of a referral chain, including a boatman and helper to accompany patients at night or day to the central clinic, and installation of a maternity clinic at Matlab where trained paramedics and female physicians are always available for obstetric first aid and treating obstetric complications, or further referral to a district hospital. Patients requiring cesarean section and blood transfusion are referred by ambulance to the district hospital (Fauveau et al. 1991).

Achievements so far

By 1978, evidence of demographic impact was apparent, and by 1981, the effects were substantial. By 1982, CPR had risen in the Matlab treatment area compared to the comparison area, and above the national averages (Menken and Phillips 1990). In 1990, three of every five eligible women residing in the project area were contraceptive acceptors and the TFR was below four. The Health and Demographic Surveillance Report (2004) shows that TFR in ICDDR,B area was 2.9 and in government services area was 3.1. After 2000, the fertility rate of the two area converged and in 2005 the TFR in the government area was 2.8 (HDS 2007). The IMR in ICDDR,B and government-served areas were respectively 39.1 and 48.5 per 1,000 live births. The NMR fell in ICDDR,B area and while it rose in government service area The post-neonatal and under-5 mortality rates fell in both areas, however, the declining trend was significantly higher in ICDDR,B area (HDS 2004). The use of facilities for delivery was over twice (about 21%) the national level at Matlab in 2001. Between 1987 and 2005, the percent of births with a skilled attendant increased from 5.0% to 53% (HDS 2007) and from 1996 all births with a midwife were health centre based. The caesarean rate has increased steadily from 0.2% in 1990 to 6.8% in 2005 (HDS 2007). Maternal mortality remained stable between 1976 and 1989 but decreased substantially after 1989. From 1990 onwards maternal mortality declined by 7% per year in the ICDDR,B service area compared to 4% per year in the Government service area. During 2001-2005, MMR in ICDDR,B area was 120/100,000 pregnancies and 200/100,000 in government area which were lower than the national average (Chowdhury et al. 2006). The speed of decline was faster after the introduction of the skilled attendance strategy, better access to emergency care, and fall abortion mortality in ICDDR,B service area.

The observed changes in the treatment area strongly suggest that the project was successful in adapting the service delivery strategy to the social conditions in rural Bangladesh (Simons et al. 1987).

MCH-FP extension project: collaboration between ICDDR,B and the GoB

The sharp increase in the CPR and its consequent impact on fertility in the Matlab project area raised question of its replicability in other areas.
of Bangladesh. In order to test the feasibility of incorporating the lessons learned from Matlab, in 1982 ICDDR,B, in collaboration with the government, started a project, called MCH-FP Extension Project in two other *upzilas* of Bangladesh i.e, Abhaynagar in Jessore district and Sadar *upazila* in Sirajganj district. The strategy was to transfer apparently successful elements of the Matlab programme into the government services, without requiring much more than the resources available and without changing the overall rules governing lines of authority, recruitment, transfer, promotion, and pay (Phillips *et al.* 1984). This new project was to be collaborative, with research direction provided by ICDDR,B and operational direction by the usual government administrative system.

In the extension project, the ICDDR,B interventions were designed to strengthen the knowledge and supervisory capabilities of mid-level government officials to implement programme activities at the field level. The primary objective was to train the government field workers about the client-oriented motivational approach. Several four-week on-the-job training programmes were conducted at field level to discuss family planning, oral rehydration, tetanus immunization, household visiting patterns, motivational techniques, community relations, referrals and record-keeping. Salient features of the extension project design that have been kept over the years include 1) field offices used as ‘policy laboratories’; 2) collaboration with government officers at both central and field levels; 3) demographic surveillance and periodic surveys at project sites, and increasingly qualitative research; and 4) a focus on implementation issues (Phillips 1987).

In the ICDDR,B Extension Project areas the contraceptive use rate is substantially higher than the national rate. The findings indicate that the programme performance in the government can be improved by introducing simple interventions. Household visiting patterns, motivational techniques, community relations, referral and record-keeping are found critical to the success or failure in large scale government programmes (Phillips 1987).

**BAMANEH’s MCH project: community-based mother and child health care services**

To curb the increased rate of maternal and infant mortality, especially in rural areas, Bangladesh Association for Maternal and Neonatal Health (BAMANEH), a national NGO as well as an affiliated body of the International Associational for Maternal and Neonatal Health (IAMANEH) was established in 1979. Since its inception, BAMANEH has been contributing significantly in family planning, TBA training, reproductive and child healthcare, and action research on health-related issues.
The intervention

In the early stage, it was recognized that the very objective of maternal and child mortality reduction could be achieved to a great extent by TBA training if safe deliveries are assured. Later the services of the village-based TBAs were extended to include family planning motivation and healthcare awareness with financial support from Asia Foundation. The project encouraged mobilization and active participation of community people to develop a sustainable MCH programme. BAMANEH undertook ‘community-based MCH care project’ in Chandina upazila of Comilla district with support from Swiss Red Cross (SRC) in 1986 and in Gabtoli of Bogra district in 1988. The project was expanded in Sadar upazila of Brahamanbaria district and in Alfadanga upazila of Faridpur district during 1992-1993. Thereafter, similar project was initiated in Sariakandi upazila of Bogra district in 1998 with support from IAMANEH. The MCH care focused on ANC, safe delivery, PNC, basic curative treatment, BCC activities, EPI for women and children, growth monitoring, and mobilization of community people through mothers’ club and health committees. The project covers 104,662 people in 61 villages of five districts.

Achievements so far

In co-operation with government’s EPI programme, BAMANEH has succeeded in bringing a positive change in immunization coverage. BAMANEH conducted a study in 1993 on ‘standardization of FP, MCH and midwifery kits’ which revealed that the project has created a sense of inspiration and enthusiasm among its beneficiaries to improve their health. TBAs, especially in Chandina, Brahamanbaria and Alfadanga, are motivated to work voluntarily that has a positive impact on reducing MMR which is lower than (220/100,000 live births) the national average (BAMANEH 2004). Nearly two-third of the deliveries in the project catchment area are conducted by trained TBAs. Empowerment of TBAs in the project areas with continued training has enhanced their credibility. Strong and effective healthcare motivation has raised the life expectancy, standard of living, and child survival rate. Growth monitoring programme has brought a positive impact on the nutritional status of under-5 children. About 16% of the children within the age group of 0-3 years are in the growth monitoring programme. Formation of para/village-wise health committee has opened up a new vista to organize and mobilize community people in smaller fora to identify their felt-needs on different health issues, and how to utilize their participatory efforts to ameliorate those problems. Child delivery at BAMANEH clinic rather than home is the persistent demand of the community which also increased revenue generation.
Birth and re-birth of knowledge from BRAC

BRAC's engagement in health started in 1972 (Rohde 2005); which summarized in Table 7. From the very start, BRAC has been moving forward along the direction of global and national health strategies to address the local health situations (Chowdhury and Cash, 1996). BRAC gained immense knowledge, particularly in improving child health throughout the 1980s. In early nineties BRAC trained 13 million women in Bangladesh how to prepare and use oral rehydration solution for treating diarrhoeal diseases at home and created concurrently a miracle in childhood immunization (Chowdhury and Cash 1996; Chowdury et al. 1999). At this juncture, BRAC conceived the idea of life cycle approach for improving maternal and child health. This idea gave rise to the origin of Women’s Health and Development Programme (WHDP) addressing women’s health through comprehensive approach (BRAC Women’s Health and Development Programme, 1992). At the same time, BRAC also crafted the Essential Health Care (EHC), a low-cost basic health intervention, particularly for the poorer sections of the community which included health and nutrition education, water and sanitation, family planning, immunization, pregnancy related care, basic curative services, tuberculosis, essential healthcare for specially targeted ultra poor, and training (Annual Report of BRAC Health Programme 2003).

In 1996 the focus of women’s health turned to reproductive health echoing with International Conference on Population and Development (ICPD) in Cairo in 1994 and the Fourth Women’s Conference in Beijing in 1995 (International Conference on Population and Development 1994; Beijing Declaration and Platform for Action 1995). The resulting Reproductive Health and Disease Control (RHDC) programme moved beyond diseases of the reproductive tract bringing into light the significance of reproductive and sexual health and rights including gender issues. RHDC provided a package of essential reproductive health services viz. adolescent family life education, contraception, maternity care, referral, HIV/AIDS awareness, treatment and prevention of RTI, STI, tuberculosis, ARI and basic curative services. RHDC provides secondary referral facilities through BRAC health Centre or Shushasthya. On the other hand, the Family Planning Facilitation Programme (FP-FP) and the Rural Service Delivery Programme (RSDP) went side by side with other health interventions starting from 1996 to 2001 (BRAC Report 2000). The RSDP establishes informal schools that provide 3 years of primary schooling to adolescents who have never attended school. Monthly reproductive health sessions are integrated into the regular school curriculum include adolescence, reproduction, menstruation, marriage, pregnancy, STIs, family planning, smoking, substance abuse, and gender issues.
Malnutrition being acknowledged as a major impediment to health and development, nutrition interventions endorsed by the World Bank and the national government began in 1996 targeting women and children to bring about changes in nutrition behaviour. At the wake of 2005, recognizing the enormity of the problems of maternal and child health, BRAC realized to initiate intensive health interventions to reduce deaths and diseases of women and children under the MNCH programme both in the rural and the urban slum areas.

Table 7. BRAC major health programmes and activities

<table>
<thead>
<tr>
<th>Major programme</th>
<th>Activities</th>
<th>Timeline</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral Therapy Extension project (OTEP)</td>
<td>Phase 1 (1980) – to scale, revise 7 points, name for diarrhea</td>
<td>1980-1990</td>
</tr>
<tr>
<td></td>
<td>External evaluation</td>
<td></td>
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<td></td>
<td>Phase 2 (1983) - training health services in use of ORT, concentrated reinforcement programme increases use further Rice ORT trials (1985)</td>
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<td></td>
<td>Phase 3 OTEP started (1986)</td>
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<tr>
<td></td>
<td>Conclude in 1990 reaching 13m household</td>
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<td></td>
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<tr>
<td>Health &amp; population programme</td>
<td>Successor to OTEP/CSP - more comprehensive EHC and WHDP</td>
<td>1990</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Women’s Health and Development Programme (WHDP)</td>
<td>Child health and development programme including birthing centre, ANC and nutrition, CSP, NPPE for adolescents-nutrition and health in kishore-Kishori school curriculum, EPI, health resource centre- village organizations, health committees, Gram Committees, drug cooperatives</td>
<td>1991-1995</td>
</tr>
<tr>
<td></td>
<td></td>
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<tr>
<td>Reproductive Health and Disease Control (RHDC)</td>
<td>WHDP becomes RHDC – add STI, HIV, TB, ARI to already safe motherhood, ANCC, CSP, etc.</td>
<td>1996</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Family Planning Facilitation Programme (FP-FP)</td>
<td>Health and family planning facilitation programme in support of government FP</td>
<td>1994</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Nutrition facilitation programme</td>
<td>Facilitate Government’s Bangladesh integrated nutrition project</td>
<td>1996</td>
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<tr>
<td></td>
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<td></td>
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<tr>
<td>Rural Service Delivery Programme (RSDP)</td>
<td>National facilitation– USAID support- train NGOs, implement essential service package in 8 districts, initiate adolescent family life programme for youth education services</td>
<td>1997</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Health, nutrition and population programme</td>
<td>Essential health care (EHC) services</td>
<td>1999</td>
</tr>
<tr>
<td>BRAC health programme (BHP)</td>
<td>Nation wide essential health care services to the poor</td>
<td>2002-to date</td>
</tr>
</tbody>
</table>

Source: Rohde 2005.
NB. The shaded rows are umbrella programmes
Achievements so far

Identification of pregnancy was the major entry point to reach within the boundary of pregnant women. In WHDP, one-third of the pregnant women were registered during the first and the remaining during the second trimester. Hence, more than 90% of the women received 2-6 antenatal visits and nearly all were immunized with tetanus toxoid vaccine (Afsana et al. 1995). In WHDP, more than 90% of births took place at home assisted mostly by BRAC TBAs. BRAC offered post-natal visits twice at home to more than two-thirds of women during post-partum period. Immunization coverage was substantially high with more than 85% among children in WHDP intervention areas (Afsana and Mahmud 1998). Similar trend was observed for Vitamin A coverage (87%) among under-5 children (Rohde 2005). In WHDP, the ARI control programme was found quite successful especially in offering treatment to under-5 children by the community health volunteers known as Shashthya Shebikas (Hadi 2003).

In RHDC programme, the set up of BRAC health centre namely Shushasthya brought into light the accessibility of the disadvantaged population, particularly, members of the BRAC village organization (VO) to facility level care. About three-fourths of the patients attending the Shushasthyas in mid-nineties were BRAC poor members (Afsana and Mahmud 1998). The quality of care maintained in different facilities varied (Afsana and Sabina 2001). Use of BRAC Shushasthya for child delivery was influenced by many factors, such as, socio-cultural barriers, costs, fear of hospitals and so on (Afsana and Rashid, 2001). However, it was reported that the women who gave birth in a Shushasthya spoke of good quality services including maintenance of privacy, dignity, caring attitudes, and emotional support.

In FP-FP and RSDP, the partnership experience with the government became more congenial to establish a better working relationship. The contraceptive use was much higher with decreasing discontinuity rate (Hadi 1998). Involvement of male in this programme was quite significant. Besides, adolescents were targeted for better education in sexual and reproductive health (Rashid 2000).

In both the Bangladesh Integrated Nutrition Programme (BINP) and the National Nutrition Programme (NNP), nutritional status was reported to be improved among pregnant women and under-2 children (Baseline survey NNP 2003, Endline Survey 2005). However, similar improvement was also observed in control areas. More importantly, low birth weight remained unchanged over the years of nutrition interventions.

In EHC, even with small numbers of staff and CHWs, ante-natal coverage was about 62% and contraceptive use was also 59% (Annual Report
BRAC Health Programme 2006), which were higher than the national average. About 80% of the children were fully immunized against six communicable diseases and 87% pregnant women were immunised with TT vaccine. The monitoring report suggests that 93% of the under-5 children received vitamin A capsules in BRAC working areas. In addition, in ultra poor families of EHC areas, service utilization was extremely high.

**Emergency obstetric care (EOC) in rural Bangladesh**

Intensified efforts on TBA training and utilization of ANC could not reduce maternal mortality at the desired level. In recent times, availability of EOC has been recognized as a key intervention to reduce maternal mortality (Islam MT et al. 2005). The government of Bangladesh has fostered successful partnership with development agencies, research institutions, and NGOs in order to improve quality and availability of EOC services across the country. Various donor-supported programmes have focused on building capacity to strengthen EOC functions in the public health sector since 1993. Moreover, the government of Japan agreed to equip 47 UHCs with comprehensive EOC and 179 UHCs with basic EOC. USAID has invested in communication and social mobilisation activities in areas where EOC services have become functional.

**Interventions**

The MOHFW, through the Directorate of Health Services and Directorate of Family Planning has implemented the EOC interventions nationwide through an integrated approach with the reproductive healthcare agenda. UNICEF has supported the Directorate of Health Services since 1993, and accelerated support in 2000 through implementation of the Women’s Right to Life and Health (WRLH) project. UNFPA supported the Directorate of Family Planning and the interventions started on pilot basis in one division in 1993. To avoid duplication of planned EOC services at facilities that were nearer but governed by two different arms of the ministry, programme activities began in Rajshahi division in 1993 with consensus building and strengthening of coordination between these two directorates.
UNICEF intervention – the WRLH project

The Women’s Right to Life and Health (WRLH) project, a joint collaboration between the GoB, UNICEF and the Averting Maternal Death and Disability Programme at Columbia University, USA, was implemented throughout the country for reduction of maternal morbidity and mortality (UNICEF 2000). The project strategy is to strengthen all district hospitals and selected 120 UHCs to provide 24-hour comprehensive EOC services. Twenty-four facilities in 14 districts were selected for the first year, based on a framework that draws on the number of deliveries conducted per year in the district hospital.

The project has adopted the ‘three delays model’ (Maine 1997) as the basis for programmatic action to establish EOC and increase utilization of available services. It is based on a conceptual framework of three elements required for successful and ethical implementation of the programme - quality technology, management excellence and respect for human rights. The linkage between women’s status and maternal mortality has been popularized and the issue is being addressed as a woman’s right (UNICEF 1997). This means nurturing a socio-cultural movement that addresses the reduction of maternal mortality as a woman’s right and also enhances women’s self-esteem and status.

Intervention

Major intervention components include needs assessment, minor renovation of facilities, development of human resources (medical officer, nurse and laboratory technician), and supplying necessary equipments and logistics. To strengthen the management information system (MIS), the project introduced delivery, operation-theater and obstetric registers (unified MIS register) at all the designated facilities including MCWCs and medical college hospitals. Relevant persons were trained on unified MIS register for record-keeping and reporting in a prescribed format. The monthly MIS report from all project facilities are sent to the MIS section of the Directorate of Health Services.

