"MANOSHI"

COMMUNITY HEALTH SOLUTIONS IN BANGLADESH

Midline Survey Dhaka Urban Slums 2009

Scientific Report No. 113
December 2010

icddr,b
KNOWLEDGE FOR
GLOBAL LIFESAVING SOLUTIONS

brac

"MANOSHI"
COMMUNITY HEALTH SOLUTIONS IN BANGLADESH

Midline Survey
Dhaka Urban Slums 2009

Nurul Alam
Azad Uddin
Mahfzur Rahman
Nahid Sultana Sumi
Syed Masud Ahmed
Peter Kim Streatfield

International Centre for Diarrhoeal Disease Research, Bangladesh (ICDDR,B) and BRAC
In cooperation with
Bill & Melinda Gates Foundation

ISBN 978-984-551-316-6

Scientific Report No. 113

December 2010

Published by:
International Centre for Diarrhoeal Diseases Research, Bangladesh (ICDDR,B)
GPO Box 128, Dhaka 1000
Mohakhali, Dhaka 1212, Bangladesh
Telephone: 8860523-32 (10 lines); Fax: (880-2)-8826050
Email:msik@icddrb.org
URL: http://www.icddrb.org

Printed by: Dynamic Printers

ACKNOWLEDGEMENT

This research activity was funded by the Bill & Melinda Gates Foundation, USA and BRAC, Bangladesh. ICDDR,B acknowledges with gratitude the commitment of the Bill & Melinda Gates Foundation and BRAC to its research efforts.

The MANOSHI project is developed by BRAC to establish a community-based health programme targeted at reducing maternal, neonatal, and child deaths and diseases in urban slums of Bangladesh. It is supported by the Bill and Melinda Gates Foundation's Community Health Solutions (CHS) initiative that aims at strengthening and leveraging community organizations and individuals to be proactive in community based interventions. This five-year project is led and implemented by BRAC. ICDDR,B, in collaboration with the Research and Evaluation Division (RED) of BRAC provide technical assistance to the project through monitoring, evaluation and research support. This project is guided by a Technical Advisory Committee and a Technical Management Committee.

BRAC and ICDDR,B would like to acknowledge the Bill and Melinda Gates Foundation for their continued support. We are grateful to all the researchers and members of programme team for their unabated diligence and efforts. We want to extend our appreciation to all the respondents from the various communities for their wilful contributions and sincere commitment towards fulfilling this research endeavour. We also acknowledge the contributions of ACPR (Associates for Community and Population Research) for field data collection.

We would like to acknowledge the contributions of Samira Choudhury and Zeeshan Rahman for helping to finalize the working papers.

Technical Advisory Committee

Dr. Abhay Bang
Director
SEARCH
India

Dr. Lynn Freedman
Director
Averting Maternal Death and Disability (AVDD)
Columbia University, USA

Dr. Jon Rohde
Chair,
Interational Advisory Board
James P. Grant School of Public Health
BRAC, Bangladesh

Ms. Julienne Hayes Smith
Advisor/Trainer
Safe Motherhood Project
CARITAS CH-NFP, Bangladesh

Dr. Abbas Bhuiya
Deputy Executive Director
Executive Division
ICDDR,B, Bangladesh

Prof. Sameena Chowdhury
Professor and Head of Department
Obstetrics and Gynaecology Institute of Child and Mother Health, Bangladesh

Prof. Mohammod Shahidullah
Pro-Vice Chancellor (Admin.) and Chairman Dept. of Neonatology
BSMMU, Bangladesh

Dr. Zafrullah Chowdhury
Trustee Member
Gono Shasthaya Kendra
Bangladesh

Dr. Kaosar Afsana
Associate Director
Health Programme
BRAC, Bangladesh

Technical Management Committee

Dr. Abbas Bhuiya
Deputy Executive Director
Executive Director's Division
ICDDR,B, Bangladesh

Dr. Peter Kim Streatfield
Head
Health & Demographic Surveillance Unit
ICDDR,B, Bangladesh

Dr. Shams El Arifeen
Senior Scientist
Child Health Unit
ICDDR,B, Bangladesh

Mr. Faruque Ahmed
Director
Health Programme
BRAC, Bangladesh

Dr. Kaosar Afsana
Associate Director
Health Programme
BRAC, Bangladesh

Dr. Syed Masud Ahmed
Research Co-ordinator
Research and Evaluation Division
BRAC, Bangladesh

Dr. Hashima-e-Nasreen
Senior Research Fellow
Research and Evaluation Division
BRAC, Bangladesh

Dr. Jahangir Khan
Health Economist
Health Economics Unit
ICDDR,B, Bangladesh

Dr. Laura Reichenbach
Social Scientist and Head
Reproductive Health Unit
ICDDR,B, Bangladesh

Dr. Alayne Adams
Senior Social Scientist
Executive Director's Division
ICDDR,B, Bangladesh

TABLE OF CONTENTS

SUMMARY OF FINDINGS

The MANOSHI ***Midline Survey 2009*** is the second community based cross-sectional survey of 3,226 (1,549 women having infants and 1,677 women having children aged 1-4 years) women residing in 100 sample slums in Dhaka Metropolitan Area (DMA). The survey was conducted in November-December 2009 as a part of the impact evaluation activity of the MANOSHI programme started in 2007. The programme expanded, in two phases, to all slums in DMA for the improvement of maternal, newborn and child heath, through implementation of a community based comprehensive package of essential services.