Providing health education in the community is a routine activity of field staff. Health education mainly focused on the five danger signs, ANC, PNC and information on services available at the facilities. Community

<table>
<thead>
<tr>
<th>Key intervention strategies</th>
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<tbody>
<tr>
<td>➢ Providing 24-hour quality EOC services</td>
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<tr>
<td>➢ Championing women’s rights in the facility</td>
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<tr>
<td>➢ Building and sustaining accountability in the health facility</td>
</tr>
<tr>
<td>➢ Building stakeholder accountability to reduce maternal deaths</td>
</tr>
<tr>
<td>➢ Mobilizing family and community accountability to saving women’s lives</td>
</tr>
<tr>
<td>➢ Measuring progress according to the values and principles of the project</td>
</tr>
</tbody>
</table>
and social mobilization activities included future search conference, observation of safe motherhood day, distribution of posters and leaflets, and strengthening of facility-based health education.

Initiative was also taken to develop local level planning (micro planning) either through Appreciative Inquiry or Hospital Action Plan. The appreciative inquiry is a participatory (involving all the hospital staff and stakeholders) planning process based on local resources, providers’ needs and clients’ rights to improve quality of EOC services. It helps the facility staff envision a collectively desired future and to implement that vision successfully into reality. Hospital action plan is a 5-step process to develop a facility-based action plan to improve quality of care involving the key hospital staff. UNICEF has developed a five-step micro planning process called hospital action plan (HAP) to reach more facilities in a shorter time, while paying attention team building and details of 24-hour EOC readiness. In contrast to using appreciative inquiry the HAP uses self-assessment to improve individual performance and capacity of emergency response. It was conducted in 71 facilities by the end of 2003. The 5-step process includes assessment of ones knowledge and skills; room-to-room readiness and set-up of emergency action; preparation of a plan of action; allocation of responsibilities; and monthly team review (UNICEF 2004).

A technical support system was established nationwide to facilitate implementation activities and monitoring of all project activities, and to check the unified MIS register for consistency of record keeping and reporting.

**UNFPA intervention**

UNFPA supports the Directorate of Family Planning to establish 24-hour comprehensive EOC services at 64 MCWCs throughout the country. Interventions are similar to those of the WRLH project except for the development of facility-based micro plans – works in different facilities (Gill and Ahmed 2004). The MOHFW first implemented services in Rajshahi division of the country and later scaled up gradually to include all the MCWCs nationally. By 2003, all 64 MCWCs have completed the upgradation of services.

**Barriers in EOC utilization**

- Inconsistent cooperation between MCWCs and district hospitals
- Non-availability of trained human resources and supplies (drugs & equipments) in DH, MCWC and UHC,
- Most of the DH, MCWC and UHC lack facilities for D & C, blood transfusion and storage, general anesthesia and drugs,
- Tremendous cost for services,
- Lower status of women in the society often led them lack decision making power,
- Poverty,
- Distance and lack of transport facilities.
CARE intervention

The Dinajpur Safe Motherhood Initiative by CARE Bangladesh under NSDP was designed to test the impact of several interventions on use of obstetric services in government health facilities in Northwestern Bangladesh during 1998-2001. The project undertook activities to improve the quality of care in the facilities included team-building among providers, case review and a stakeholder’s committee. CARE introduces a community mobilization intervention encompassing birth planning community support system for funding, transportation, blood donation for care of women with complications.

Health system linkages

Staff from the MCWCs and district hospitals were encouraged to maintain close links with both higher and lower level health facilities to encourage referral of cases that could not be managed at a given level. A joint letter from the Directorate of Health Services and the Directorate of Family Planning was issued to encourage cooperation among the staff of MCWCs and district hospitals. District and upazila level managers were involved in promoting links between lower level facilities and the MCWCs as a first referral centre for STI and obstetric emergencies. Links were also made between government and project staff and local and international NGOs working in the area to coordinate coverage of services, transport arrangement and community awareness building activities. In addition, ambulances were provided to MCWCs that did not have one.

Coverage

Comprehensive EOC is available in 60% of the district hospitals, 27% MCWCs and 3% UHCs. Similarly, basic EOC is available in 14% district hospitals, 19% MCWCs and 32% UHCs. The coverage of EOC services has increased from 1 facility per 3.6 million populations in 1994 to 1 facility per 1.9 million populations in 1999 (UNICEF 2000). In southwestern Bangladesh, there were 1.04 and 0.64 comprehensive and basic EOC facilities respectively per 500,000 population. When compared with the baseline data, the coverage of comprehensive EOC facilities was found to be substantially increased from 0.23 to 6.9% (2006), which achieves the minimum UN standards but the coverage of basic EOC services remained the same (Islam et al. 2005, APR 2007).

Achievements so far

The availability and utilization of EOC services in Bangladesh has been assessed based on internationally recognized process indicators (UNICEF 1997) through surveys conducted in 1994, 1999 and 2002. Comparison to the baseline status of the project, the situation of UN Process
Indicators shows considerable progress in Bangladesh with the exception of blood transfusion (UNICEF 2006, Hossain and Ross 2006, Gill and Ahmed, 2004). The use has doubled during 1994-2002, births in EOC facilities has increased by 63%, the number of complications treated in facilities increased by 135%, and the number of caesarean sections increased by 70%. As part of a national initiative assisted by UNICEF, 123 EOC facilities were equipped with operating theatres. From 1999 to 2002, births at the facilities increased by more than 25%, the number of women admitted with birth complications increased by almost 90% and the number of caesarean sections increased by more than 40% (UNICEF 2006). The differences in availability and use are due to differences in geographical location. By their nature comprehensive EOC facilities are typically located in urban areas, and not surprisingly, the availability of EOC tends to be better in capital cities than in the country overall (Paxton et al 2006). In south-western Bangladesh, the met need has increased by 24% in intervention area compared to 13% in comparison area and no changes were observed in the control area (Hossain and Ross 2006). Percentage of total births in facilities also significantly increased to 20.4% in 2001 from 8.3% in 1999 (p<0.01) (Hossain and Ross 2006).

Improvement has also been observed in knowledge level, preparation for obstetric emergency and quality of care (Hossain and Ross 2006). Approximately 63% of women, 39% of husbands, and 55% of family decision-makers in Dinajpur district knew about the signs of obstetric emergency. Fifty percent of the families in the intervention area have made plans to prepare for an obstetric emergency (savings and transportation), double the percentage in the comparison areas. Specific improvement of quality of care (QOC) was observed in the area of cleanliness, privacy, security, and inter-personal communication. Moreover, a quasi-experimental study in Matlab, Bangladesh reveals a 50% reduction in maternal mortality once EOC services were introduced in an intervention area (Main et al. 1996). However, paralleling the EOC services, changing factors, such as fertility, birth order, the age of first birth, etc. are also contributing significantly on the reduction of MMR in Matlab over the period (1976-2001) (Koblinsky et al. 2006). The situation of record keeping and reporting is far from adequate and requires urgent action (UNICEF, 2000).

**Safe deliveries by skilled attendants**

The government of Bangladesh initiated a TBA training programme in late seventies to provide at least one trained TBA for each of the 68,000 villages in order to ensure safe delivery by skilled attendants and to help reduce maternal deaths. However, contrary to the expectation, no significant decline in maternal mortality occurred. Several studies have shown that trained TBAs did not attend sufficient proportion of births in the community, did not apply whatever they learned in the training, and
cannot significantly contribute to the reduction of maternal deaths (WHO 2004, Nasreen et al. 1994). Murakami and colleagues (1998) identified some important weaknesses of the programme including poor selection of TBA trainees, insufficient supervision, and inadequate content of the training programme. Consequently, in 1998, the government and the development partners abandoned TBA training. There is, therefore, a need to develop alternative strategies to ensure that pregnant women in the community have access to skilled delivery services.

The MOHFW, thereafter, piloted a six-month competency based programme to develop community-based SBAs at a level of auxiliary midwife during March-August 2003 in six districts. WHO and UNFPA Bangladesh provided technical and financial support to this programme and Obstetrical and Gynaecological Society of Bangladesh provided operational assistance. The SBA training programme has been scaled-up rapidly across the country (JICA 2003). The Bangladesh government has decided to train all the FWA and Female HA for 18 months to make them SBA in phases and thereby covering the whole country. The NGOs and private sector have opportunity to train their paramedics as SBA in the line of the pilot, keeping the standard set by the government.

**Intervention**

The TBA training programme included a 12-day basic course, a 5-day refresher course, and a 5-day 2nd refresher course. Besides reproductive health, the training also covered general health and nutrition awareness as well as awareness on water and sanitation. The SBA training programme trained FWAs and female HAs on selected essential midwifery skills and abilities (WHO 2004) and Bangladesh Nursing Council certified them as community midwife. The SBAs were trained for providing clean home delivery services, recognizing danger sign and mobilizing community support for those women who are unable to go for institutional delivery. The FWVs were trained on midwifery and supervision techniques to monitor activities of the SBAs.

**Coverage**

The TBA training programme has so far trained 52,000 TBAs across the country which was stopped since 1998. The SBA pilot programme trained about 300 SBAs at union levels and 90 SBAs at district level in 2000 (HNPS 2003, WHO 2004). Through this programme it is expected to develop 10,000 SBAs by the year 2010 (The Daily Star 2004).

**Achievements so far**

Findings from different studies have shown controversial effects of TBA training on maternity care. The cutting and tying of the cord generally take place under unhygienic conditions. At least 90% of the TBAs
interviewed said that they did not wash their hands before delivery. No ante-natal care is provided by the TBAs nor is it expected from them. The TBA’s involvement begins when she arrives for the delivery and ends as soon as the birth is completed (Rozario 2006). Goodburn et al. (2000) found that trained TBAs were significantly more likely to practice hygienic delivery than untrained TBAs, but this hygienic practice did not prevent post-partum infection.

The evaluation of the pilot programme showed that the SBAs are making significant contribution to the increased proportion of births by trained health providers. On average, each SBA performs 3-4 births per month and it is believed that this could easily be raised to 5 or 6 with further strengthening of the field programme (WHO 2004). Community people were satisfied and happy with their services. The most effective outcome was that the referral increased in the UHCs, district hospitals and so on by these SBAs (The Daily Star, 26 April 2004).

Initially the community midwives in Chakaria project were supported by ICDDR’B but currently they are employed under Village Health Post Committee (VHPC), a welfare group organized by the local villagers. The midwives charge for their services (Taka 10/ANC and Taka 400/Delivery) and deposit the money to the VHPC’s account.

Source: ICDDR,B 2002

NGO community-based SBA pilot models

During 2002, a research proposal was developed with financial support from DFID to study the development of the community-based midwifery (SBA) model. In Bangladesh, two such models are currently in operation on a limited scale – one in Chakaria and the other in Chandpur. These models are described below.

Chakaria community-based midwifery project

ICDDR,B initiated the Community-based Midwifery Project in 1997 in three unions (Kaiyerbil, Baraitali, and Manik Char) of Chakaria upazila in Cox’s Bazar to ensure greater participation of pregnant women in antenatal and safe-delivery care, including referral of complicated cases.

Under this project, 11 CHWs, trained in midwifery to serve the community, provide services both at their residence where they have some basic equipments and supplies including drugs, and in the homes of women where they may be called upon to attend deliveries. The community midwives receive partial salary from ICDDR,B, but this support will be withdrawn once they become fully self-sustaining. After implementation of the project, the number of women receiving maternity care services including ante-natal and delivery care, and referrals from the midwives increased gradually (ICDDR,B 2002).
Chandpur Community Midwifery Project

A local NGO, Bangladesh Association for Voluntary Sterilization (BAVS), initiated the Chandpur Community Midwifery Project in 1992 covering 12 unions of Chandpur Sadar upazila. Thirty-six women were selected and trained as midwives for 6 months to conduct deliveries and provide MCH services at home. They were called ‘Palli’ or village nurses. The project was successfully implemented, and an evaluation of its performance was done after 5 years. The Palli nurses were given partial salary by BAVS for the first 3 years, beyond which they have continued to earn from the women they serve. The success of the programme is reflected by the improved coverage of maternity care provided by the Palli nurses. They performed better than the trained TBAs in preparatory arrangement and following instructions in conducting delivery. Nearly 64% of the deliveries were conducted by these trained Palli nurses in 1995 (Barkat et al. 1998). However, the coverage declined to 52% in 1997, the phase-out year of the project. They referred 9% of the women they attended to a higher facility and almost all of the women complied with the referral. With the training programme in place, 90% of the pregnant/post-partum women in the project area received ante-natal and post-partum care visits from a Palli nurse. In 2002, there were 25 Palli nurses still in practice and were earning their living from the women they help during delivery in the community. Four Palli nurses were elected in local government positions who were still practising midwifery (ICDDR,B 2002).

Menstrual regulation programme in Bangladesh

Under the Penal Code of 1860, abortion in Bangladesh is permissible only for saving the life of the mother. In 1974, the government encouraged introduction of menstrual regulation (MR) services in a few isolated family planning clinics under the auspices of the US Agency for International Development (USAID). In 1978, MR training and services programme (MRTSP) was initiated in seven medical colleges and two-government district hospitals to train government doctors and paramedics to provide such services (Amin 1996). In 1979, the government issued a circular distinguishing between abortion, which remains illegal under legislation derived from British colonial law, and MR which is considered "an interim method of establishing non-pregnancy" for a woman at risk of being (but not known to be) pregnant (Dixon-Mueller 1996). The MR programme is guided by a National Technical Advisory Committee which is headed by DGFP and its members are from the Directorate of Family Planning. Four NGOs play a significant role in providing MR services and training. Until 1983 external funds were available from USAID, Pathfinder International, and the Population Crisis Committee. In 1983-84 almost all non-government programmes supported by USAID stopped providing MR services because of the U.S. government’s stance on abortion. Thereafter, the Swedish
International Development Agency (SIDA) has initiated providing funds for the NGO network to support FWV refresher training and research.

The HPSP (1998-2003) and HNPSP (2003-2006) have included ‘prevention of unsafe abortion through safe MR services’ as one of the component of safe motherhood services of reproductive healthcare package.

**Intervention**

MR services are available at all major government hospitals and health facilities and are legal for pregnancies of 6-10 weeks. MR is performed by physicians at UHCs, and by female paramedics called FWVs at UHFWCs. Nurses and family welfare visitors can provide MR services if the length of gestation is no more than eight weeks; physicians are permitted to do so upto 10 weeks of gestation. Any case with a longer duration must be referred to a specialist doctor.

MR training and services are extended in phases and services are now available throughout the country. Training was given to government doctors, FWVs and a few private doctors. Around half of the doctors received training during internship in the medical college hospital. The training for doctors includes a 12-day basic course, a 4-day refresher course, and for paramedics a 14-day basic course and a 6-day refresher course. Currently there are nearly 9,000 doctors and 6,500 paramedics trained on MR who are posted in different government hospitals. FWVs also received MR training after their formal posting in health facilities. FWVs are performing MR at community and primary (under supervision of a doctor) levels, and doctors or obs/gyn specialists perform MR at districts, secondary and tertiary level. Pre- and post-counseling is also given as well as post-contraceptive use. In addition, MR is performed privately by doctors, FWVs, other medical personnel and others such as unauthorized or unskilled providers including indigenous practitioners without formal training.

Only a limited number of NGOs provide MR services and these include BAPSA, BWHC, MCSC, FPAB and BRAC.

**Coverage**

MR services are available in 13 medical college hospitals, 59 district hospitals, 87 MCWCs, 402 UHCs, and 4,770 UHFWCs (Akhter 2006).

**Status of MR and induced abortion**

The actual number of MR and abortions being performed in Bangladesh is unknown. The annual number of MR officially reported to the Directorate of Family Planning rose from 4,000 in 1975-76 to 120,000 in
1998-99. Each year, about 2.8% of all pregnancies undergo MR and about 1.5% undergo induced abortion. These services are usually provided by untrained paramedics and ill trained doctors in logistic constraint setting (HPSP, PIP 1998). Another study indicates that the abortion rate in Bangladesh is 26-30 per 1,000 live births. The annual number of induced abortion is 730,000 of which MR is 430,000. The overall rate of hospitalization for abortion is 2.4 per 1,000 live births and about 75% of these complications are due to unsafe abortion and the remainder due to MR. The annual estimated number of complications requiring hospitalization that result from MR is about 19,300, which is approximately 4% of the 468,000 MR performed annually (Singh et al. 1997). Induced abortion other than MR is estimated to have a complication rate of about 40% and a hospitalization rate of about 20% (Chowdhury et al. 2002). Studies of pregnancy termination in Bangladesh usually involve women who have obtained MR at a clinic (most often in Dhaka) or women hospitalized for abortion complications. From these limited and somewhat biased samples, the studies indicate that MR clients are comparatively well-educated and of higher than average socioeconomic status (Bhatia and Ruzicka 1983).

### Summary achievement of MCH-FP programme

Despite formidable constraints of various kinds, commendable progress has been made in several crucial areas as follows:

- Adoption of a national population policy;
- Increased resource allocation for population and related activities;
- Adoption of a multi-sectoral approach within a broader based population and development framework;
- Creation of a definite administrative infrastructure from the national headquarter down to the local level;
- Development of a large number of service infrastructure,
- EOC centre established,
- Community SBAs trained,
- Recruitment, training and development of large fleet of outreach female workers;
- A significant headway with respect to nationwide awareness (99%) about FP programme, method and message of small family norm;
- An impressive gain in contraceptive use.

An examination of the types of methods used, providers, complications and fatality rates over a period of 17 years reflects some changes in the patterns of unsafe induced abortion and its consequences (Akhter 1998, Begum 1991). There is a clear transition from non-medical persons to medically trained personnel in performing these services. The proportion of abortion conducted by trained doctors, nurses and FWVs was 26% in 1977, 43% in 1984, and 46% in 1994 (Akhter 2006). The proportion of post-abortion uterine infection and fatality has reduced from 29% and 5% in 1977 to 18% and 0.2% in 1994 respectively (Akhter 1998).
Child health interventions in Bangladesh

Child healthcare in Bangladesh consists of six sub-components - 1) EPI, 2) control of ARI, 3) diarrhoeal disease control, 4) integrated management of childhood illnesses, 5) preventive and curative vitamin A supplementation, and 6) school health services. The first four are implemented in close collaboration and with technical assistance from the development partners. Vitamin A capsule were distributed through the EPI programme and in collaboration with the Institute of Public Health Nutrition (IPHN). The programme is headed by the DGHS and is implemented jointly by the DGHS and DGFP in a functionally integrated manner. The Bangladesh government is committed to accelerating the implementation of IMCI as a key strategy to reduce childhood mortality and as such has been included in the HNPSP, and functional arrangements have been made to merge previous ARI and CDD programmes to guide the implementation.

Integrated Management of Childhood Illnesses (IMCI)

The GoB adopted the IMCI strategy in 1998 to reduce child mortality and morbidity associated with major childhood diseases and conditions, and to promote child growth and development by prevention of diseases and promotion of healthy practices. The WHO and UNICEF jointly developed guidelines for IMCI at the first-level health facilities to address five leading causes of childhood deaths (70% of all childhood deaths in developing countries) including pneumonia, diarrhoea, measles, malaria, and malnutrition. Following this guideline, between 2001 and 2003, the Government of Bangladesh piloted the IMCI interventions in 3 upazilas.

Intervention

The IMCI combines a range of curative and preventive interventions to address major diseases and conditions contributing to morbidity and mortality in under-5 children through facility and community-based approaches. The facility-based IMCI addresses diseases and conditions like diarrhoea, ARI, malaria, measles, and malnutrition. The community IMCI provides community-based services and counseling to improve family and community practices on care seeking, feeding, immunization, neonatal health, and early childhood development. The intervention is implemented through coordination and integration of existing child health programmes as feasible and/or applicable. The intervention comprises three strategic approaches i.e., 1) improvement of case management skills of health staff, 2) improvements in the health system for drugs, logistics and human resources, 3) improvement of family and community practices for healthy growth and development.
Coverage

By December 2004, interventions were introduced in 48 new upazilas. From 2005-2007, the pace of expansion should triple to engage 50, 70 and 100 new upazilas in each respective year (WHO 2004).

Achievements

In 2003, the government of Bangladesh and WHO conducted a multi-country evaluation of IMCI effectiveness, costs and impact. The study concluded that the IMCI strategy was feasible and effective to address the needs of children in Bangladesh and recommended that the government make provisions for rapid scaling up (WHO Multi-country evaluation, http://www.who.int/imci-mce). Khan (2002) identified that about 75% of symptoms mentioned by the mothers were directly related to illnesses that are targeted in the IMCI. Significant differences were observed between IMCI-recommended drug treatment and current practices followed by the paramedics. Referral of patients to higher facilities varied from 3% for the paramedics to 77% for the CHWs. Arifeen (2004) assessed the correct treatment of sick children by a scale (0 to 100), a score of 54 was obtained in IMCI facilities compared with 9 in comparison facilities. Use of the IMCI facilities increased from an average of 0.6 visits per child per year at the start of the study to around 2 visits per child per year around 2 years after the introduction of IMCI. Nineteen percent of sick children in the IMCI areas were taken to a health worker compared to 9% in non-IMCI areas. However, while a substantial proportion of sick children seeking care at these facilities were fully assessed or correctly treated, almost none of their caregivers were advised on how to continue the care of the child at home. Over one-third of the sick children were managed by lower level workers who were significantly more likely than higher-level workers to classify the sick child correctly and to provide correct information on home care to the caregivers (Arifeen et al. 2005).

Saving Newborn Lives (SNL)

Bangladesh is one of the seven countries, where Saving Newborn Lives (SNL) initiative was implemented and funded by the Bill and Melinda Gates Foundation to address the problems of high neonatal mortality. In Bangladesh, Save the Children USA (SC/USA) launched the programme in 2000 in 10 upazilas of nine districts in collaboration with the government and three local NGOs – BRAC, BPHC and CARE (SC/USA 2005).
**Intervention**

The project identified six technical areas for intervention, such as 1) community-based intervention, 2) behaviour change communication (BCC), 3) essential newborn care (ENC) training, 4) monitoring and evaluation, 5) advocacy, and 6) research. The primary activities included training, ENC services, BCC activities, advocacy; regular monitoring, supportive supervision to health workers of different cadres and community groups who provide service during ante-natal, intra-natal, post-natal and neonatal periods, referral of sick newborns, and neonatal care practices by women and family members including birth preparedness through BCC. The project targeted primarily the mothers of infants and secondarily the family decision-makers including husbands, mother-in-laws, caregivers (formal and non-formal) and village leaders. Existing NGO and government cadres provided household visits and health education. Each NGO has a different community-based strategy. Trained TBAs provided delivery and postnatal care in all project areas. The community-based strategies included door-to-door visits, village health committees, courtyard meeting, training of village doctors, and use of community leaders as promoters. A local ENC BCC strategy was developed with NGOs, the government BCC unit and media agencies. ENC BCC activities were incorporated into the MOH annual operational plan for BCC.

**Coverage**

An estimated number of 102,650 women of reproductive age (out of 513,197 population) by BRAC, 47,210 women (236,012 population) by BPHC, and 80,000 women (400,000 population) by CARE were under coverage of SNL initiatives (SC/USA 2005) in 10 upazilas of Barisal, Comilla, Cox’s Bazar, Dinajpur, Jessore, Moulvibazar, Nilphamari, Rajbari, and Shariatpur districts.

**Achievements**

A steady improvement in the coverage of ANC was found in the SNL project area. ANC coverage with one or more antenatal visits was found
to be significantly high at 92.2% in SNL area, which is 22% points higher than the 2002 estimates and substantially higher than the national estimate (BDHS 2004, SC/USA 2004). A slight improvement was noted in the area of delivery assisted by skilled personnel. The skilled personnel includes MBBS doctors, nurses, midwives, FWVs, NGO paramedics, MAs and SACMOs. Delivery assisted by trained providers (TTBAs, FHV, HAs, Shasthya shebikas, BCC promoters, essential newborn care facilitators, essential newborn care trainers and field trainers) shows a significant increase over the last two years, 36.4% in 2002 to 72.8% in 2004. The most notable success of SNL initiative appeared to be in the area of postnatal and newborn care. Post-natal check-up at any time after delivery was estimated to be 61.7%, which was 37.5% higher than the baseline estimate of 2002. Newborn check-up within 24 hours increased by 12.9% points from 14.4% in 2002 to 27.3% in 2004. Practice of putting newborn to the breast immediately after birth (within 1 hour) rose to 76.2% and within 24 hours of birth rose to 96.3%. Exclusive breastfeeding practices have increased from 44.5% in 2000 to 71% in 2004 among the mother of children aged below six months. Improved knowledge of danger signs for mothers and newborns suggests that demand for referral may increase. A cadre of trained health providers including 154 paramedics (nurse, FWV, MA, SACMO and equivalent cadres), 512 field workers (HA, FWA, FPI, AHI, HI and equivalent cadres), and 1,407 TBAs were developed at the community level (SC/USA 2004).

Kangaroo Mother Care (KMC) Programme

Kangaroo Mother Care (KMC) is a method for care of stable pre-term or low birth weight (LBW) infants who need thermal protection, adequate feeding, frequent observation, and protection from infection. The KMC method has been shown to significantly reduce the incidence of life-threatening morbidity in stabilized newborns. Most women in Bangladesh give birth at home, one-third of who have little access to specialized neonatal care, gave birth of LBW babies. Under these circumstances, community-based KMC (CKMC) could prove to be the best means of stabilizing neonates and thus reducing neonatal mortality.

Working with Columbia University, BRAC and Mitra and Associates and the Population Council, Bangladesh is testing the effectiveness of CKMC on neonatal and infant survival that has been implemented (November 2004–April 2007) by piggybacking CKMC instruction into an existing community-based programme.

**Intervention**

In KMC, hospital born LBW newborns are placed in 24 hour skin-to-skin contact on the mother’s breast in an upright position. A team of multinational, multi-disciplinary experts have adopted CKMC and developed a
simple and user-friendly CKMC protocol that can be easily transferred to other countries and cultures. The protocol does not require birth weight or clinical judgment to identify which newborns should receive CKMC like in hospital settings.

The CKMC method attempted to mimic the ‘spirit’ of KMC, promoting constant skin-to-skin contact, exclusive on-demand breastfeeding, sleeping upright with the baby, using a damp or dry cloth to clean the baby instead of immersing the baby in water, and recommending that the mother immediately seek healthcare if the baby experiences danger signs. The same easily transferable teaching technique as the hospital-based method relying on person-to-person communication and demonstration was used, and the ‘main messages’ pamphlet given to mothers was adopted for the most illiterate women in Bangladesh study area. The strategy integrates CKMC into an existing government programme, BINF, whereby community-based nutrition promoters teach CKMC to pregnant mothers.

Coverage

CKMC intervention has been implemented in four upazilas of Dhaka and Sylhet divisions in Bangladesh.

Achievements

Kangaroo care was acceptable to the nurses, midwives, doctors and mothers of LBW infants (Folia and Browne, 2007 Lamb http://www.icddrb.org/images/ASCONX-oralSession-02.pdf). A pilot study found that CKMC was quickly and popularly adopted by the rural Bangladeshi women (Iftekhar 2003). Over three quarters of surveyed women initiated CKMC and 85% of the mothers with LBW babies continued till the post-partum period. Mothers who initiated usual skin-to-skin care reported more frequent breastfeeding, delayed newborn bathing, and more instances of sleeping with their babies. KMC, as applied in LAMB hospitals, showed to reduce the incidence of illness in LBW babies, greater temperature control, increased growth and increased breastfeeding. Outcome for the babies included changes in the length of hospital stay and survival. Other benefits of KMC included less anxiety to mothers and less infection, increased thermal control, increased breastfeeding and increased growth of neonates (Folia and Browne, 2007 LAMB http://www.icddrb.org/images/ASCONX-oralSession-02.pdf).

USAID funded programme

Since 1997 USAID focuses on improving family health through reduction of fertility, maternal and child mortality, and childhood illnesses. USAID
supports a network of 45 local NGOs that provide integrated MCH services including family planning through the government of Bangladesh (USAID 2004). The strategic objective of the project is to increase the availability of integrated health and family planning services through a system that has traditionally emphasized vertical service provision through separate health and family planning infrastructure and staff, improving service quality, and changing attitudes and behaviours with respect to service utilization among potential clients. The project involved the private sector, including the NGOs and commercial product-distribution networks to substantially complement and extend the reach of the government health services. The major partners included ICDDR,B for operations research; Management Sciences for Health and technical support related to immunization (including polio eradication) and other child health services; AVSC International for quality improvement activities; John Snow, Inc. for urban service delivery and logistics management; and Pathfinder International for rural service delivery. Currently, USAID is working with the government at the policy level to increase the provision of MCH services by NGOs (USAID 2004). These NGOs will serve as models for expanding basic health services with government and other donors.

Coverage

By 2003, the programme established 300 full-time community clinics, more than 12,000 associated satellite clinics, and nearly 7,000 community volunteers. It covers approximately 22 million people (USAID 2004).

Intervention

The intervention component under this project included capacity development of local NGOs; social marketing; improved distribution of family planning commodities; immunization including polio eradication; Helen Keller's work on nutrition; disease surveillance; early identification and treatment of respiratory infections and diarrhoeal diseases; ANC and PNC for mothers; and reproductive health care for men, women and adolescents; and mass media health communications programmes (USAID 2004). The programme provides free, one-stop clinic-based services for the entire family. New communication materials and programmes were developed for use by USAID-supported NGOs, and assistance was provided to the GoB to design a national communication strategy for key behavioural factors associated with high maternal mortality.

The services are provided primarily through (1) 300 community clinics and 12,000 monthly satellite clinic sessions, all managed by the NGOs; (2) technical assistance to the government health sector; (3) capacity
development of the NGOs; and (4) support for the Social Marketing Company for oral contraceptives and oral rehydration salt (ORS) packets.

Achievements

Table 8 describes a considerable progress in social marketing of oral contraceptives and ORS, immunization coverage and programme-generated revenue over five-year period under the strategic objectives of USAID funded programme.

Table 8. Achievement of USAID supported programme over the period

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<tr>
<td>Percent of aggregate operating costs of USAID-supported NGOs covered by programme generated revenues</td>
<td>6</td>
<td>7</td>
<td>10</td>
<td>12</td>
<td>14</td>
<td>16</td>
</tr>
<tr>
<td>Sales of Oral Contraceptives by the Social Marketing Company (in millions of cycles)</td>
<td>8.0</td>
<td>12.1</td>
<td>15.8</td>
<td>19</td>
<td>21</td>
<td>23</td>
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<tr>
<td>Sales of Oral Rehydration Salts Packets by the Social Marketing Company (in millions of cycles)</td>
<td>53</td>
<td>62</td>
<td>70.3</td>
<td>77</td>
<td>80</td>
<td>84</td>
</tr>
<tr>
<td>Percent of children fully vaccinated by age 12-months with recommended EPI antigens</td>
<td>51</td>
<td>54</td>
<td>52</td>
<td>56</td>
<td>58</td>
<td>60</td>
</tr>
</tbody>
</table>

(Source: USAID 2004)

The sale of oral contraceptives and ORS packets increased by 97.5% and 33% respectively from the 1997 baseline. Use of clinics operated by the NGOs increased by 5%, for a total of more than 24.2 million patient contacts. Utilization of ANC by pregnant women, and treatment of ARI and childhood illnesses increased by 16%, 9.4% and 7% respectively by the year 2004 from the 1997 baseline (USAID 2004).
MNCH INTERVENTIONS IN THE URBAN AREAS

Introduction

The urban population in Bangladesh is growing fast, mainly due to the influx of rural poor families, thereby worsening urban poverty situation (Centre for Urban Studies 2006). While the overall population growth rate is 2% per year, the urban population is increasing at an annual rate of 5 to 6% with a fertility rate of 3.9% and a population density of 225,000 persons/sq. km in the slum areas (UNFPA 2006). Nearly a quarter of the total population live in urban settlements and a third of the urban population lives in slums (NIPORT 2005, BDHS 2004). Despite significant gain over the past few decades, the situation of maternal and child health is unacceptably poor and the condition in urban slums is dismal, often worse than rural areas and non-slum urban areas. Nearly 80% of the deliveries in slums are conducted by neighbours/relatives at home (UNICEF 2004). Ante-natal coverage of 55% in urban slums is much lower than that of urban non-slum areas (74%). The newborn care utilization is virtually absent. Immunization coverage of 63% in urban slums is much lower than national and non-slum averages of 73%. Thus, the urban areas particularly the urban slums present a much greater challenge for improvement of the MNCH condition than other parts of the country.

Urban health services are the responsibility of the Ministry of Local Government, Rural Development and Cooperatives (MOLGRD&C). The Municipal Administration Ordinance of 1960, the Pourashava Ordinance of 1977 and the City Corporation Ordinance of 1983 clearly assigned the provision of preventive health and of limited curative care as the responsibility of the city corporation and municipalities with finance from USAID. But due to limited resources and manpower, public sector health services could not meet the needs. Private healthcare providers are the main source for delivery of curative care, including tertiary and specialised services to the urban people, but not preventive and promotive health services.
Under the directorate of Health, since 1953 the Maternal and Child Health Institute (MCHTI) in Azimpur started MCH activities through training lady health visitors. Gradually MCHTI was upgraded to provide safe motherhood services including MCH, EOC, FP, neonatal care, gynaecological services. Currently it has been further strengthened for providing RH:FP-MCH services to meet the needs of urban poor and slum dwellers. Presently, NIPORT conducts all trainings (table 5) under HNPSF agreed by the Directorate of Family Planning.

The UNFPA/EC-assisted programme named ‘Quality Reproductive Health (RH) care for vulnerable groups in the urban and peri-urban areas’ provided opportunity for knowledge building through community-based services and related youth empowerment initiatives. Under this umbrella programme, four projects were implemented through four NGOs (Marie Stopes Clinic Society, Family Planning Association of Bangladesh, Save the Children UK, and Bangladesh RED Crescent Society) in 18 peri-urban and urban areas. The primary healthcare programme in urban areas began to improve after 1997, when the Urban Family Health Partnership (UHFP) project was launched with financial support form USAID under the National Integrated Population and Health Programme (NIPHP). Thereafter in 1998, the ADB-financed Urban Primary Health Care Project (UPHCP) was initiated. These are complemented by a project for reproductive health services in metropolitan cities jointly funded by UNFPA, ADB and the Nordic Development Fund, which upgraded city corporation maternity centres for the provision of comprehensive EOC, family planning, and RTI/STI detection and treatment.