The Midline Survey 2009 consisted of two groups of respondents; programme and comparison. The programme group was selected from the programme slums proportional to the phase size (indicated by number of households). The comparison group was selected from a few non-programme slums (in Nikunja housing area, Dhaka Uddyan and Baraid) in Dhaka Metropolitan Area (DMA) and from slum-like clusters of impoverished households in Demra, Jingira, Keranigonj and Tongi. As a result, the comparison group was not truly comparable to the programme group, but provided contemporary estimates of knowledge and practices in low income group. Present below are the ***results of the Midline Survey 2009 for the programme and the comparison groups, and the Baseline Survey 2007 results for the programme group to assess changes in knowledge and practices in the programme area between 2007 and 2009, as well as, between the programme and the comparison areas in 2009.*** Substantial differences in maternal and newborn health indicators in the programme area between 2007 and 2009, and between the programme and the comparison areas in 2009 are attributed largely to the effects of the MANOSHI programme.

Household Population and Housing Characteristics

The sample household populations are predominantly young, with 43% aged below 15 years and 2.4% aged 60 years or older in both the midline and baseline surveys.

Average household size was smaller, 4.5 and 4.8 in the programme area in 2007 and 2009. It was 4.6 in the comparison area in 2009.

Female headed households are decreasing; they accounted for 5% in the programme area in 2009, compared to 7 % in the programme area, in 2007, or 4% in the comparison area in 2009.

Educational attainment was higher among women in 2009 (68%) than in 2007 (56%): eight or more years of schooling in the programme area was more than double in 2009 than in 2007 (24% and 11%), while in the comparison area in 2009 it was 12%.

Characteristics of the Sample Household

Households with electricity connections were higher in programme area in 2009 (98%) than in 2007 (89%), or in the comparison area in 2009 (92%).

Access to modern sanitation facility was higher in the programme and the comparison areas in 2009 (72% and 64% respectively), than in programme area in 2007 (20%). Access to drinking water facilities was somewhat similar across the surveys and the areas.

Compared to the Baseline Survey 2007, proportionately, more households have roofs, walls and floors made of cement/concrete in 2009 in both the programme and the comparison areas.

Ownership of durable assets such as almira/wardrobe, table, chair, clock, television and mobile phones (except for radio, bicycle and rickshaw/van) was more frequent in 2009, than in 2007.

Characteristics of the Sample Women

Women with completed primary education (class 5 or higher) were higher at 47% in the programme area in 2009, compared to the 34% from 2007.

Access to mass media (measured through the reading of newspapers and watching of television at least once a week) was higher in 2009 (9% and 88%), than in 2007 (4% and 77%).

Fewer women (17% and 19%, respectively) were "currently employed" in the programme and the comparison areas in 2009, than in the programme area in 2007 (25%).

Women's involvement with NGOs was lower in the programme and comparison areas in 2009 (10% and 12%, respectively), than in the programme area in 2007 (23%).

Mean number of children ever born to the women was lower (2.2 and 2.3, respectively, in the programme and the comparison areas) in 2009, compared to the programme area in 2007 (2.7).

Knowledge of Women on Maternity Care

Women's knowledge about requirements for antenatal care and TT vaccination was universal (97% or more) in 2007, as well as, 2009.

Less than half (42-47%) of the women knew that the required number of ANC visits was 4 or more, and it was a little higher (47%) in the programme area in 2009, than in 2007 (45%).

Knowledge about importance of iron supplementation during pregnancy was higher in the programme area in 2009 (97%), than in 2007 or the comparison area in 2009 (91% each).

Women's knowledge about requirement of postnatal care (PNC) was lower (84% in the programme area and 83% in the comparison area) in 2009, than in the programme area in 2007 (94%).

Their knowledge on requirements of vitamin-A, and iron supplementation after delivery was higher (73% and 76%, respectively) in the programme area in 2009, than it was in the programme area, in 2007 (67% and 72%, respectively), or in the comparison area, in 2009 (69% and 72%, respectively).

Women's common sources of knowledge about ANC and other safe motherhood practices during pregnancy in 2009 were 'self' (52-57%), followed by 'BRAC ***Shasthya Shebika/Kormi'*** (32-45%), 'friends' (24% each), and then 'family members' (19-23%). BRAC ***Shasthya Shebika/ Kormi*** was more frequently mentioned in the programme area, than in the comparison area.

Women's knowledge about life-threatening pregnancy complications (except for lower abdominal pain, and reduced foetal movement) was higher in the programme area in 2009 (4 - 12% points), than in 2007, or in the comparison area in 2009 (1-5% points).

Fatal post-delivery complications, such as excessive vaginal bleeding, convulsions and high fever were mentioned by more women in the programme area in 2009 (53%, 42% and 10%, respectively), than in 2007 (37%, 29% and 6% respectively), when more women mentioned prolonged labour and severe abdominal pain as fatal post-delivery complications.

For managing any life-threatening maternal condition during or after 42 days of delivery, more women named government hospitals (67% and 65%), followed by private clinics (20% and 45%) and then NGO health centres (34% and 35%) in both 2007 and 2009.

Knowledge of Newborn and Child Health

More mothers mentioned difficult or fast breathing, asphyxia, jaundice and convulsion as newborn's life-threatening health problems in the programme area in 2009 (55.6%, 60.1%, 40.0% and 32.4% respectively), while the figures in 2007 were (69.8%, 64.8%, 25.6% and 27.7% respectively).

Women's knowledge related to drying newborn thoroughly, wrapping with warm clothes and feeding colostrum was higher in the programme area in 2009 (90%, 75% and 41%, respectively), than in 2007 (64%, 59% and 25%, respectively), or in the comparison area in 2009 (87%, 69% and 31%, respectively). Mothers' knowledge about requirements of vaccination right after birth and vitamin A for under-five children was universal.

Women's knowledge about newborn's first feeding has shown a substantial improvement, with 73% mentioning colostrum as the first feed in 2009, as opposed to 39% in 2007. Honey as the first feed was mentioned in the programme area by 21% in 2009, compared to 49% in 2007

Knowledge about time of initiation of breastfeeding and duration of exclusive breastfeeding was similar in 2009 and 2007, and three-fourths of the women mentioned six months as the period for exclusive breastfeeding.

There has been a slight improvement in women's knowledge about symptoms of acute respiratory infection (ARI) over the years; 43% in the programme area, compared to 44% in the comparison area in 2009, or 41% in the programme area in 2007.

Women's knowledge about giving packet saline to children suffering from diarrhoea was universal (95% or more), but knowledge related to amount of food intake for under-five children with diarrhoea was low in both surveys (20% or less).

In seeking care for managing diarrhoea and pneumonia in under-five children, MBBS doctor was the most preferred health care provider in either year or area (61% in 2007 and 79% & 70% respectively in programme area & comparison areas in 2009).

More than 62% women made plans regarding the place of delivery, assistance during delivery and saving money for extra expenses related to childbirth.

Maternity Care Practices

Any ANC visit for the most recent birth was highest in the programme area in 2009 (81%), followed by 75% for the programme area in 2007, and 71% for the comparison area in 2009.

The government recommended 'four or more ANC visits' was highest in the programme area in 2009 (42%), followed by 35% for the comparison area in 2009, and 27% for the programme area in 2007.

Median number of ANC visits was higher in the programme area in 2009 (3 visits) compared to 2 visits each in the comparison area in 2009 and the programme area in 2007. Median month of pregnancy at first ANC visit was four in 2009 compared to five in 2007.

BRAC delivery hut (22%), followed by NGO health centres, and private clinics (20% each) were the predominant places for receiving ANC in the programme area in 2009. It was not the case in 2007, when NGO health centres (26%) were followed by government hospitals (17%). This was also the case in the comparison area in 2009. More women in the programme and the comparison areas in 2009 received ANC services, than women in the programme area in 2007.

During ANC visits, in the programme area, 'advice on proper diet', 'taking rest', and 'not to lift heavy items during pregnancy' was more frequent in 2009 (52%, 50%, and 44% respectively) than in 2007 (33%, 23%, and 23% respectively).

Half of the deliveries took place in health facilities in programme area in 2009 compared to 24% in the comparison area in 2009, and only 15% in the programme area in 2007. In the programme area, 19% of the deliveries took place in the BRAC delivery hut in 2009, compared to just 1% in 2007, or 3% in the comparison area in 2009.

Deliveries assisted by trained persons: doctors (22%), BRAC midwife/***Shasthya Shebika*** (18%), and nurse/midwife/Family Welfare Visitor (FWV) (10%) were higher in the programme area in 2009, than in 2007 (8%, 1% and 5%), or in the comparison area in 2009 (14%, 4% and 8%).

Coverage of PNC after delivery was highest in the programme area in 2009 (55%), followed by 28% for the programme area in 2007 and 32% for the comparison area in 2009, but coverage of four or more PNCs were low at 5-7% in all areas.

More often used for PNC visits were BRAC delivery huts (18%) and private clinics (16%) in the programme area in 2009, compared to 2% and 3% use, respectively, in 2007 programme area. The respective figures were 3% and 8% for the comparison area in 2009.

Self-reported pregnancy complications were lower, 19% in the programme area in 2009, compared to 26% in 2007, as well as, 28% in the 2009 comparison area. The most prevalent was the lower abdominal pain, followed by severe headache/blurry vision, and oedema of hands/feet in both 2007 and 2009 in both programme and comparison areas.

For treatment of pregnancy complications, NGO health centres, private clinics and government hospitals were used more often.

Immediate Newborn Care Practices

Colostrum was preferred as pre-lacteal feeding after birth more frequently in the programme area in 2009 (71%), followed by 36% in 2007, and 45% in the 2009 comparison area. In the programme area use of honey and sugar/glucose water as initial pre-lacteal feeding was lower by more than 50%, than that of 2007, and it was lower by more than 40% than the use in the 2009 comparison area.

Half (50-52%) of the women started breastfeeding within an hour of birth in the areas. Feeding colostrum immediately after birth was highest in the programme area in 2009 (91%), followed by 83% for the programme area in 2007 and 78% for the 2009 comparison area.

Practice of bathing just after birth was lowest in the programme area in 2009 (18%), while it was 55% for the programme area in 2007, and it was 29% for the comparison area in 2009.

Majority of the women (91% in 2007; and in 2009, 83% in the programme area, and 87% in the comparison area) reported that their child's head was shaven within one week of birth.

Health check-up of neonates was most frequent in the programme area in 2009 (57%), followed by 37% for the 2009 comparison area, while it was 36% for the programme area in 2007.

Complications/illnesses among the neonates were reported lowest in the programme area in 2009 (20%), followed by 32% for the comparison area, while it was 40% for the programme area in 2007.

Illnesses in order of prevalence was fever, followed by cough, difficult breathing, jaundice, and skin rash/pustule in all the areas, though it was lower in the 2009 programme area, than the 2009 comparison area or the programme area in 2007.

Private clinic/doctor's chamber was the most visited place of treatment in the programme area (10% in 2007 and 9% in 2009), but in the comparison area it was (16% in 2009), followed by government hospital in the programme area (5% in 2007 and 4% in 2009), and in the 2009 comparison area (7%).

For treating neonatal complications, homeopathic (2-4% cases) and herbal medicines (1-2% cases) were used to a little extent.