The lowest tier of service delivery in urban areas was door-step delivery provided by the NGO fieldworkers. Currently, the door-step services have been withdrawn by the NGOs and shifted towards the static service delivery sites. The fixed sites at the lowest tier are the satellite clinics organized by NGOs once a month. The next tier of service delivery comprises of clinics/ dispensaries managed by NGOs, GoB, DCC and the for-profit private sector. Most of them are staffed with paramedics and/or qualified physicians, and very little coordination and referral systems exist among them (Alamgir et al. 1999). This chapter highlights the major MCH interventions in the urban slums and how they succeeded or failed in improving lives of urban poor women, neonate and children.

**Urban RH: MCH-FP initiative**

To improve the health and well-being of the country’s rapidly growing urban population, in 1994, a three-year facility-based MCH-FP programme (1994-98), known as Urban MCH-FP Initiative, began in collaboration with the government of Bangladesh, ICDDR,B and Concerned Women for Family Planning (CWFP) with financial support from USAID-Bangladesh. Existing facilities of the Directorate of Family
Planning within city corporations and municipalities like MCHTI, MFSTC, MCH units of Barisal and Rajshahi, MCWCs at district level, and three Mohanagar Satellite clinics in Dhaka and Narayanganj were further strengthened for RH:FP-MCH services in urban areas. An MCH hospital with 200-bed capacity at Lalkuthi, Mirpur, Dhaka was constructed to meet the increasing needs of EOC, child and woman healthcare and training related to EOC, SBA, midwifery, and RH:FP-MCH. NGOs are involved predominately to deliver MCH-FP services in the urban areas.

Interventions

The key feature of the MCH-FP initiative was the establishment of Health and Family Planning Coordination Committee in 1995 with representative from all government and non-government service providers at 10 zones and 90 wards of Dhaka City Corporation (DCC). The reproductive health component of the initiative included family planning education and services, complications management, ante-natal care, tetanus immunization, delivery care, post-natal care, EOC and child health services which were delivered through a static clinic under ESP package. Posts of FWAs (population basis) and FWVs for each ward of six City Corporations were created (in proportion to population) for targeted home visits in the slum areas. Functional collaboration were strengthened with urban PHC programme of City Corporations for RH:FP-MCH services in the city slums and outside. Satellite clinics were held for providing MCH services to the slum dwellers. The initiative also tested alternative strategies in conjunction with the withdrawal of home-based distribution in two areas of Dhaka city (Hazaribag ward 58 and Gandaria ward 80) in 1996.

Achievements

The coordination committee at the zonal level was found to be an effective forum to discuss and resolve problems between service providers, resource generation and establish link with local leaders. These have resulted in reorganization of service delivery facilities including provision of space for satellite clinic, the establishment of referral systems, and increased access to services in slum and poor communities (USAID 1998). After one year of implementation, marked improvement was observed in government dispensaries, NGO clinics, prescription pattern, and a reduction in the misuse of antibiotic for treatment of diarrhoea and ARI. In each ward, however, duplication and gaps in services were identified and thus a reorganization plan was made for relocating certain facilities, bringing services under one roof, expanding the range of services and improving referral facilities (USAID 1998).

After 6 months of initiation, a comprehensive assessment recognized the need for some additional efforts, such as, establishment of functional
coordination committee to set and monitor local bodies, implementation of record keeping and reporting system, designing card-based clinic information system, reorganization of current distribution of clinics, and development of cost-management strategy to sustain and to deal with the new urban challenges. The result also revealed that services at the primary healthcare clinic increased in contraceptive prevalence, because the community service points were lacking other essential health services.

Coverage

Initially the project commenced at 10 zonal and 90 ward levels of the Dhaka city corporation and later was extended to 60 municipalities across the country.

First Urban Primary Health Care Project (UPHCP-I)

The government of Bangladesh and the Asian Development Bank (ADB) initiated the Urban Primary Health Care Project (UPHCP) in 1998. This project was implemented through the Local Government Division (LGD) in the MOLGRD&C and 4 city corporations (CC), and supported contracting of NGOs to provide urban health services for the poor. The project continued till June 2005. The contracting NGOs were Marie Stopes Clinic Society (MSCS), Bangladesh Women Health Coalition (BWHC) and Population Service and Training Centre (PSTC). The project was implemented in Dhaka, Chittagong, Rajshahi and Khulna City Corporation areas. ADB, UNFPA, Nordic Development Fund and the Bangladesh government provided financial support.

Interventions

The project components included i) providing PHC through partnership agreements, ii) strengthening urban PHC infrastructure, iii) building capacity of CCs, and iv) supporting project implementation and relevant research. The main component and innovation of UPHCP-I has been to use government funds to contract NGOs through partnership agreements, to provide ESPs for the poor in defined catchment population of about 300,000. Each NGO was allowed to develop its own system to achieve the targets. In most cases a four-tier system has emerged, with a comprehensive reproductive healthcare centers (CRHCC), PHC centers (each services about 50,000 populations), satellite clinics, and CHWs. CRHCC provided reproductive morbidities and EOC services through indoor and outdoor outlets. All primary healthcare components, including an ESP have been incorporated. Monitoring function has been partly contracted out to an independent firm, which also conducts baseline and follow-up surveys to assess NGO performance.
Achievement so far

The UPHCP has been successful in providing critical maternal care and family planning services of good quality including cesarean section, and in reducing maternal mortality. Client-visits have increased rapidly from 300,000 in 2001 to over a million in 2002. A large number of clients reached through outreach services. CCs, NGOs and beneficiaries are pleased with the services (ADB 2003).

Coverage

UPHCP targeted over 75% of all project beneficiaries among urban poor women. Of 16 PAs, 10 are in Dhaka, three in Chittagong, two in Khulna and one in Rajshahi. Under Dhaka City Corporation, UPHCP has introduced over 42 health centres, and nearly 25 maternity centers (11 city corporations and 14 of partner NGOs were upgraded to Comprehensive Reproductive Healthcare Centers through renovation, installation of equipment and training of doctors and paramedics.

BWHC’s experience: The Bangladesh Women’s Health Coalition (BWHC), a national NGO committed to the improvement of reproductive and sexual health of vulnerable women and children, is one of the major implementing agencies of UPHCP-I. To strengthen further the effectiveness of the UPHCP, BWHC developed additional partnerships with local private groups such as diagnostics centers and legal agencies in order to make services more affordable and accessible to the clients. One example of a successful NGO-private sector partnership was between BWHC and Medicom Diagnostic Center.

BWHC offered a quality full service package at an affordable cost, avoiding big investments and established effective referral linkages between the private, public and NGO sector at local level through partnership arrangement. Services offered through 10 clinics include MR, contraception, gynaecological morbidities, ANC, PNC, general adult and child health, child immunization, counseling, laboratory test and referral. Nearly 4,251 poor clients received services from the private partners in 2003. The total market price of these services was equivalent to roughly US$16,000, out of which the clients paid only US$6,400 (or 40% of the total). The remaining 60% represented the contribution of the private sector partners. Clients’ flow as well as their satisfaction increased as a result of reduced travel time and cost (Sunyat 2007).

Marie Stopes Clinic Society’s (MSCS) experience: Marie Stopes Clinic Society was established in 1988 with a modest centre in Chittagong. Since then, it has grown and developed tremendously and is now a key provider of high-quality reproductive health services to the poor in Bangladesh. The main funding sources included DFID, EU/UNFPA, the
Asian Development Bank/government of Bangladesh, and the private sector. Their service delivery network consists of 23 comprehensive reproductive health centres. They provide the full range of reproductive health services including family planning, female sterilization, vasectomy, antenatal, delivery and post-natal care, cesarean section, primary healthcare, youth services, STI treatment and prevention, and STI/HIV/AIDS awareness-raising initiatives. These clinics have specialists for maternity centres and for male units to meet men’s needs. In addition, 46 'mini centres' within urban slums are providing accessible services to slum dwellers. Over 150 factory-based health centres provide essential services to young women whose long working hours prevent them from accessing centre-based services. MSCS is now also increasingly involved in training government, non-government and private reproductive health service providers as part of its commitment to strengthening the country’s national health capacity. The number of clients receiving services since the programme began has increased 600-fold to over 600,000 each year.

**Second Urban Primary Health Care Project (UPHCP-II)**

After the successful completion of UPHCP-I, ADB approved UPHCP-II in May 2005 with Asian Development Fund (ADF) resources equivalent to US$30 million in loans and US$10 million in grants. The government, NGOs and beneficiaries wanted to improve the ongoing approach of UPHCP-I and explored whether it can be used in municipalities. UPHCP-II has co-financing support from the Department for International Development (DFID) of the United Kingdom (US$25 million), the Swedish International Development Agency (US$5 million), the United Nations Fund for Population Activities (US$2 million), and Orbis. Participation of a wide range of development partners reflects an overwhelming endorsement of the model. The project will continue till December 2011.

*Intervention*

UPHCP-II is providing a package of high-impact primary healthcare services to the urban population, particularly poor women and children in Bangladesh. It builds on the tested features of UPHCP-I and further focuses on targeting the poor (at least 30% of all the services have to be accessed by poor households). The first component of UPHCP-II is to continue support PAs. The four CCs of UPHCP-I was phased out with CCs taking over financing services for the poor, and non-poor services being managed through cost recovery or pre-paid arrangement. Two new CCs (Sylhet and Barisal) and a number of municipalities were added resulting in a modest increase of the catchment population. CHWs were added to reach the very poor. The project planned to give more emphasis on nutrition intervention, child care and male health promotion. The second component comprised of improving the infrastructure and
environmental conditions in the slums and its health services. The third component included strengthening of capacities and linkages of the LGD, MOHFA, CCs, and large municipalities along with monitoring, evaluation and operations research.

PHC centers provide a full range of essential services including basic EOC. The CRHC centers, on the other hand provide comprehensive EOC, newborn care, and specialized ESP+ services. The partner NGOs offer ESP+ services in the partnership agreement areas. These services consist of i) HIV/AIDS and STI control, ii) other communicable disease control, iii) other ESP services, and iv) supplementary nutrition for moderate to severely malnourished women and children. Community-run latrines and community-based solid-waste disposal are piloted to improve environmental health, and clinical waste management is supported.

Implication of the project

"The project will help Bangladesh achieve the MDGs by reducing child and maternal mortality by benefiting mostly women and children. Rapidly growing urban slums without adequate primary healthcare may lead to epidemics of emerging or reemerging communicable diseases," said the Country Director for ADB's Resident Mission.

Coverage

The Project finance 24 partnership agreements in all the six city corporations and five municipalities to be identified, each covering 200,000-300,000 population. Each partnership agreement area consists of one CRHC center, at least one PHC center for 30,000-50,000 population, and at least one satellite or mini clinic for 10,000 populations.

The NGO Service Delivery Programme (NSDP)- ‘Smiling Sun’ static clinic

Launched in 2002, the 5-year USAID-supported NGO Service Delivery Programme (NSDP) (coordinated by Pathfinder International and eight partner organizations7) supports a network of 31 NGOs previously funded under USAID to deliver essential health services at NGO-run ‘Smiling Sun’ (SS) clinics. It works with the Ministry of Health and Family Welfare.

7 The NSDP is implemented by eight international partner organizations including CARE-Bangladesh, Pathfinder International, University of North Carolina International Training in Health (Inrah), University Research Corporation, Save the Children (USA), and Bangladesh Center for Communications Programs (BCCP). These organizations are responsible for institutional and financial capacity building of the contracted NGOs.
to evolve a national policy for financing NGO support delivery. In coordination with other donors, it influences GoB policy to expand the role to NGOs as providers of ESP services within the national health system.

**Intervention**

NSDP provides high impact and high quality Essential Services Package (ESP) at Smiling Sun clinics covering child health, maternal healthcare, reproductive healthcare, clinical and non-clinical family planning services including emergency contraception, communicable disease control, tuberculosis, STI/HIV/AIDS, safe delivery including first aid EOC, post-abortion care, and limited curative care. The major difference with the ADB-funded project is that the NSDP does not provide MR services. NSDP's strategy is to improve NGOs' role in meeting primary healthcare needs of the population, with special emphasis on the poor and underserved.

**Coverage**

1. Working through 318 urban and rural clinics, nearly 8,500 satellite clinics and almost 8,000 female depot holders nationwide, NSDP serves approximately 17% (20 million people) of the national population in 61 districts (CCP, The Johns Hopkins University 2005).

2. PSF provided ESP services from 66,458 to 52,990 customers from urban clinics. ANC services were provided to 48,470 pregnant women and TT immunization to 39,807 pregnant women.

**Achievements**

NSDP has made considerable progress in expanding essential family planning and health services. In terms of coverage of family planning services, the increase in contraceptive use in the project area is greater than the non-project area, led by increases in use of pills and injectables. However, there is a decline in use of clinical methods. Though NSDP has made a substantial investment in ensuring that No Scalpel Vasectomy (NSV) and minilap are available, there has been significant loss of this investment due to problem with physician retention (Riggs-Perla 2006).

There has been remarkable improvement in treatment of diarrhoea with ORT and immunization coverage in general over the past two years and clearly NSDP NGOs are doing their part. The record on ARI treatment and vitamin A coverage declined between 2003 and 2005. There is no
increase in either project or non-project sites in children being treated by the trained providers (Riggs-Perla 2006).

Use of ANC is increased in NSDP sites and NSDP’s market share of ANC services in urban areas appears to be increasing. Safe delivery services are offered only in 16 clinics and of these, only six provides EOC services. NSDP is offering little by way of neonatal care, mainly because few deliveries are actually performed in NGO clinics and follow-up of neonate is not routinely done (Riggs-Perla 2006).

**Urban Community Health Programme of Gonoshasthya Kendra**

The Urban Community Health Programme (UCHP) of Gonoshasthya Kendra (GK) provides primary healthcare services to the slum dwellers. The programme was designed to be people-centred so that healthcare would be available near the urban poor’s homes and workplaces. The paramedics visit people in their homes, set up small satellite clinics in slum areas and visit factory workers (mainly women) at their workplace. The UCHP project has also set up hospitals for providing comprehensive services in larger city centres such as Mirpur. The paramedics working in the slums and the satellite clinics use a referral system whereby patients can be transferred to the larger hospital if needed. Gonoshasthaya Kendra (GK) is also working at policy level to influence the policy-makers for an effective and efficient PHC system for the urban poor.

**Project components and activities**

**House-to-house visits in the slums:** The visits steadily increased throughout the programme as it was felt that satellite clinics were not reaching enough people. Women and girls showed special interest in these house-to-house visits. With increased house-to-house visits contact figures with slum people have leapt up. The main services provided in the slums are as follows:

<table>
<thead>
<tr>
<th>Medical services:</th>
<th>Social actions:</th>
</tr>
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<tbody>
<tr>
<td>• Ante-natal Care</td>
<td>• Identification of poor families or persons</td>
</tr>
<tr>
<td>• Post-natal care</td>
<td>• Slum survey</td>
</tr>
<tr>
<td>• Family planning</td>
<td>• Death and birth recording</td>
</tr>
<tr>
<td>• Treatment of common ailments</td>
<td>• Marketing services</td>
</tr>
<tr>
<td>• Immunisation</td>
<td>• Liaison with TBAs and local medical practitioners</td>
</tr>
<tr>
<td>• Care of elderly population</td>
<td>• Contacts with slum women</td>
</tr>
<tr>
<td>• Tetanus toxoid (TT)</td>
<td>• Distribution of tin signs</td>
</tr>
<tr>
<td>• Care of elderly</td>
<td></td>
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</table>

**Traditional birth attendants:** GK currently works with 47 TBAs. They are all women from the slum areas who are generally well-trusted and
respected by the slum dwellers. They are the main source of ante-natal and post-natal care for women in the slums. GK provides them with free training and the relationship with the TBAs has been strengthened through regular meetings and they have been given GK identity cards to prove that they are working in formal association with GK.

**Communication and marketing:** The shift in emphasis towards house-to-house visits using TBAs as its key contacts in the slums and holding regular meetings with slum people have all led to an improvement in the GK’s relation with its target groups. GK’s health services are marketed as follows: distribution of leaflets explaining services available at Mirpur and Dhanmondi, using community mass media (microphones in mosques), providing information to local leaders, health professionals and TBAs through interpersonal contacts and meetings, writing letters to teachers, garment factory owners, NGO and government officials and regularly meeting with them, and putting up tin signs in important places.

**Health education:** Health education sessions are held in schools, slums and garment factories and cover immunization, family planning, homemade ORS solutions, personal hygiene, drug-use and smoking, hygienic care during menstruation, STIs and sexual health. In schools the health education sessions have now been fully accepted and have become a routine part of classroom activity.

**Garments factories:** In Bangladesh 1.3 million jobs are directly dependent on export-oriented textile and garment factories. The vast majority of the workforces are women, mostly aged between 14 and 29 years. In further outreach work the house-to-house visits have been followed by taking the programme to various garment factories to increase coverage of disadvantaged women. Initially, there were some resistance from the factory owners, but once GK were able to educate on the potential benefits of a healthy workforce, many welcomed the initiative.

**Coverage**

There are currently 37 satellite clinics at Mirpur where around 155,579 patient contacts were made during the project period.

**Achievements**

- The programme is fully established at Mirpur and Dhanmondi,
- GK continues their pro-women approach to the work, the majority of clinics staffed by women,
- GK service charges are at least 40% below the average market rates, and
Surveys show that the majority who used GK’s services was satisfied with the standard of care, level of advice and treatment given.