Child Health Services

Complete vaccination (BCG, three doses of DPT, Polio, and Measles) coverage was highest in the programme area in 2009 (74%), followed by 70% for its comparison area in 2009, while it was 41% for the programme area in 2007.

Most common childhood illnesses were fever (45% in 2007 and 28-33% in 2009), followed by acute respiratory infection (ARI) (11% in 2007 and 5-10% in 2009) and diarrhoea (19% in 2007 and 4-5% in 2009).

Treatment was sought mostly from the private clinic/doctor's chamber (34% in 2009 and 19% in 2007), followed by pharmacies (30% in 2009 and 36% in 2007), and government hospitals (12% in 2009 and 9% in 2007).

Perception on Local Delivery Facilities and BRAC Birthing Hut in Programme Area

Women's knowledge about availability of healthcare and delivery facilities in their localities was highest in the programme area in 2009 (85%), followed by 49% in the comparison area, while it was 53% in the 2007 programme area.

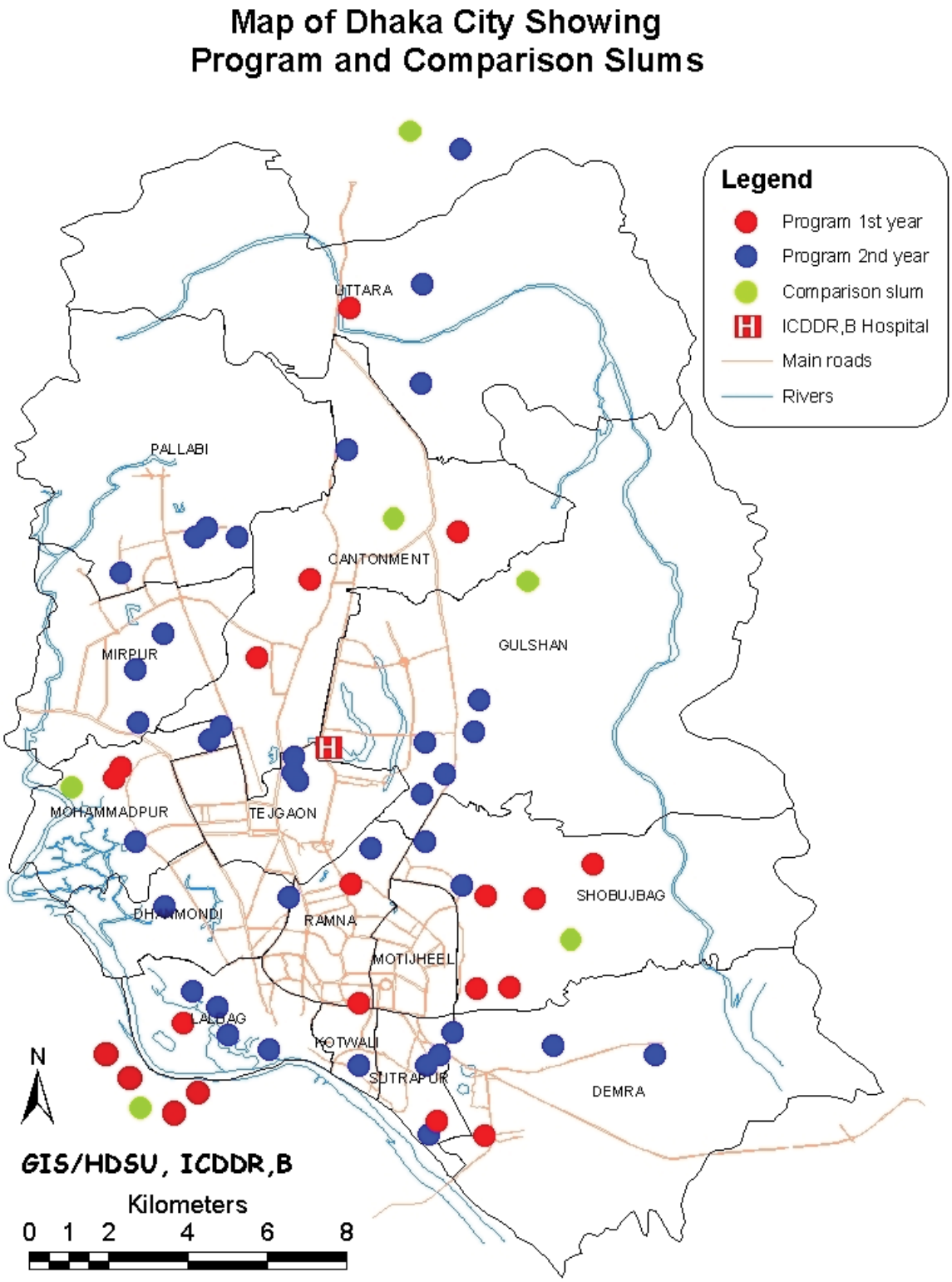
Type of health facility mentioned most for PNC was BRAC delivery hut (60%), followed by NGO operated health centre (41%), and then private clinics (18%) in 2009.

In the programme area, in 2009, 68% women were aware of the existence of BRAC birthing (or delivery) huts in their locality, compared to only 25% in the 2007 programme area. More women in 2009 were aware of services BRAC birthing huts provided than in 2007.

Only 38% of the women who were aware of BRAC birthing huts registered them to the birthing huts in 2009; it was 7 percent in 2007 for antenatal check-up, delivery care and skilled delivery assistance.

Reasons for not registering with BRAC birthing huts changed over the years; 'not knowing the requirement of registering to receive its services' (31%) and 'no permission from family' (19%) in 2007 were replaced by 'family objection' (12%) and 'availability of the TBAs at home' (9%) in 2009.

Figure 1: MAP OF DHAKA CITY CORPORATION



CHAPTER 1: INTRODUCTION

Urbanization is an inevitable and unavoidable feature in a society's development process. Bangladesh, along with other Asian countries, has been experiencing rapid urbanization in recent decades (1, 2, and 3). The Bangladesh Bureau of Statistics, the national statistical organization of the government, projected that fifty percent of the Bangladesh population will be living in urban areas by the year 2035 (4). Rapid urbanization is due to (a) rural to urban migration, (b) geographical increase of urban territory, and, (c) natural growth of population in urban area.

Factors accelerating the rural-to-urban migration process are natural disasters, high population density, high population growth and poor communication infrastructure (5). Natural disasters such as cyclone, flood, river erosion or drought affect thousands of rural households every year. Frequent flood and river erosion damage rural infrastructures. Population density is far higher than any other country that is not a city state (4). Agricultural land is virtually saturated. High population growth continuously shrinks availability of per capita agricultural land, and makes 1 percent of it into non-agricultural land every year (6). All these together accelerate the ongoing process of increasing number of landless households and diminishing job opportunities in rural areas.

Many, already destitute, do not have a decent place to live in their place of origin. To cope with the situation they migrate to towns and cities in search of employment or scope of earning (Afsar 2000), indicating a clear link between rural poverty, migration and urbanization. The urban poor are largely rural migrants and find shelter in overcrowded slums with inadequate sanitation and other civic facilities. Altogether, urbanization in Bangladesh raises new challenges for parties aiming to serve the poor and address poverty.

Most migrants from rural areas come to the already over-crowded Dhaka city, with around one-third living in informal settlements under unhealthy and unsafe conditions (8). Implications of unbridled urban growth and proliferating slums are poverty, gross inequality, high un-and-underemployment, overcrowded housing, deterioration of environmental conditions, inadequate supply of clean water, high incidence of diseases and overcrowding in schools and hospitals. The other implications are over loading in public transports and increase in traffic jams, road accidents, violence, crimes and social tension. All these make the conditions more unhealthy and unsafe and challenge heavily the capacity of urban centres to cater for the basic civic needs of newcomers. There is tremendous need to work with deprived communities like the urban poor who live in informal settlements and slums. Bangladesh needs to have a distinct vision and clear strategies to address these issues, especially for covering health, water and sanitation services in the urban centres.

1.1 HEALTH SERVICES DELIVERY FOR URBAN POOR

In comparison to rural ***primary health care*** (PHC) infrastructure, the urban PHC system that could help improve the health of the urban poor is underdeveloped (9, 10). Although the urban population has been increasing rapidly for a longer period of time, the government and external donor agencies have started addressing urban PHC problems only in the last decade. Under the present system, slum dwellers in metropolitan cities of this country need to seek treatment and care directly from tertiary level hospitals and facilities, which involves time, money and sometimes negligent and incompliant behaviour on the part of the care-seekers. For improving the health of the urban poor, particularly women and children through improved access and provision of health services in urban areas, the Urban Primary Health Care

(UPHC) Project was initiated in 1998 (9). The project established 142 PHC delivery centres in the four major cities of the country, including 60 solely in the Dhaka City Corporation (DCC) for delivering good quality preventive, promotional and curative services. DCC has signed the contract with selected competitive NGOs for the delivery of a package of essential services and comprehensive ***emergency obstetric care*** (EOC) in 10 defined partnership areas, linking contract payments to health improvement of the population of the project area. The interim poverty reduction strategy paper (PRSP) and the targets set in the Partnership Agreement on Poverty Reduction (PAPR) (11) with ADB reflect the Government's commitment to achieving the MDGs by strengthening urban PHC, especially for the poor.

The second project called Urban Primary Health Care Project II (UPHCP-II) covers the six city corporations and five selected municipalities of Bangladesh for the period 2005-2011 with:

(a) focus on providing a package of essential primary health services with an emphasis on preventive intervention, giving priority to maternal and child health,

(b) expand the role of the private sector including NGOs in the provision of health, nutrition and population services,

(c) take gender, equity, poverty and developmental issues into account in designing and provision of services,

(d) expand cost recovery and improve efficiency of resource utilization in the public sector, and

(e) involve beneficiaries in the management of health care,

(f) emphasize on the sustainability and environmental issues,

(g) endeavour to provide one stop shopping for health and population services (12)

The current Health, Nutrition and Population Sector Programme (HNPSP) of the Ministry of Health & Family Welfare, Government of Bangladesh embodies all of these and adds a few new dimensions, e.g. risk sharing and risk spreading to address catastrophic illnesses and piloting of demand-side financing in different forms and decentralization of decision making by the lower level managers (13). The project aims to contribute towards the achievement of the Millennium Development Goals (MDGs) undertaken at the Millennium Summit of UN.

1.2 BACKGROUND OF THE MANOSHI MIDLINE SURVEY 2009

In 2007, BRAC launched the MANOSHI programme for improving maternal, newborn, and child health in the urban slums of Bangladesh through the implementation of a community-based comprehensive package of essential health services. The target populations of the programme are:

(a) Pregnant women, and, (b) Mothers of newborn and child

The programme had gradually expanded its activities to all the slums under Dhaka Metropolitan Area (area under the Dhaka City Corporation and unions under the metropolitan area) by 2009 and is going to cover all the slums in all other city corporation areas by 2011.

1.3 SLUMS OF DHAKA METROPOLITAN AREA

The Dhaka Metropolitan Area (DMA), with an estimated population of 9.1 million, in 2005, comprises Dhaka City Corporation (DCC) area and adjoining areas totalling 306 sq. kilometres. The 2005 Slum Census of Urban Bangladesh identified 4,966 slum clusters in DMA with a

total slum population of 3.4 million (37.4 percent of the total population in DMA), more than double the slum population counted in 1996 (3).