Child Survival Programme of Concern Bangladesh

During 1998-2004, Concern and the municipalities of Saidpur and Parbatipur demonstrated through the Child Survival Programme that they could make sustainable and significant improvements in the lives of poor families with limited resources. In October 2005, Concern signed an agreement with the government of Bangladesh and USAID to replicate the approach used in Saidpur and Parbatipur in seven new sites: Bogra, Dinajpur, Gaibandha, Jaipurhat, Kurigram, Nilphamari, and Rangpur Municipalities in Rajshahi division. The new sites have a population of 882,448 (2001 census). The primary goal is to boost significant increase in health coverage and effective civil society and local government engagement in health, and ultimately reduce maternal and child mortality in nine municipalities in Rajshahi division of Bangladesh. The programme will reach 285,000 women of reproductive age and 173,000 under-5 children over the next five years. The cost extension is for the five-year period from October 2004 through September 2009. The total programme cost is estimated to be US$2 million including US$1.5 million requested from USAID/GH/HIDN/ CSHGP and US$500,000 matched by Concern.

The two primary implementation partners are the nine municipal authorities under the MOLGRDC and the seven district Civil Surgeons’ offices under the MOHFW. Within the municipalities, the project will collaborate with 13 hospitals, eight MCWCs, 29 private non-profit clinics, and three government outpatient centers. Elected municipal commissioners and social leaders will direct neighbourhood groups and ward health committees, overseeing of health volunteers, private practitioners, and TBAs. A national-level Project Advisory Committee will provide technical guidance, lead advocacy efforts, and forge linkages with other health and development programmes.

Intervention

Priority interventions are targeted at the major causes of urban maternal and child mortality -- maternal and newborn care, pneumonia case management, nutrition, and diarrhoeal diseases -- using an integrated approach. Technical approaches and standards are aligned with ESP, NNP, National Strategy for IMCI, and National Maternal Health Strategy aimed at delivering cost-effective and evidence-based services for improved health of vulnerable groups.
Coverage

In the first phase of the programme, Concern reached 210,000 people including 73,613 women of reproductive age and under-5 children with interventions targeting the major direct causes of mortality: measles, malnutrition, diarrhoea, pneumonia, and poor maternal and newborn care.

Achievements

Over the past five years, the programme has resulted in significant improvements in health coverage and practices. For example:

- Municipal health coordination committees meet quarterly to serve the greater needs of the urban population and address collective quality improvement,
- Appreciation and participation approaches have been institutionalized to improve health services at all levels, and
- There is increased awareness of MCH danger signs.

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>Full immunizations to children aged 12-23 months</td>
<td>43%</td>
<td>69%</td>
</tr>
<tr>
<td>Pregnant women delivering at health facility</td>
<td>25%</td>
<td>48%</td>
</tr>
<tr>
<td>Local governments developing annual health plans</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>with collaboration of their constituencies</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Neighborhood health committees</td>
<td>0</td>
<td>24</td>
</tr>
<tr>
<td>frequently meeting and planning for health promotion</td>
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There are many real-life examples of how these changes have affected the lives of people living in urban areas.

Dustha Shasthya Kendra (DSK Bangladesh)

Experiences have proved that government service provision is not adequate and dependable for the communities living in urban slums and squatters. DSK stressed that without direct participation of the community, it will be impossible to develop a health network that is dependable, service-oriented, affordable and sustainable. The DSK model aims to demonstrate how ‘informal’ communities can access ‘formal’ utility services. The key principle of the model is to respond to demand for water indicated by communities willingness to pay. According
to this model communities willing to form self-help groups are provided training on management and maintenance of water points; health/hygiene habits and behavioural change. DSK facilitates processes with community participation to design water points, select specific placement of infrastructure and formulates guidelines on water access and cost sharing. DSK mediates on behalf of communities with formal city authorities and utilities, lends initial funds and provides technical support for construction.

In order to achieve its goal of taking health services to the doorsteps of the poor, DSK is also committed to render primary healthcare including family planning services with a focus on women and children. Along with this, they also undertake an illiteracy eradication programme among children and adults, facilitates women’s participation in income-generating ventures and disbursement of credit, works to improve the living conditions of urban slum dwellers, and launch relief and rehabilitation programmes among victims of natural calamities and disasters.

Project components

Besides mediating piped water supply service to slums and low-income communities, a well designed PHC activity was also initiated covering mainly three components:

- Clinic-based activity i.e. immunization, qualified consultation, essential drug supply and ante-natal care,
- Home visit by health workers, and
- Training of TBAs and general health awareness training of women from the community.

DSK runs its project operations through branches. A branch usually covers 1500-2000 member-borrowers. About 70% of the cost is covered by savings of the slum-dwellers and 30% from the ongoing income of the revolving credit programme.

Achievements

Success of the community-based organizations in accessing formal utilities, such as water has been one of the major achievements of DSK. DSK’s model of community managed water points is being implemented by quite a few NGOs in Dhaka and other urban centres. Community participation in DSK’s health programme areas also has reached a level of 57%. DSK could cover more than 57% of the operational expenditure for health from the contribution of its member borrowers. Rest of the expenditure is borne from the income of the organization.
BASICS-I country programme: Bangladesh

The BASICS-I (Basic Support for Institutionalizing Child Survival) programme in Bangladesh was the continuation of almost 10 years of USAID funding which helped the GoB improve and sustain its urban immunization efforts, and helped cities and selected municipalities plan, implement, and monitor their child health services. BASICS-I adopted a strategy to ensure services and increase demand for immunizations in urban poor areas, assist the government to strengthen the national disease surveillance system, in sustaining 85% immunization coverage in urban areas, and in strengthening child survival programmes.

Operational plan and components

BASICS worked in 84 municipalities and four major city corporations in Bangladesh (Dhaka, Chittagong, Rajshahi, and Khulna). Together, these 88 urban areas had a population of 15 million, with more than 2.4 million target population aged under 5 years and almost 500,000 of those children were aged under one year. The project worked with municipal officials and the MOHFW to strengthen routine EPI services, especially in urban poor areas; conducted national immunization day for poliomyelitis eradication; and strengthened child survival policies, standards, and services.

Achievements

1. During the last five years, BASICS has improved the immunization situation in the four major city corporations and 84 municipalities. Routine and polio national immunization days (NID) reduced the gap in immunization coverage between slum and non-slum areas.

2. BASICS also trained and improved immunization techniques for more than 2,600 municipal vaccinators and NGO workers. Significant progress has also been made in building and institutionalizing a health and immunization capacity in the urban areas to sustain what was initiated.

3. In the beginning, there were only a few medical officers in the 88 urban areas. Now, almost half of the areas have medical/health officers.

4. BASICS assisted in the development of a disease surveillance system, which, after being in existence for six months, identified approximately 75% of the expected acute flaccid paralysis (AFP) cases in Bangladesh’s four major cities.

5. Starting in 1996, new child health activities were added in addition to immunizations. These included the update of national policies and guidelines for immunization, control of diarrhoeal diseases, control of
ARI, and supplementation of vitamin A. BASICS developed a new child survival training system for NGOs in urban and rural areas and initiated a phased-in introduction of IMCI.

EngenderHealth (Bangladesh)

EngenderHealth has been working in Bangladesh since 1974 to improve family health and reduce overall fertility rates in Bangladesh. The goals of the programme include providing greater access to high-impact services, improving the quality of design and delivery of information and services, informing women and men so that they can become proactive about their health, and mobilizing communities to promote improvement in health service delivery.

Operational plan

EngenderHealth, Concerned Women for Family Planning and World Vision Bangladesh comprise the Quality Improvement Partnership (QIP). Bangladesh has seen a decrease in the use of clinical contraceptive methods during the 1990s, and so the priority for EngenderHealth has been to develop a technical assistance programme to increase client access to quality clinical contraception services, such as voluntary sterilization, Norplant implants, and IUDs at NIPHP clinics. Along with ensuring access to these services, QIP works with clinics and providers to develop quality assurance monitoring systems. With its local partners, EngenderHealth provides technical assistance and training to government and NGOs, and all who offer family planning, reproductive health, and MCH services in urban and rural areas.

EngenderHealth activities

QIP provides the opportunity to work in a number of key ways. The quality improvement tools and approaches of EngenderHealth are being used in new clinics and throughout the health care system to help ease the transition. These tools are being introduced to the upazila level managers to help the family planning and health staff reorganize and resolve problems proactively.

For example, EngenderHealth has been working with the MOHFW on a new project that addresses the social marketing of contraceptives. They stress the importance of continued emphasis on providing quality services for long-acting methods of contraception including sterilization, Norplant implants, and IUDs. It is more important than ever to ensure that clinic-based reproductive health services are easily accessible and client-centered.
Achievements

Now in its fifth year, EngenderHealth’s quality improvement work in Bangladesh has made a difference:

- In 2001, they trained 936 providers and conducted 226 site visits.
- Developed government-endorsed technical standards for RTI/STI and conducted training-of-trainers programmes on these topics.
- Influenced the MOHFW to change its policies to remove barriers to surgical sterilization.
- Provided technical assistance to 13 medical colleges in training on clinical contraception and RTI/STI management.
- Conducted quality improvement training at 638 NGO sites.

UNFPA supported programme

In addition to its support to strengthen MNCH activities in rural areas, UNFPA has supported strategies to improve the Reproductive Health (RH) status of the urban poor through activities designed for capacity building in RH service delivery of city corporations, Local Government Authorities and partner NGOs working in six city corporations and six large districts of Bangladesh. The activities cover all the priority areas of RH i.e. safe motherhood, family planning, RTI/STI, etc. (UNFPA, 2006).

Major activities

- Provision of training on RH service delivery and management.
- Provision of medical, surgical equipments, and drugs to 25 Comprehensive Reproductive Health Care Centers (CRHCC).
- BCC activities at clinic and community level.
- Development and automation of urban RH Management Information System (MIS).
- Ensuring proper record keeping and reporting, and management of CDRS at CRHCCs.
- Ensuring quality assurance of service delivery at CRHCCs and piloting public-private-NGO partnership in Adolescent Reproductive Health (ARH) and other RH issues.
Achievements

Deliveries at the centers have increased from 825 in 2001 to 12,472 in 2004. Some of the centers are even conducting more than 250 deliveries a month, however, on an average each center is carrying out 50-60 deliveries each month. Youth-friendly services are provided in the CRHCCs run by 14 partner NGOs. Planned activities for intensive BCC activities in slums have been initiated. Printed forms, registers and cards were supplied to CRHCCs. The centers are using Client Data Recording System (CDRS) software for recording client’s data. Recently a Quality Assurance System and RH-MIS were developed and are being piloted in few centers.
GAPS AND BARRIERS

Despite all the positive and innovative changes discussed in the previous section on different programmes, Bangladesh continues to face significant challenges in its effort to improve maternal and neonatal health. The bifurcation of health and family planning services, a predominant problem in Bangladesh, has led to a duplication of efforts and a lack of coordination that has created mixed messages, particularly in BCC strategies, and in monitoring and evaluating quality care. The array of providers and the diversity of services required at field and institutional levels continue to challenge Safe Motherhood in Bangladesh. Indeed, defining the duties and responsibilities of the various providers presents a challenge in and of itself, policy-makers, users, and providers themselves can easily confuse the roles of the TBAs, paramedics, and medical providers.

General consensus emerging from the wide range of discussions and interactions was that almost all policies and programmes are well conceived but problem lies mostly at the implementation level. Ground realities in these areas were reviewed based on available secondary materials on MNCH programmes. Primary data on gaps and barriers in policy and implementation levels were also collected through in-depth interview with 10 stakeholders who are being involved in planning, policy making and implementing MNCH interventions at local and national level. After analyzing the data, the following gaps and barriers emerged.

Gaps in policies

- During the last three decades, Bangladesh population policies have aimed to reduce the rates of rapid population growth through effective dissemination of contraceptive services. Although modest increases in contraceptive prevalence have been reported in recent years, demographic impact has fallen far short of the official goals (Mitra and Associates 1984). Debate focuses on the question of whether this experience represents a policy failure – suggesting that existing demand for services is inadequately addressed by the national programme.

- Lack of administrative initiatives and lengthy bureaucratic procedures impeded the intended devolution of authority to lower levels of service delivery autonomous institution.

- Insufficient coordination of the key government staff at all levels, and their inadequate orientation and training in the sector-wide approach.
**Gaps in implementation**

- Under the HPSP, the major service delivery issue at the community level has been a shift away from domiciliary services to static clinic services. This has affected the functioning of the FWV and health assistants. Fears were expressed that such changes in the service delivery system would adversely affect the use of contraceptives and that many women would drop out from home delivery related contraceptive acceptance and move to the private clinics (Khan et al. 2000).

- The parallel health system of the Directorate of Health Services and the Directorate of Family Planning in Bangladesh posed particular challenges for establishing a viable referral system. The consensus building that marked the beginning of the HPSP project was successful in developing a common goal of improving the availability of RH and EOC, particularly at the national level. Unfortunately, however, cooperation between MCWCs and district hospital is inconsistent leading to systematic discontinuity in EOC service provision as well as duplication of efforts.

- Although an agreement between the government and bilateral agencies ensured that each team of newly trained clinicians would continue to work as a unit, the availability of human resources to provide RH and EOC services remains a challenge. As in many developed and developing countries, trained health personnel in Bangladesh are concentrated in urban areas, and are often unwilling to work in rural areas for lack of financial security and family concerns. This issue becomes even more significant as the caseload of the upgraded MCWC facilities increases.

- Socio-cultural barriers including lack of decision-making power by women within household, poverty, and poor infrastructure such as roads, transport and communications remain significant barriers to accessing RH and EOC services in Bangladesh. Out of 28,998 maternal deaths (most of which were due to obstetric complications) in the country, Rahman et al. (2002) found that more than half of the women died at home.

- The government took up the programme of establishing 18,000 community clinics without ensuring community involvement, and were influenced in many cases by political consideration which was found to be counter productive. It is worth mentioning that construction of the community clinics was taken up without completing the ongoing construction of UHFWCs at union level. A study done by the London School Hygiene and Tropical Medicine (UK) found non-involvement of community groups as a reason for the non-functioning of the existing clinics (Sengooba F, et al. 2007).

- The BDHS Survey 2000 (BDHS 2004) shows that 80% of women felt that not having a healthcare facility nearby was an obstacle in
accessing healthcare. A half of the women mentioned that lack of confidence in the services and going to the health centre were problems in accessing women’s healthcare. Seventy one percent of women said that getting money for treatment and 44% said that permission to go were obstacles in accessing healthcare. Almost two-thirds reported that not knowing where to go was a major obstacle in accessing care.

**Constraints of supply side subsidies by the health system**

In Bangladesh tax and donor-financed supply side subsidies have been the main strategy for improving the access of poor people to health, nutrition and population services. The limitation of supply side subsidies is that the target group does not receive the subsidy directly. Instead, they receive them from the service providers and in the absence of an effective exemption system, in many cases such efforts are often poorly targeted and fail to achieve the objectives.

**Inadequate resource invested**

The major problems encountered at the service delivery points include vacant posts, staff absenteeism; shortage of competent staff trained to manage obstetric complication; non-availability of trained nurses and paramedics; lack of commitment of health providers; lack of furniture, equipment and supplies; lack of good record-keeping system; and absence of systematic referral system. Other factors contributing to the operational constraints are unfavourable doctor-nurse ratio (which is 2:1, the international standard is 1:3), low coverage (especially in the urban slums and inaccessible rural areas), lack of an institutional mechanism to bring the ultra poor and vulnerable people within the ambit of health service delivery, and unfavourable attitude of the service providers towards the poor (Nasreen et al. 2006, WHO 2004). The budgetary constraints in health sector (6% of total budget) may contribute to the poorly resourced healthcare facilities and mal-distribution of resources across the healthcare facilities at lower administrative units. Moreover, the conflict between field level DGHS and DGFP staff resulted in insufficient service delivery.

**Delayed pooling of donor fund**

Delay in aid disbursement created considerable additional barriers to implementation. The new procurement procedure through the reimbursable programme aid pool was contingent upon a ‘realignment of responsibilities from development partners to government’ and the release of fund was dependent upon strict disbursement criteria. The considerable time and resources needed, in terms of capacity development and organizational change, to dismantle the old system and put in place the new one was not fully comprehended. As a result,
disbursement from IDA and pooled funds during the first two years of implementation of the HPSP was about 40% of the original commitment (World Bank 2003:69).

**Inadequately addressed gender issues**

- Despite policies of ‘mainstreaming’ gender issues into a range of sectoral activities, this approach has largely been neglected.
- There also has been an inadequate focus on the role of men and male-dominated institutions, including men’s role in subordinating women and subjecting them to a range of risks.
- Constitution has special anti-discriminatory clause related to sex. On a more hopeful note, law against domestic violence has been promulgated in Bangladesh. Also, Bangladesh is the signatory of Universal Declaration of Human Rights and also ratified CEDAW.

**Monitoring, research and evaluation**

- Overall, programmes lack monitoring and quality control for improved management. Monitoring and evaluation efforts tend to emphasize numerical service statistics, rather than quality of care and the orientation to clients’ needs.
- Most of the policy dialogue associated actions under HPSP were focused on the process and the structural dimensions of HNP sector reform. Comparatively less attention was given to impact consideration or health outcome. After four years of implementation virtually no sector or goal-level indicator improvement could be attributed to the organizational changes under HPSP. Thus, the key population development indicator of TFR continues to plateau; important MCH health indicators have similarly not improved as expected.
- That much of the applied research in population is never, in fact, applied to policy development is well known. Operations research, however well targeted on practical organizational issues, often fails to affect operations. Policy research findings, however well focused on relevant policy themes, often fail to overcome the bureaucratic inertia of public sector programme. However, eliminating the gaps between research, policy and implementation is rarely the subject of systematic inquiry.
- An additional area in need of improvement, according to respondents, is monitoring and evaluation to measure programme impact and provide direction for future strategies.

**Behaviour Change Communication (BCC)**

BCC strategies are lacking both in quantity and quality. Few materials explain clearly the signs of complications in pregnancy and exactly how
the client and her family should prepare for action in case of development of a complication. Although BCC is to be targeted at providers as well as clients, details of how to implement changes have not been elaborated, nor has there been any pilot testing of this initiative.

Training

Training of all health providers continues to rely heavily on note learning; clinical practice during training remains undervalued and poorly supervised. Moreover healthcare ancillary staff (such as cleaners) generally receive no training. However, they are regularly involved in vital functions such as personal patient care, sterilization of equipment, and they may be found assisting with deliveries and other clinical procedures.

Service delivery

Coupled with poor communication skills and a lack of clinical training on the part of providers, organizational issues also contribute to a low proportion of clients receiving services from professional attendants. For example, at the district hospitals and medical colleges, pregnant women must wait with all other gynecological patients. Even those with serious complications often end up waiting for several hours, increasing their risk for mortality and morbidity. The waiting place is typically crowded and dirty. Care for young children who accompany their mothers is virtually non-existent.

Traditional birth attendants (TBA)

TBAs may be more accessible to many women than the professional providers, but even trained TBAs, like many professionals, continue to ask women to bear down during the first stage of labour and continue to perform multiple vaginal exams. Coordination among various levels of care is lacking, and even where referral systems are in place in project areas, they rarely function well.

Logistics

To provide quality EmOC, well-maintained suction and anesthetic machines are required, as well as uninterrupted supplies of emergency drugs and other consumables. Most facilities are not prepared for providing quality EmOC services, as they lack appropriate supplies and equipment, maintenance of facilities, and the necessary technical and interpersonal skills to provide quality services. The challenges are systemic, requiring change on a variety of levels to overcome the barriers to improving quality care.
BEST PRACTICES AND LESSONS LEARNED

In the previous chapters, we took an in-depth look into the key MNCH interventions in the public and private sectors in the rural and the urban areas respectively. This chapter makes an attempt to summarise the different best practices and lessons learned from the policy making and from the rural and the urban interventions described in the previous chapters.

Policy-making in health and population sectors

Historically, health and population sectors in Bangladesh have been viewed as distinct policy areas for public action and investment. The Health and Population Sector Strategy (HPSS) was formulated within this background in consultation with donors, UN agencies and important stakeholders. The process of formulation was seen to be fairly consultative and participatory, a requirement of the ICPD PoA and of donors. Although official cabinet approval was a prerequisite for appraisal of the sector programme by the donor consortium, donors clearly had a very strong role in the formulation of this strategy. An important distinction was that population sector activities were much more donor dependent, with important implications for the articulation of programme goal and design of delivery structure.

The strategy intended to provide adequate basic healthcare for the people and slow population growth through healthcare services that “should be responsive to clients’ needs, especially those of children and women and the poor, and achieve quality of care with adequate delivery capacity and financial sustainability” (HPSS 1997). The reform measures required to implement the HPSP and it follow-up HNPSP included unification of the bifurcated structures of health and population within government; provision of a one-stop delivery modality at the community level; reorganization and decentralization of decision making; improvement in management capacity and competencies and enhanced resource mobilization. The shift to the sector-wide management, however assumed to be not only cut down wastage of human and material resources but would promote more efficient service delivery and lead to better coordination among donors and better management of aid at the national level. But the imperative to provide good quality curative healthcare such EOC will require expensive technology, and costly human and physical infrastructure. The issue of financial sustainability in the context of reforms initiated under the HPSP was of particularly concern in view of rising programme costs and a likely reduction in donor financing. Hence,
the issue of alternative resource mobilization strategies is critical for future programmes in the sector.

The HPSP went into implementation from July 1998 but implementation and allocated fund utilization did not proceed as planned. The expenditure shortfall was primarily the result of relatively lower utilization of external funds. The share of donor funds was on average around 70 per cent (except in 2002-03), which was much higher than originally planned primarily because of the downsizing of government allocation to health in the annual development plans. On the programmatic side the pooling of donor funds into a common pool has, quite predictably, created considerable additional barriers to implementation by delaying aid disbursement.

The shifting strategy from curative to preventive healthcare and from urban to rural areas was not welcomed by professional providers, leading to unfilled posts of medical officers at the *upazila* level, widespread absenteeism, poor performance and negligence of duty. To some extent this was explained by the fact that medical training imparted to doctors was extremely biased towards clinical care with almost no training in preventive healthcare or in community health needs.

Insufficient understanding of the ground reality has made the HPSP into an over designed programme with overambitious and sometimes inappropriate targets and having little room for flexibility. Lack of progress is not difficult to understand partly explained by setting of ‘targets largely uninformed by either organizational, behavioural or financial realities’ targets have to be revised down or will only serve the purpose of ensuring failure rather than realistic levels of success (WB 2000). Although the stated goals of the HPSP reflect the government’s development goals of poverty alleviation and human development, its performance has been undermined by the inability to reorganize service delivery, a consequence no doubt of the broader governance challenge facing Bangladesh.

Initially public health services were not targeted specifically to the poor. However, the fact that services were provided free indicated an implicit concern that the poor should not be excluded. Currently, Bangladesh is in the process of preparing a poverty reduction strategy and an accompanying three-year rolling plan, which will really be an implementation and investment strategy rather than a plan document, so that these sectoral policy documents are likely to lose even their limited rhetorical value.
Rural interventions

Government initiatives

Bangladesh family planning programme has achieved a notable success because of good political commitment. The government of Bangladesh has been the provider of family planning services with a substantial contribution from the commercial sector and the NGOs. Until recently, the priorities of the population policy were to enhance national commitment and to create a social movement to promote a small family norm. Aside from the continuous high level support, another reason for the programme’s achievement has been the door-step provision of services by a large number FWVs. In the Bangladesh government programmes of the nineties, the populations served were smaller, and the rate of clients-worker contact was higher than any other South-East Asian countries. However, a slow decrease in the population growth, birth, or TFR in a country should be interpreted as a failure of the entire development planning process, including the family planning programme; instead it usually is interpreted as a family planning failure (Jain and Bruce 1994).

Public MCH-FP service provision in Bangladesh has a number of distinguishing features. First, the pattern of service utilisation is lopsided, with low utilisation of most facilities at the community level (upazila and below) and over utilisation of facilities at the district and at teaching hospitals (Mahmud 2004). The major reason for low utilisation is the poor service quality and negative perception of the community about the types of services available. A study in Narsingdi district reveals that there is little difference in staffing, equipment and services among the government health facilities at different levels. Though the government EOC project has been proven as an effective way of improved services for maternal care by using three delays model (Hossain and Ross 2006, UNICEF 2006), none even the district hospital is able to provide it (Nasreen et al. 2006). The poor quality of service is indicated by reports of inadequate attention by doctors, non-availability of medicines and supplies, long waiting time, poor maintenance of equipment, unhygienic conditions, the overemphasis on contraceptive acceptance but neglect of follow-up care, widespread absenteeism of medical personnel, and inadequate training and knowledge of service providers on issues including EOC (UBINIG 1998, BRAC 1991, Khan 1988, Afsana 2004, Nasreen et al. 2006).

The core pro-poor delivery mechanism of the government was reaching the ESP through one-stop community clinics to prioritize interventions that had a public good character (important externalities) and were related to maternal and child health. However, almost all CCs are currently non-functional since there are severe implementation problems.
with respect to mobilizing community participation in the management of clinics as well as institutional weaknesses in clinic operation. Finally, excessive reliance of the HPSP and its follow-up HNPS on external funds (donor dependence) has prevented programme efforts at self-reliance in terms of resource mobilisation, cost recovery, community participation and ownership, community accountability, decentralised planning and local authority.

Lessons learned

1. Government EOC project has proven to be an effective way of delivering improved safe-motherhood services by using three delays model
2. Further improvement in women’s health will require costly facility-based technology like EOC, for which alternative resource mobilization strategies is crucial
3. Upgrading the quality and coverage of safe motherhood services may have the largest pay-off in averting deaths and reducing disability in women and children in Bangladesh.

Addressing EOC

The pilot initiatives demonstrated that increased utilization resulted from improved performance as well as improved reputation of facilities in local communities. In focusing on the key programme elements, including renovations, procurement of equipments and supplies, training activities, management issues, and ongoing supervision, the projects were able to effectively introduce comprehensive EOC services into an existing national reproductive health agenda. This is not only led to overall improvements in the health system, but also increased access to EOC in Bangladesh.

It is important to note that the success of the EOC pilots was a direct result of sustained partnerships between several key players – the government of Bangladesh, UNFPA, UNICEF, medical college staff and MCWC clinical teams. The experience demonstrated that the long-term impact of the EOC efforts will only be achieved if government continues strong support of and investment in these efforts in future. It is concluded that the best results are achieved through a combination facility improvement, quality of care activities and targeted community mobilization activities.
Lessons learned

1. Through effective EOC intervention, the reduction of MMR is possible to meet the MDGs. However, this requires high quality 24-hour EOC services to be ensured in all facilities.

2. To nullify the systematic discontinuity in EOC service provision and duplication of efforts, government and its partners need to improve coordination between the health and family planning directorates or to merge the two wings.

3. To make health services available when and where these are needed, some sorts of recruitment procedures of trained personnel and incentive mechanism need to be developed. Introduction of systems and initiatives that support and reward innovation while placing sanctions on poor performance and harmful practices (technical and administrative) may help in this regard.

Initiatives in the non-governmental sectors

Several pilot projects in the non-governmental private sectors have tested innovative ways to improve the quality of care in maternal health services in a smaller scale compared to the public sector.

The Matlab MCH-FP project

Many maternal and child health as well as family planning interventions have been tested over the years in Matlab to study their effectiveness in field conditions (Koenig and Strong, 1993). Study findings from the Matlab MCH-FP project showed that family-planning programmes could be successful even under unfavourable socioeconomic conditions. The intervention was also reported to be successful in reducing maternal mortality rates in the project areas (Fauveau et al. 1991).

Particularly critical to the success of the Matlab experiment is the client oriented services (Simmons 1987, Phillips 1986). An important component of the Matlab project is the presence of local female CHWs, most of whom are contraceptive users. In addition, there is a well developed support system of female paramedical and medical staff, and field supervision. Given the basic training in household communication and service techniques, and field support from supervisors, female workers can interact effectively with their village clientele. In addition, experiences from the project suggest that the introduction of an organizational culture based on qualification and performance with quality of care has succeeded in raising the performance to levels much higher than those of the government programme (Rob and Cernada 1992). Also, the combined efforts of community midwives, trained physicians at the Matlab maternity clinic, functional referral chain and
proper transport contributed greatly to the reduction of maternal mortality in Matlab (Fauveau, 1991).

Lessons learned

- The contribution of community level intervention to reduce maternal mortality depends upon the functioning of higher levels of health system (Maine 1997). With a functioning chain of referrals and proper transport, patients from the intervention area were able to get to the Matlab clinic and to Chandpur Hospital in greater numbers, and probably in better condition, than they would have done otherwise. Without the services at these two facilities, the decline in maternal mortality in Matlab is unlikely to be achieved.

- The pattern of self-referral strongly suggests that if good quality EOC services are available, substantial numbers of people will use them, even in the absence of community interventions encouraging use.

- Matlab nevertheless demonstrated that an appropriate system of supply could have a sustained impact on contraceptive behaviour and fertility trend in an unfavourable social, institutional and economic context.

MCH-FP extension project

The MCH-FP extension project is an operational model that is neither the Matlab system nor the government's system, but something new and unique that must be scaled up into national operational planning. Some 20 districts are currently engaged in a programme development exercise, with procedures that are informed by project experience. Whether the national system of work is ultimately affected remains to be determined, but key objectives of the organizational development exercises are consistent with the project findings: 1) increased staff density to make specified work routines more realistic, and 2) recruitment, training and posting procedures developed along the lines of the extension project model. These changes, together with improvement in logistics and information systems, make it possible to improve the national climate of worker accountability in the extension project model. Thus, the adaptation of Matlab model to the public sector has produced a new model of services in project areas that differs from the pre-project government system and the Matlab system. Although this new model, when developed on a national scale, may not represent a systematic change of the sort attempted by the project paradigm, changes have been substantial and may ultimately improve the national system.
Lessons learned

- The Matlab project is a demographic success that had little practical impact on government system until the Extension Project researched the policy development process.
- The MCH-FP extension project established that systematic diagnosis of service delivery problems and a continued research programme tailored to the needs and interests of the programme managers can lead to improved policy development and programme performance in an unavoidable bureaucratic environment.

*Skilled birth attendants*

Though there is an increasing trend for the proportion of births delivered by the SBAs, still three-fourth of births are assisted by the TBAs. Only 12% of births were assisted by medically trained persons, doctors or nurses, midwives or FWVs (MMS 2001). Considering this situation, there are serious questions regarding the feasibility and desirability of providing safe delivery services without involving the TBAs as traditional systems will continue to dominate the rural scenario in Bangladesh. Therefore, strategy needs to be developed to effectively integrate traditional and modern health care systems so that maternal mortality can be prevented.

Most government TBA training programmes have had limited success. These programmes have attempted to improve the level of knowledge and skills of the TBAs but have done little to bridge the wide socio-cultural gap between the traditional and the modern practitioners. On the other hand, several micro-level projects especially in the NGO sector, have shown that when this gulf between the TBA and the formal health system is bridged, TBA training programmes can be much more effective (WHO, 2004). In connection with that, SBAs collaborates closely with the existing TBAs in the community to increase the number of safe normal delivery, attend complications and referral if necessary (HNPSP 2004). TBAs are important gatekeepers for women and families with respect to decisions about accessing care. In the foreseeable future, they will continue to play a significant role until there is sufficient infrastructure to make high quality institutional delivery affordable and accessible to all women. The box below illustrates this.
Janaki Bala lives in Gangaprasad village in Dinajpur district of Bangladesh, and is a trained TBA. She has two sons and a daughter. Her daughter is married, the eldest son is in the army, and her youngest son works in business. She is proud that at her home she has a slab latrine, a tubewell, a kitchen garden and some fruit trees.

Having a hygienic lifestyle with basic facilities is a significant achievement that many people in rural Bangladesh are unable to have. Janaki had been working as a birth attendant for long time without any formal training. But she began to realise that she could only cope with normal and uncomplicated cases, and wanted to be able to do more. In 1998 she had the opportunity to receive training from the Dinajpur TBA Training Centre. This is a programme supported by the Christian Commission for Development in Bangladesh. Janaki is one of approximately 1,400 women from 17 rural districts who has become TBA and got training (4-11 days). Husbands and families are encouraged to participate and assist their wives both before and after delivery. This has resulted in a positive impact for local communities as traditional roles and perceptions are challenged. This training has enhanced Janaki's skill level and credibility as a birth attendant in her locality.

Now Janaki is able to identify complications and life threatening conditions. Besides conducting deliveries, Janaki counsels the pregnant women on nutrition, immunization, child care, sanitation, and family planning.

When Lucky Ara, a woman from Chakgapalpur village, was expecting her first child the benefits of Janaki’s training were shown. One night in February of this year Lucky Ara had labour pain and one of her relatives came to help to deliver the baby. Lucky gave birth to a baby boy, but there was a problem when the placenta did not come out. Janaki was called in. She learned from her training that in cases of retained placentas the mother should breast-feed the baby her colostrum. Janaki asked Lucky Ara to suck the baby. Slowly the placenta came out and Lucky was relieved from any complications.

Not only has Janaki improved her skills but her position in society has improved. As the people of Gangaprasad village seek Janaki’s advice in family matters, she has become very happy to serve and live for others as she shares in both their joys and sorrows.


Although the two SBA models in Chandpur and Chakaria differ in their organization and implementation, they have independently shown promising results. However, they have only been tried to a limited extent. Also, issues of linkage with formal healthcare systems and sustainability questions should be addressed before scaling up.
Lessons learned

- Trained TBAs can reduce the risk of maternal morbidity through early diagnosis of delivery complications and referral.
- However, to respond quickly to delivery complications and to improve access to hospitals, community participation is necessary along with the TBA training programme (Paul B and Rumsey D 2002).
- Harmful practices of the TBAs can be minimized by continuing refresher training at regular intervals and close monitoring.