The 2005 slum survey also identified conspicuous growth of slums in peripheral and suburban areas of Dhaka city. In the central areas of the city, slum concentrations were relatively sparse compared to the periphery. The major slum concentrations in DMA are as follows:

- Eastern fringe of the city, along the border of the city corporation:
  Khilket, directly opposite to the Dhaka Airport
  Badda-Satarkul area, in the vicinity of the Gulshan and Baridhara residential areas
  Area between Meradia and the Kamalapur Railway Station
- Western fringe of the city:
  Kamrangir Char on the bank of the river Buriganga, just outside the DCC border
  Hazaribagh and West Mohammadpur, along the western embankment Mirpur

The single largest concentration of slums is Kamrangir Char, having a slum population of 265,000. The largest single slum in Dhaka city is Korail in Mohakhali near Gulshan, with more than 100,000 people (3).

1.4. MANOSHI IMPACT EVALUATION METHODOLOGY

The major challenge for the impact evaluation of the MANOSHI programme activities is that there is no comparison group of slums for follow-up to control for secular changes. BRAC has expanded the MANOSHI programme in two phases to cover all slums in DMA by 2009.

Given the absence of sufficient slums without programme intervention in the DMA, the comparison group consisted of a few slums in DCC and slums selected from outside the DCC geo-boundary. Arguably, the comparison and programme areas are dissimilar in terms of access to health facilities and tenure of living. Nonetheless, such a comparison group is better than having none at all, to control for secular changes due to non-programme and extraneous factors.

Another way to assess the MANOSHI programme impact would be to examine the dose-response relationship (i.e., the longer exposure time to the programme the higher rate of change in measurable maternal and newborn care indicators).

1.5 ORGANIZATION OF THE MANOSHI MIDLINE SURVEY 2009

1.5.1 Survey Objectives and Implementing Organization

The Midline Survey 2009 collected data, similar to the Baseline Survey 2007 (14), on knowledge, perception and practices related to maternity care and newborn and child care of women having under-five child(ren) living in slums in the DMA. Both the 2007 and 2009 surveys were implemented by a private survey organization named Associates for Community and Population Research (ACPR, email: acpr@bangla.net). The overall objective of the 2009 midline survey was to estimate changes (improvements) in knowledge and practices related to maternity, newborn and child care in slum area. The specific objectives were:

- Assess changes in levels of women's knowledge and perceptions related to antenatal care, delivery care and post-natal care, and care of neonates and sick children living in the programme and comparison area during 2007-2009.
- Assess changes in women's practices related to maternity care, and care of neonates and sick children living in the programme and comparison area during 2007-2009.

1.5.2 Sampling Design of the Midline Survey

The two-stage random cluster sampling was followed in the ***Midline Survey 2009*** which is similar to the ***Baseline Survey 2007*** design. The first stage was the random selection of slums

(clusters) and the second stage was selection of households with eligible women. With only a few slums in the DMA outside the purview of the MANOSHI programme, they were not sufficient to construct a comparison group of equal size to the programme group. To cope with the situation the sample size for the comparison group was made half the size of the programme group (the programme sample ratio was 1:2) in the ***Midline Survey 2009***.

Sample Size: The ratio of samples in the programme and the comparison groups was 2:1. The minimum required sample sizes of the programme and comparison groups for different indicators are shown below (Table 1). Total sample size of the ***Midline Survey 2009*** was estimated to be 3,048 compared to 2,400 of the ***Baseline Survey 2007***.

Table 1. sample size of the Midline Survey 2009 for maternal and child health indicators

Level of care	P_1	P_2	$(P:C)^1$	p	n`	deff	Programme	Comparison	Total
ANC 3+	0.45	0.68	0.5	0.525	113	1.5	170	85	254
Facility delivery	0.14	0.21	0.5	0.177	294	1.5	1015	508	1523
PNC for child	0.23	0.35	0.5	0.268	357	1.5	535	268	803
DPT 3+	0.47	0.71	0.5	0.548	102	1.5	153	77	230
Sickness care	0.39	0.59	0.5	0.455	152	1.5	228	114	343
Sample size (Max)							1015	508	1523

Note: P_1 is the prevalence in MANOSHI ***Baseline Survey 2007*** and P_2 is expected new value in future.

$(P:C)^1$ is the ratio of sample sizes in programme and comparison groups.

Selection of the Sampling Units: The first stage was the selection of clusters (slums) with ***probability proportional to the size*** (PPS) in terms of number of households in slums, and the second stage was the selection of mothers (women) who have infants or children of 1-4 years old. The intervention group was selected proportionately from slums covered in the 1st and 2nd phases of the MANOSHI programme. The programme sample consists of 67 slums; 32 from the first phase and 35 from the second phase.

The comparison area of the ***Baseline Survey 2007*** has been covered by the MANOSHI programme, leaving a few slums to serve as comparison. These are slums in Nikunja Housing area in Khilkhet Thana, Dhaka Uddyan in Adabar Thana and Baraid in Badda Thana in Dhaka Metropolitan area. These slums do not have enough households to get the required sample of 508 mothers with newborn. Some clusters of impoverished households in Demra, Jingira, Keranigonj and Tongi - the outreach of the MANOSHI programme were selected to make the comparison group of 508 sample respondents.

A household listing operation was carried out to update the list and identify households with infants and children aged 1-4 years in each selected cluster. The resulting lists of the households served as sampling frame for selection of households at the second stage of sampling for interview. The Required number of mothers of infants and 1-4 year old children was selected in each cluster through random systematic sampling.