Menstrual regulation programme

In spite of the restrictions of abortion law, many women in Bangladesh have nevertheless enjoyed access to MR services to avoid unwanted pregnancies (BAPSA 1996). The proportion of MR procedures and the back-street abortions yield a startling figure of 45% of unplanned pregnancies (Singh et al. 1997). Though studies of MR have found it to be generally safe, it raised concerns regarding the technical training and skills of the service providers (Fouveau and Blanchet 1989, Khan 1984, Begum et al. 1991). A significant numbers of MR are conducted in public facilities under unsafe conditions (HPSP, 1998). Approximately 71,800 women are hospitalized each year due to complications from unsafe procedure (Singh et al. 1997). Unsafe termination of pregnancy continues to occur due to inadequately trained personnel and inadequate logistic supply in Bangladesh (Akhter 2006). Access to legal MR services is also poorer in rural areas than the urban areas (Begum 1984). Many adolescent girls (married and unmarried) still resort to illegal and unsafe abortion (Akhter HH http://www.who.int/reproductive-health/publications/towards_adulthood/20pdf).

The MR programme represents a good networking and coordination between government and NGOs. Currently, paramedics are providing the MR services while the government is providing the logistics and the NGOs providing the training. The MR programme involving the paramedics encountered virtually no resistance from physicians or their professional societies. Rather there are referrals of MR cases from the obstetricians/gynaecologists to the MR centres.

Lessons learned

- In Bangladesh, significant access to termination of pregnancy has been achieved despite unfavourable laws. A legal solution for abortion was never seriously on agenda once MR had been introduced. Most actors and advocates of MR are content with the current MR regulations.
• Improved quality, accessibility, capacity building of providers, ensured supplies, advocacy are the issues to be addressed rather than legality of abortion.

• Emergency contraception need to be included in the Bangladesh National Family Planning Programme which averts unplanned and unintended pregnancies, thus in turn reduces unsafe abortion.

*Child health intervention*

The most dramatic achievement in child health has been children's immunization, which has greatly augmented the chances of their survival. Only 3% of children aged 12-23 months did not receive any childhood vaccine (BDHS 2004). It may be noted that the alternative strategy of focused intervention in the low coverage area taken by the government and NGOs played a significant role behind this success (Tawfik et al. 2001). Data from the MCH-FP extension project revealed that longer preceding birth interval and provision of primary healthcare services play a significant role in reducing the risk of child mortality. Access to tubewell water was also associated with a reduced risk of mortality for young children (Wagstaff et al. 2004). These finding have strong policy implications.

IMCI is also playing an important role in child survival through reducing child mortality and morbidity and by promoting child growth, development and healthy practices. Effective implementation of IMCI case management guidelines improved quality of care in health facilities across various settings (WHO multi-country evaluation http://www.who.int/imci-mce). Taking consideration of experiences form other developing countries into account, in Bangladesh IMCI implementation led to a rationalisation of child health policies, updates of essential medicines lists, and reviews of supervision. Considering its impact at low-cost, the government plans to gradual expansion of IMCI programme in the country (WHO 2004). How well IMCI can work depends upon the strength of the health system responsible for its implementation (Gwatkin 2000). However, health system support for IMCI rarely reached adequate levels in Bangladesh (Arifeen 2005).

*Lessons learned*

• IMCI strategy offers a promising set of interventions to address the child survival problems in Bangladesh. However, the poor quality of services show that there is much room for improvement.

• To meet the targeted goal, the quality of care issues have to be urgently addressed in the first level facilities. Inadequacies of case management are not due to the lack of necessary supplies and
equipments but to lack of skills, inadequate performance of the health workers, and absence of monitoring and supervision system.

SNL initiative

Intra-partum, post-natal and neonatal cares have the potential to save 20-40% of newborn lives (Darmstadt et al. 2005). However to date, post-natal care for mothers and newborns has received relatively little emphasis in public health programmes, with only a tiny minority of mothers and babies in high-mortality settings receiving post-natal care. Care at birth and in the first days of life not only saves the lives of mothers and newborns, but also reduces serious complications that may have long-term effect. The SNL initiative illustrates remarkable changes in all areas of maternal and newborn care. Despite some improvement, the effect of SNL initiative on post-natal and neonatal care is still low (SC/USA 2004).

Lessons learned

- Door-to-door visits by the community health workers using community registers is an effective way to identify the pregnant women and follow them through pregnancy to the post-natal period.
- Training of CHWs in Essential Newborn Care (ENC) has increased the proportion of women receiving early ante- and post-natal care. Trained TBAs are important providers of delivery and PNC services in the community. However, they need regular monitoring and supervision.
- The quality of referral level care should be evaluated and strengthened to reduce maternal and newborn deaths. Sentinel registers at hospitals may be useful in the longer term for tracking newborn referrals.
- Collaborative approaches to the development of training and behaviour change materials mean that they are widely accepted, use consistent messages, and are technically sound.
- Close communication between researchers and programmers is important to ensure that research is disseminated and used locally.

USAID funded programme

Considerable progress was achieved by the USAID funded projects (e.g., NSDP) in expanding access to MCH services through capacity development of partner NGOs, quality assurance in service delivery, and unified logistics and supplies at local level. New communication materials and programmes were developed, updating of service delivery guidelines for family planning and EOC was done, and curriculum was developed for improved client counseling and supervision. The programme also
revised quality assurance mechanisms to incorporate these new additions and further strengthened logistical systems through training and technical assistance to ensure availability of contraceptives, and other MCH supplies and drugs, in keeping with GoB desire to unify its health and family planning logistics systems. The programme also enhanced programmatic and institutional sustainability through training, technical assistance and continued transfer of responsibility for management and implementation to Bangladeshi partner organizations.

Lessons learned

- This project demonstrated that ensuring availability of integrated health, family planning and MCH services through traditional service provision system could possibly make some changes in the lives of mothers and children.
- Emphasis need to be put on health and family planning infrastructure and staff, improving service quality, involving traditional health system, and changing attitudes and behaviours with respect to service utilization among potential clients.
- Social marketing strategy provides easy access to contraceptives, oral rehydration salts, and other health supplies at thousands of non-clinical and commercial outlets across the country.

*Kangaroo Mother Care*

There are controversies and challenges with the effectiveness of Kangaroo Mother Care (KMC) in reducing infant mortality. KMC or skin-to-skin care has never been proven to prevent infant death in studies using similar (rather than self- or clinician-selected) comparison and intervention groups (Conde-Agudelo et al. 2003, Charpak et al. 1996), because most infant deaths occur in the first week and month of life, before clinicians generally consider the babies medically stabilized and thus eligible for kangaroo care. In a hospital-based randomized controlled trial in Ecuador, babies were not stabilized and therefore, not eligible for KMC until about 2 weeks of life. This excluded 85% of the deaths that occurred in first 6 months of life (Sloan et al. 1994). But KMC is at least as safe and effective as traditional care with incubator especially for the LBW infants who are unable to regulate their temperature (Conde-Agudelo et al. 2003), or may be associated with reduction of many neonatal infection (Lincetto O et al. 2000; Charpak et al. 2000). Moreover, as the CKMC increases exclusive and pre-dominant breastfeeding, (Bosque EM et al. 1995, Affonso et al. 1989; Whitelaw A et al. 1988), the method would be expected to influence the incidence of diarrhoea and possibly growth in community. Lack of data on the CKMC effect on neonatal and child mortality restrict its large scale implementation in Bangladesh. Recently, the Population Council, BRAC
and Mitra Associate have conducted a community-based randomized control trial, the result of which is expected to design intervention strategies for rural communities in Bangladesh.

Lessons learned

- The process and strategies of the hospital-based KMC can be successfully implemented and adapted for community-based implementation.

- Experience from pilot studies in Bangladesh and African countries (Iftekhar et al. 2003, Rekha F and Nicola B 2007, Ruiz-pelaez JB et al. 2004) suggest integrating KMC with the post-natal care services to enable regulation of body temperature of the LBW infants weighing 2000 g or less. This is especially applicable in places where there is no incubator and outpatient care facilities and thus, may reduce certain neonatal infections.

BRAC

BRAC has success stories with respect to promoting access of the poor to quality essential healthcare services, especially for women and children. BRAC’s community-based health and population programme utilizes community health volunteers, and makes use of community partnership in successful provision of the different elements of the ESP over the decades. Some of the successful stories of BRAC’s healthcare services include EPI, DOTS programme for TB, family planning, post- and ante-natal services, WHDP and RSDP. Within 5 years of inception of CSP, successes in immunization, vitamin A and ORT provision made Bangladesh an internationally noted success case in PHC and child survival (Rohde 2005).

At the age of 11, Razia was nervous on her first day of school. Almost three years later, she sits comfortably with her friends in the after-school library. One of the top students in her class, Razia will enter the formal schooling system as a 5th grader in a few months. “I plan to go to college and be a teacher!” Razia vows. Her mother, married at 13, said, “Even though she’s already had suitors, I won’t let Razia to marry until she’s at least 18. I don’t want her life to be a repetition of my own.”

Razia is one adolescent whose life has been changed by BRAC. In Sherpur, the village she is from in Bangladesh, most adolescents have never attended school. Girls may marry as early as 12, and many start childbearing before they are 18.


The design of the BRAC’s programme is based on comprehensive primary healthcare model. It is structured in a way to be integrated with the rural
development programme and the non-formal primary education programme, as BRAC believes addressing health and development holistically. Across the country, BRAC has its own infrastructure to deliver services even at the grassroots level. The involvement of community health volunteers, namely, Shasthya Shebikas in providing basic healthcare is a critical example of the primary healthcare approach in the world. Through the deployment of Shasthya Shebika, BRAC identified and treated 75% of ARI cases within participating communities. Through regular growth monitoring and targeted food supplements, nutrition of mothers, children and girls were measurably improved (Rohde 2005). The major breakthrough is the scaling-up of the programme throughout the country with the capacity development of health human resources at the grassroots level.

The innovative aspects of the BRAC programme are its simultaneous work with the government and the private sector, the priority accorded to health problems of women, children, and female adolescents. Over the period BRAC has achieved the hallmark of success in developing community health cadres, nationwide implementation of key programmes and government facilitation in health programmes. However, building health-related community institution or the community ownership of health projects still remains as challenges that BRAC needs to address in the future.

Lessons learned

- In the WHDP programme, frequent contact, community participation, and commitment and hardship of staff resulted in partnership development. Moreover, participation and involvement of community helped facilitate programme operations quite smooth. WHDP also provided lessons for future interventions by highlighting the pivotal role the government collaboration can play in supporting BRAC-facilitated healthcare services.
- It was also learnt that the concept of risk strategy could not capture pregnancy complications. Maternity waiting homes did not work very well because of the dependence on risk strategy for pregnancy complications.
- In the BINP and the NNP, BRAC worked in partnership with the Bangladesh government, NGOs and development partners. But, this intervention has become more supplementation centric rather than working more on changing nutrition behaviour. On the other hand, nutritional impact of the intervention was not significant. BRAC believes in action learning, however, the rigid nature of the NNP programme design created less space for innovations. Thus, BRAC withdrew itself at the end of 2006. Nonetheless, the BRAC’s existing programmes continue to render pills and condoms at household levels.
• Without having well-thought sustainability plan for health programme, many of the major interventions suddenly stopped operating in different rural districts. On the one hand, absolute dependence on donor funding and on the other, lack of sustainability plan including post-grant financial strategy have given rise to this situation. However, it is crucial for BRAC to begin a project with plan for phasing out to a low-cost self-sustaining programme specifically in partnership with the government, NGOs and non-profit private organizations.

• Over the years of experiences, BRAC has become thoroughly matured in undertaking interventions, especially for improving MCH. The result is the current interventions on MNCH in urban slums and in rural districts of Bangladesh. Experiences not only in implementation, but, also in scaling-up make BRAC expand the current interventions throughout Bangladesh if not now but certainly by the year 2015.

Urban interventions

The government of Bangladesh, under HPSP clearly envisioned a client-centred, financially sustainable service system to deliver high-quality essential services to the population, especially women and children. While the strategies to deliver ESP in the rural areas are well defined and structured, modalities to provide the ESP in urban areas remained unaddressed.

Urban RH: MCH-FP project

Prompted by the positive effects of Thana Functional Improvement Pilot Project (TFIPP) and Planning and Coordination Services of the Urban MCH-FP Extension Project, the HPSP has emphasized on the concept of effective partnership among the government, NGOs and local community in planning and delivery of ESP at local level. Following the success of the urban MCH-FP Extension Project, the Ministry of Local Government, Rural Development and Cooperatives replicated 'Planning and Coordination of services at the local level' from Dhaka to other city corporations and municipalities (Hasan Y et al. 1999). However, a comprehensive assessments of the urban health and family planning services in 1994 revealed that most urban facilities provided only a narrow range of services and their quality was found to be poor, reflecting inadequate training, inappropriate or absent service-delivery protocols, weak support systems such as lack of logistics, monitoring and supervision (MCH-FP Extension Project- Urban 1997).

Lessons learned

• To sustain the achievements and to deal with the new urban challenges, the urban MCH-FP initiatives contributed significantly
towards strengthening urban health service delivery in Bangladesh, with some additional efforts,

- Delivering a package of essential health and family planning services by a system of static clinic is cost-effective provided that the approach is holistic and clients’ needs are addressed.

**ADB initiative: partnership approach in UPHCP**

The Bangladesh Urban Primary Health Care Project (UPHCP) is pioneering in many ways. It is one of the rare large-scale projects that targets primary healthcare services in urban areas of developing member countries. The UPHCP follows a different approach, in that the government contracts NGOs to provide PHC. UPHCP supports contracting services to NGOs government financed but provided by the private sector in geographically defined partnership areas covering from 200,000 to 300,000 people in each area. Involving NGOs for providing healthcare through clinics run by city corporations yielded a landmark policy success in establishing GO-NGO collaboration to provide services efficiently (ADB 2003).

To facilitate working women’s access to the services, the health facilities remaining open at hours convenient for them, including evenings, weekends, and holidays. NGOs were paid according to their performance, with an additional bonus up to 6% of the contract amount depending on the health impact in the catchment population.

The reasons behind the success of UPHCP - I included (1) local NGO-private partnership through a bilateral agreement or MOU, (2) a participatory planning approach involving representatives from local people, private sector and NGO partner management, (3) feedback mechanisms were in place to secure input from clients, providers, advisory committee members, and private sector representatives (Sunyat 2007).

The experience, however, showed that a performance-based system is difficult to link with NGO effort, as many people outside catchment area use the services, the environmental condition undermine the impact on child health, and performance is difficult to measure in time. The competitive bidding process, without adequate standardization, created a situation where the NGO budget is too low. Another important challenge was to make the services affordable for the poor. The very poor are given free services using a colour-coded card. For the non-poor, NGOs are
recovering about 20-50% of their costs through user fees. While this does not provide a financial incentive for the NGOs, as this amount is deducted from the total amount reimbursed to NGOs, it helps overcome the occasional cash flow problems. Another challenge is to sustain services after external funding stops. Currently, city corporations target only 1% of their budget for health services.

Lessons learned

- Involving NGOs for providing healthcare through clinics run by city corporations yielded a landmark policy success in establishing GO-NGO collaboration to provide services efficiently.

- Most users of the UPHCP-I were either low- or middle-income urban households. To increase service use by the poor, a pro-poor targeting will be needed in phase II.

- Most poor pregnant women in slums continued to give birth at home, increasing the risk of maternal mortality and morbidity. However, the number of users of weekly satellite clinics in slums can be improved through community mobilization in slum areas. In slum and squatter settlements, mini-clinics will need to operate at night to cater to the needs of working women.

- Findings revealed that use of health services by the urban poor is influenced by i) lack of money, ii) lack of information on available health services, iii) cost of health services, iv) distance to health facilities, v) inflexible hours of the health facilities, vi) social prejudice against modern and established health facilities, vii) dependence on neighbourhood drug stores, and viii) reliance on traditional medicine.

These issues are addressed in the UPHCP-II by pro-poor targeting, increase awareness and demand, increase depth of coverage, improve quality of care with convenient timing, etc. Experiences in increasing the accessibility of health services to the urban poor is expected to develop replicable models for scaling up in other urban areas.

**NGO Service Delivery Programme (NSDP)**

NSDP has demonstrated solid progress in expanding essential family planning and health services to about 20 million urban and rural poor in six divisions of Bangladesh. Though these facilities supposed to provide essential services, individual facility usually offers a limited range of services, and many are single-purpose clinics, i.e. provide only EPI, or only FP, or only curative services, etc. (Alamgir et al. 1997). The

<table>
<thead>
<tr>
<th>Key lessons learned:</th>
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<tbody>
<tr>
<td>- More emphasis on institutional issues;</td>
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<tr>
<td>- Build local capacity for resettlement;</td>
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<td>- More effective monitoring and evaluation;</td>
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<td>- More beneficiary participation;</td>
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consequent fragmentation of services not only increases the cost of providing these services, but also limits access to these services as the opportunity costs for the clients go up. Members of the staff at many of these facilities are either doctors or paramedics, and therefore, can be trained to provide a broader range of services (Alamgir et al. 1997).

The project piloted an SBA home delivery programme from 10 clinics in 2005 and is planning to expand this to 30 additional clinics in 2006. Part of the challenge is finding a supply of paramedics with minimal level of training. NSDP is offering little care for neonates as most deliveries take place at home. An evaluation of the programme (2006) revealed low use of ante-natal, delivery and post-natal care services, and higher prevalence of childhood diarrhoeal and respiratory illness.