1.5.3 Survey Questionnaire

The questionnaire of the midline survey was the same as the baseline questionnaire, except for one variable so that comparison of the results across surveys can be appropriate. The variable was 'date of start of the activity of the BRAC delivery centre in the catchment slums' to assess length of exposure to the programme.

CHAPTER 2: HOUSEHOLD POPULATION AND HOUSING CHARACTERISTICS

This chapter presents information on demographic and socioeconomic characteristics of the household population of the ***Midline Survey 2009***, including age, sex, and marital status (for members aged 10 years or more), pregnancy status (for married female members of the household), educational attainment, and employment status. The chapter also describes the conditions of the households in which the survey population lives, including source of drinking water, sanitation facilities, availability of electricity, housing construction materials, possession of household durable goods, and ownership of homestead land. The information on household durables is used to create an indicator of household economic status, the wealth index.

In the ***Midline Survey 2009*** the definition of household is the same as that of the ***Baseline Survey 2007***, where are a household is defined as ***a person or a group of related and/or unrelated persons who usually live in the same dwelling unit(s), who have common cooking and eating arrangements, and who acknowledge one adult member as a head of the household. A member of the household is defined as any person who usually lives in the household.*** This definition is consistent with the Demographic and Health Survey (DHS) definition.

The characteristics of the household population are analyzed based on the de facto population, while household characteristics are presented based on the de jure population, in order to maintain comparability of these results with other DHS reports. Tables present results of the ***Midline Survey 2009*** and some results of the ***Baseline Survey 2007*** to highlight changes over time.

2.1 HOUSEHOLD POPULATION BY AGE AND SEX

The age-sex distribution of the population from sampled households of the ***Baseline Survey 2007*** and the ***Midline Survey 2009*** is shown in Table 2.1.1 and further illustrated by the population pyramid for the ***Midline Survey 2009*** in Figure 2.1. The age distribution showed a young population age structure with more than 43 percent of the population under 15 years of age in 2009 compared to 45 percent in 2007. As expected, the base of the population pyramid for the 2009 midline survey was very wide, showing that more than 26 percent of the populations were children less than five years of age in the programme and the comparison slum areas.

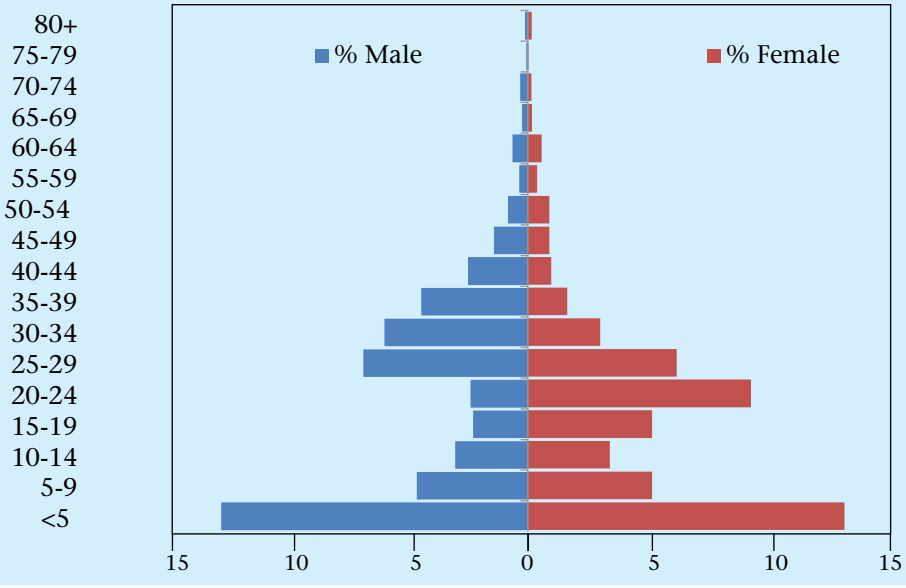
For age-groups 15 to 24 years, the female population in the slums of Dhaka Metropolitan area was markedly larger than the male population and for age-group 25 to 39 years, the male population was larger than the female. As slums are the major residences of migratory young people looking for earning opportunities in the transport, construction, manufacturing, and ready-made garments (RMG) sectors, the females are predominant in 15-24 age groups and the males in 25-39 age groups.

Table 2.1.1 Household population by age and sex

Percent distribution of the de jure household population by five-year age groups and sex in Dhaka metropolitan slum area, Baseline Survey 2007 and Midline Survey 2009

Characteristic	Programme area				Comparison area		Total	
	Male		Female		Male	Female		
	2007	2009	2007	2009	2009		2007	2009
Age group								
<5	26.3	26.1	25.8	25.8	26.2	26.8	25.6	26.1
5-9	12.1	9.5	11.7	10.1	11.8	10.6	11.4	10.3
10-14	7.8	6.2	8.0	6.6	7.2	7.7	7.9	6.8
15-19	5.5	4.7	10.8	10.1	3.7	10.6	7.7	7.4
20-24	5.7	4.9	15.6	18.1	5.1	18.1	11.1	11.7
25-29	11.8	14.0	11.0	12.1	13.9	10.9	11.6	12.8
30-34	9.2	12.2	6.4	5.9	12.2	5.6	8.1	8.9
35-39	8.3	9.1	3.0	3.2	8.1	2.6	5.9	5.8
40-44	5.0	5.1	2.2	1.9	4.4	1.6	3.5	3.3
45-49	2.7	2.9	1.9	1.7	3.0	1.2	2.2	2.2
50-54	2.1	1.7	1.1	1.7	1.4	1.7	1.7	1.7
55-59	1.2	0.7	1.0	0.7	0.8	0.8	1.1	0.8
60-64	1.1	1.3	0.8	1.1	1.2	0.8	1.0	1.1
65-69	0.3	0.5	0.2	0.3	0.2	0.3	0.5	0.4
70-74	0.6	0.7	0.3	0.3	0.9	0.3	0.5	0.5
75-79	0.3	0.1	0.1	0.0	0.1	0.1	0.2	0.1
80+	0.1	0.3	0.2	0.3	0.1	0.2	0.2	0.2
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
Number	**3,078**	**4,861**	**3,183**	**5,087**	**3,006**	**3,095**	**12,362**	**14,854**