Several recent pilot programmes aimed at addressing more effectively ARI treatment and improving maternal and newborn health need to be expanded for broader impact. Clearly, a great deal more than offering treatment in static or satellite clinic is needed for any significant impact on ARI mortality. The current NSDP Community IMCI pilot programme with depot holders trained to provide paediatric Cotrimoxazole is a step in the right direction. This may provide valuable experience for the national programme. Finally, the ideas in the cooperative agreement about rationalizing service coverage need greater attention, especially with the advent of the ADB-supported UPHCP II project and the upcoming World Bank contracting with NGOs.

Lessons learned

- Clinics and even satellite clinics alone will not be able to make much contribution in reducing ARI, maternal and neonatal mortality in Bangladesh unless facility-based services are accompanied by education programmes that reach the community, both through mass media and door-step services. Depot holders are playing an important role in selling contraceptives and ORS but they are not addressing other causes of mortality. Outreach to communities to link them to services and follow-up of the cases is essential.

- If feasible, USAID should consider how to strengthen policy analysis and formulation activities within MOHFW, particularly as they relate to the role of NGOs in service delivery.

Lessons learned from NGO initiatives

Lessons learned from the SHAHAR Project

1. The importance of understanding the links between the components in achieving project objectives should be emphasized. This calls for a
thorough understanding of the logic and mechanism by which each activity contributes to the overall project goals and objectives.

2. The project was characterized by a large number of people for a limited number of staff to cover, especially when they have minimal knowledge of how to implement various components of the project. Addressing the diverse needs in the project sites itself posed problems for monitoring and keeping track of activities in all locations.

3. Due to the huge coverage of beneficiaries, the number of partners was also high. The high number of partner NGOs posed an additional problem in ensuring continuous dialogue and interaction.

4. The importance of monitoring and evaluation activities for success in project implementation should be recognized.

**Lessons learned from GK (Gonoshasthya Kendra) - Urban Community Health Programme**

1. Further development or expansion of the work on services/approaches should be focused on areas which are not being covered by other agencies and locations which are under-served. The potential for replication in other urban environments in Bangladesh is enormous.

2. This project has come across a number of inevitable challenges over the years, some of which can surely be expected when working in such a volatile environment. One of the main challenges was working against the slum evictions carried out by the government time to time. This had an immense effect on the progress of the programme, as did the heavy competition from the sudden growth in private profit-making clinics.

3. As GK medical staff/volunteers are widely known for their skills and abilities, they are very often ‘poached’ by other firms.

**Lessons learned from the Child Survival Programme (CSP) of Concern Bangladesh**

Concern’s CSP is characterized by no external resource inputs and sustainability of benefits is built in from the beginning. It aimed to strengthen the municipality’s capacity to deliver specific child survival activities of good quality which will improve the health status of mothers and children in Saidpur and Parbatipur, and which can be sustained within existing Municipal and Ministry of Health and Family Welfare (MOHFW) resources (Concern 2005). The idea was that after the completion of the programme (Oct 2000-Sept 2004), the municipalities will have the capacity to continue to provide services beyond Concern’s support.
The main factors contributing to the success of the CSP can be identified as follows (Concern 2004):

1. Informed orientations of municipal managers and staff and other relevant stakeholders developed mutual trust and confidence, which was key to all achievements.
2. The clarification of mutual roles and responsibilities at the beginning of the programme was important in focusing on the type of interventions to be carried out (i.e. capacity building rather than material support) and to get support from the municipal authorities and other stakeholders.
3. Interest and support of the community stakeholders i.e. ward health committee members, TBAs, community health volunteers, teachers, community leaders for the CSP activities have been a major factor to the smooth operation of CSP.
4. Participatory research (i.e. PLA, HICAP) conducted in both municipalities not only contributed to the collection of baseline information, but it also played a pivotal role in engaging different sections of the community in the planning and implementation of the CSP.
5. In CSP, the main leadership of the programme lies with the municipalities rather than with Concern. This has resulted in the municipalities’ ownership of the programme.
6. Capacity assessment using Appreciative Inquiry (AI) has been found a valid tool not only for assessing the capacity of the municipalities but also as an effective instrument to make the municipal staff aware of their roles and responsibilities in terms of health service delivery.
7. Although the CSP aims at developing a health system in the partner municipalities, it has been seen that it is not possible to develop a sustainable health system without addressing the management system of the municipalities. Unless the general management (concept/capacities) of the municipality is addressed and improved, the management problems related to health, i.e. budgeting, supervision, management, planning, staffing cannot be solved.
8. The political nature of the municipalities is one of the major problems. The chairman and commissioners are elected for a five-year term. A change in the municipal cabinet following elections can lead to major changes in its priorities, motivation and commitment. This could disrupt the smooth operation of the programme.

“This is one of the best programmes that I have ever seen in my 25 years of experience,” stated Dr. David Pyle, a senior public health specialist and lead evaluator of the Bangladesh Municipal Health Programme.
Lessons learned from Dustha Shasthya Kendra (DSK Bangladesh)

1. In this model, they initially committed to serve the member borrower along with five of his/her family members. This turned out to overburden the programme and consideration is being given to reduce the coverage.

2. To date, this model did not provide full requirements of drugs to the patient, as they believe that 50% of the drug consuming cost should be borne by the member borrower herself/himself. This method allows for more effectiveness to the programme and control of drug use. In order to decrease the burden of cost of drugs to the user, a retail drug store along with the satellite health centre could be established.

3. To motivate member-borrowers, sometimes field staff draw a picture about their health operation which is unrealistic. This creates some unnecessary illusion and unwanted debates between the borrowers and the health personnel when borrowers do not receive these services.

4. Motivation of the field workers is important. Staff should understand the dynamics of this model, its innovative aspect and usefulness.

5. To reach viability, at least 90% of the borrowers should deposit health savings regularly. Another point is increase of coverage. The present structure is in a position to shoulder a load of two thousand borrowers without increasing cost of personnel and maintenance.

6. A further problem is non-availability of such kind of model around them. They are the pioneers in this line; so, they have to precede facing pain, difficulties and learning, while confronting the realities.

Lessons learned from BASICS-I country programme, Bangladesh

1. Constraints that might prevent full immunization coverage were fear of side effects and not vaccinating during an illness.

2. To identify slum areas with an unacceptable performance, the Lot Quality Assurance Sampling (LQAS) technique is useful.

3. Training, communications and social mobilization, procurement, and logistics to support immunizations must be continued.

4. The impact of polio eradication efforts on maintenance of routine immunization programme for all six target diseases must also be considered.

5. Strengthening routine EPI services will also require creative management to capitalize the resources available for NIDs. For example, mass media communications to advocate participation in NIDs could include reminders of the importance of routine vaccination.
Lessons learned from Bangladesh Women’s Health Coalition

- The quality of women’s lives is enhanced by emphasizing an inclusive gender approach, community participation and working in integration and collaboration with government and other relevant organizations.
- It is possible to involve private sector in social development.
- Social development is accelerated if local private sector resources are involved.
- Flexible system design can give maximum overall impact.
- Targets were mortality oriented.
- NGO services were mainly focused on women, and less on children and men.
- More focus is needed on community activities.

Lessons learned from EngenderHealth (Bangladesh)

Through the interventions of the QIP (Quality Improvement Partnership) team, EngenderHealth continues to help improve the quality, availability, and sustainability of high-impact services throughout Bangladesh. Engender-Health strives to ensure that quality reproductive health remains central to healthcare services in Bangladesh. Despite some shortcomings and future challenges, each programme has succeeded in progressing towards a more integrated approach to maternal health. Some of the specific lessons learned are:

1. From the onset, programmes may be delayed due to delays in financing strategies by donor agencies. Such delays in beginning can affect the achievements of goals. Moreover, goals must be realistic given the timeline of the programme, and baseline data must be available to make realistic assessments of the change in indicators.

2. Programme development, implementation, monitoring, and evaluation of safe motherhood programmes must be supported by the top political and management leaders in the country. A lack of conceptual understanding of the specific services being delivered can cause confusion and lead to lower quality of services as well as misdirected interventions, impeding the ability to achieve stated goals.

3. Programme planners need to be clear about what types of services will be provided at what level, and how these services are intended to impact the programme objectives. Moreover, large-scale programmes require acknowledging regional disparities, which may make national indicators difficult to interpret.

4. The importance of provision of EOC at various health facilities should not be underestimated by focusing only on cesarean section, anesthesia
and blood transfusion. These interventions are important life savers, but many basic obstetric interventions (such as evacuation of retained products after incomplete abortion, manual removal of retained placenta after delivery, antibiotics for sepsis, oxytocin for reduction of post-partum haemorrhage, first aid to stabilize women with haemorrhage and eclampsia, management of prolonged labour, management of severe anaemia, and resuscitation of the newborn) can be provided at the primary healthcare level. Provision of such services in places closer to women can manage mild obstetric complications before they become serious.

5. Programme planners and implementers must strike a balance between improving care for normal deliveries and for complicated deliveries. Bringing midwifery services close to women's homes and timely referral of women to appropriate health facilities in the event of complications they cannot manage are two key strategies for a maternal health programme.

6. Community involvement is key to supporting families throughout pregnancy, delivery and the post-partum period. Community leaders and family members need to be aware of possible complications and their signs, and where and how to seek appropriate help. Improving the perception of health services on the part of the community/client will help generate demand for services.

7. Improved quality of services will result from increased training in clinical and interpersonal skills as well as follow-up with general management techniques. Finally, supply and distribution networks must be in place so that trained and competent providers have the necessary equipment to do their jobs well.

8. Since Alma Ata has defined community participation as one of the pillars of primary healthcare, most governments and NGOs have included it in their primary healthcare programmes. However, ensuring community participation in the true sense remains a challenge (Bhuiya et al. 1996).
IMPLICATIONS AND RECOMMENDATIONS

Policy implications

Taking experiences of safe motherhood initiatives in low resource settings into account, upgrading the quality and coverage of safe motherhood services (including neonatal care) will have the largest payoff in averting deaths and reducing disability among women and children in rural Bangladesh (Tinker et al. 1993). Recently, efforts to reduce maternal mortality in Bangladesh have been made using low cost easily deliverable technology such as tetanus toxoid coverage of pregnant women, training of birth attendants and development of community midwives, coupled with awareness raising BCC campaigns for identifying and managing risky pregnancy. For scaling up of these tasks, building a functioning primary healthcare system from community level to the first referral-level facilities is essential (Freedman et al. 2005). Particular emphasis should be placed on developing human resources for health (HRH) at all levels in this sector, e.g., the trained TBAs/midwives for skilled assistance during delivery at homes; community health volunteers/workers for raising awareness, motivation, neonatal and IMCI care; and doctors and nurses for providing EOC services, etc. Coverage of essential obstetric care should be made universal at the sub-district and the district level. Equally important is the need that the public and the private sectors, especially the not-for-profit NGOs, should join together in effective partnerships in this endeavour.

Public-private partnership has been successful in delivering affordable quality ESP through UPHCP to the urban poor. It is now important to explore the possibility of making this model sustainable by strengthening management and expansion in the policy framework of the government’s HNPSP. Due to its proven success, Smiling Sun needs to become institutionalized as a Bangladeshi network that survives beyond USAID funding and is not associated with any particular donor in the future. NSDP network will be critical in the long run since the large urban NGOs should eventually become sustainable and able to cross-subsidize the rural NGOs. Clinics and NGOs not previously associated with ‘Smiling Sun’ should be provided the opportunity to join as a way of broadening the network. The best avenue is engaging MOHFW at the policy level within the context of the HNPSP.

94
Recommendations

This section outlines the key recommendations for attaining the goal of improving the accessibility and quality of maternal and neonatal healthcare. Although these recommendations are preliminary and remain under this review within urban context, it provides some useful lessons for a large-scale programme.

- Create awareness regarding appropriate behaviours during pregnancy, delivery and the post-partum period, and generate demand for use of maternal health services. Orient health service providers to be responsive and respectful to the clients.

- Existing BCC materials need to be analyzed and its use evaluated to determine relevance and effectiveness. BCC efforts directed simultaneously to the community and providers will help create an awareness of services and quality standards in such services, thus increasing demand.

- Expand and improve the quality of normal delivery at home by trained providers and introduce post-partum visits. Selected FWAs, who provide outreach services to all women of reproductive age, should receive basic mid-wifery training. TBAs must continue to receive training in the detection of complications, referral, post-partum care, and avoidance of harmful practices. Linkages among mid-wives (FWVs/Nurses), TBAs and FWAs must be improved to assure quality services and adequate referral systems.

- Take advantage of existing programme components where service utilization is high (tetanus toxoid and family planning visits) to screen for pregnancy complications and advise women about danger signs and contingency plans they and their families need to take in case they suffer a complication.

- Expand and improve the quality of EOC. Upazila health complexes, and MCWCs and district hospitals should be upgraded with basic and comprehensive obstetric care. Efforts should also focus on the satellite clinics (selected on the basis of population served, road communications and staff configuration), and upgrading them to provide basic EOC services.

- Establish effective linkages between community and health facilities for referral. It is essential that this initiative involve both community members and providers. Providers will need training on proper management of the referral system, and efforts will need to be made to bring the traditional and formal medical systems together.

- Develop an effective management information system (MIS). Instruments for data collection and monitoring must be user friendly,
integrated so that family planning and reproductive health systems are linked.

- Provide technical guidance to the design, implementation, monitoring and evaluation of maternal health programmes from the national level. This effort will help ensure that programmes are relevant to national objectives and meet national standards. To meet national standards, the GOB will also need to clarify the roles of the various providers in provision of treatment and referral specifically so that policymakers, providers and clients understand the responsibilities of each provider and duplication and gaps can be avoided.

- Issues like Adolescent Reproductive Health, Male Participation and Care, and Violence Against Women (VAW) should be introduced and incorporated.

- Strengthening public-private-community partnership is necessary for management and financial capacity building, delivering affordable quality ESP services to the poor, sustainability and scaling-up of the development intervention of any kind in resource poor setting. Encouraging local participation ensures community acceptance and programme sustainability and helps establish critical link between care in the household, peripheral care facilities, and hospitals.

The review demonstrates that the best results are achieved through a combination of facility improvement, quality of care activities, targeted community mobilization and participation. It is also important to encourage innovative approaches to providing maternal healthcare, but such pilot projects must be validated on a small scale before they are implemented at a national level. Scaling-up requires an understanding not only of what works, but why and how it works, as well as what does not work and why, also what may diminish or enhance the approach on a larger scale.
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### Profile of reviewed programmes/projects

<table>
<thead>
<tr>
<th>Programme, project or activities</th>
<th>Implementing agency</th>
<th>Development partner</th>
<th>Status</th>
</tr>
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<tbody>
<tr>
<td>Reproductive: MC H-FP under HNPSP</td>
<td>Director General, DGFP Director Planning, DGFP Director MCH, DGFP</td>
<td>World Bank, DFID, EC, RNE, SIDA, UNFPA, CIDA</td>
<td>Operational (2003-2010)</td>
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<td>ICDDR,B</td>
<td>ICDDR,B donor consortium</td>
<td>Operational (1997-to date)</td>
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<td>MCH-FP extension project</td>
<td>GoB and ICDDR,B</td>
<td>ICDDR,B donor consortium</td>
<td>1982-1993</td>
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<td>MCH project</td>
<td>BAMANEH</td>
<td>IAMANEH, Swiss Red Cross, RSDP, NSDP</td>
<td>1979- Dec2001 2002-2006</td>
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<td>BRAC donor consortium</td>
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<td>GoB (DGHS and DGFP)</td>
<td>UNICEF, UNFPA, WHO EU, Gates Foundation</td>
<td>Operational (1993-2010)</td>
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<td>GoB (MOHFW)</td>
<td>WHO, UNFPA, Gynaecological society of Bangladesh, JICA</td>
<td>Operational (2002-2010)</td>
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<td>MR programme</td>
<td>GoB, NGOs, private sector</td>
<td>USAID, Pathfinder International, Population Crisis Committee, SIDA</td>
<td>Operational (1979-to date)</td>
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<td>SNL</td>
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<td>Gates Foundation</td>
<td>2000-2004</td>
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<td>1997-2002</td>
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## Programme, project or activities

<table>
<thead>
<tr>
<th>Programme, project or activities</th>
<th>Implementing agency</th>
<th>Development partner</th>
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<tbody>
<tr>
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<td>GoB (LGD in corporation with 4 CC) and 24 contracting NGOs</td>
<td>ADB, UNFPA, Nordic Development Fund, GoB</td>
<td>Mar 1998-Jun 2005</td>
</tr>
<tr>
<td>UPHCP II</td>
<td>GoB (LGD in corporation with 6 CC) and 3 contracting NGOs</td>
<td>ADB, DFID, SIDA, UNFPA, Orbis</td>
<td>May 2005-2011</td>
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<td>USAID</td>
<td>2002-2006</td>
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<tr>
<td>UNFPA funded project</td>
<td>UNFPA</td>
<td>CIDA</td>
<td>Operational (2004-2007)</td>
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<tr>
<td>Urban Community Health Programme</td>
<td>GK</td>
<td>GK donor consortium</td>
<td>April 1999-to date</td>
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<td>Child Survival programme</td>
<td>Concern Bangladesh</td>
<td>GoB and USAID</td>
<td>1998-2004</td>
</tr>
<tr>
<td>NIPHP strengthening clinical contraception services</td>
<td>Engender Health</td>
<td>USAID</td>
<td>2000-2006</td>
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<tr>
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