Figure 2.1: Population pyramid , midline survey 2009



In Bangladesh, most households are 'male-headed', and so are the slum households (Table 2.1.2). In the programme area, only 5 percent of the households in 2009 and 7 percent in 2007 were headed by female members. Households consisting of 3 to 5 members accounted for 78 percent in the programme area in 2009 and 77 percent in the comparison area in 2009. The respective figure was 71 percent in the programme area in 2007. The average household size was slightly lower in 2009 (4.5 persons in the programme area and 4.6 in the comparison area) than in 2007 (4.8 persons in the programme area).

Table 2.1.2 Household composition

Percent distribution of households by sex of household head, household size in Dhaka Metropolitan slum area, 2007 and 2009

Characteristics	Programme area		Comparison area
	2007	2009	2009
Sex of household head			
Male	93.4	95.0	95.9
Female	6.6	5.0	4.1
Number of household members			
1	0.1	0.0	0.0
2	0.5	0.5	0.2
3	22.9	30.2	27.8
4	25.5	29.6	30.5
5	23.1	18.2	18.9
6	13.9	10.9	11.7
7	6.6	6.0	5.8
8	3.6	2.3	2.3
9	2.2	1.2	1.9
10+	1.6	1.3	1.0
Total	**100.0**	**100.0**	**100.0**
Number of households	**1,295**	**2,209**	**1,074**
Mean household size	**4.8**	**4.5**	**4.6**

2.2 EDUCATIONAL ATTAINMENT

Studies have shown that education is one of the major socioeconomic factors that influence a person's behaviour and attitudes, and has a significant effect on access to health services. In general, the higher a person's education level, the more knowledgeable s/he is about the use of health services, family planning methods, and hygiene practices. For all household members age 5 years or older, data were collected on the level of education last attended and the highest class completed. Table 2.2.1 shows the percent distribution of household population aged 5 years or older by educational attainment and slums in 2007 and 2009. Educational attainment in terms of 'ever attending to schools/madrasas' was 66 percent in the programme area, and 55 percent in the comparison area, in 2009. It was 54 percent in the programme area in 2007. Other than secular schools, proportion of household members attending madrasa (Islamic faith schools), non-formal (under Government's Mass Literacy Programme) and non-institutional (vocational training) schools was very low in the slums in both the 2007 and 2009 surveys. Education level of class 8 or more in the programme area in 2009 was more than double (24 percent) that in the programme area in 2007 (11 percent) and the comparison area in 2009 (12 percent).

Table 2.2.1 Educational attainment of household members

Percent distribution of household population aged 5 years or older by education in Dhaka Metropolitan slum area, 2007 and 2009

Ever attended educational institution and years completed	Programme area		Comparison area
	2007	2009	2009
Ever attended school/madrasa			
Yes	56.2	68.5	57.7
No	43.8	31.5	42.3
Type of school attended			
None	43.8	31.5	42.3
Non-formal	1.7	1.3	1.7
School	53.3	65.9	54.5
Non-institutional	0.5	0.8	0.9
Madrasa	0.6	0.6	0.5
Don't know	0.0	0.0	0.0
Class passed			
No education	43.8	31.5	42.3
0	5.6	1.6	1.8
1	4.9	4.4	4.9
2	5.1	5.5	5.7
3	5.9	5.5	6.1
4	3.8	5.2	6.2
5	13.1	14.1	12.6
6	3.5	4.1	4.5
7	3.0	4.0	3.8
8	4.2	7.7	4.8
9	3.7	6.3	3.6
10+	3.4	10.1	3.7
Total	**100.0**	**100.0**	**100.0**
Number	**4,628**	**7,369**	**3,605**

2.3 HOUSEHOLD CHARACTERISTICS

The ever increasing number of landless households and diminishing job opportunities in the rural areas are pushing people to migrate to the towns and cities in search of employment. Already destitute, they do not have a decent place to live in their places of origin. They find shelter in overcrowded slums with inadequate sanitation and other decrepit civic facilities. The ***Midline Survey 2009*** similar to the ***Baseline Survey 2007*** collected data on certain characteristics of households, including the source of drinking water, type of sanitation facility, main housing materials, and access to electricity. These physical characteristics of a household are important because they are used to assess the general well-being and socioeconomic status of the household members.

Table 2.3.1 presents the percent distribution of households by their characteristics and area in Dhaka Metropolitan slum area in 2007 and 2009. The percentage of households with electricity connections was higher (98 percent) in the programme area in 2009 than in 2007 (89 percent) and the comparison area in 2009 (92 percent). Access to modern sanitation facility was higher (72 percent and 64 percent respectively) in the programme and comparison areas in 2009,

than the 20 percent found in the programme area in 2007. The drinking water facilities were somewhat similar across surveys and areas. In both the surveys, most of the slum households had tin roof, cement/concrete or tin walls, and cement floor in the programme and the comparison areas. Compared to the 2007 baseline survey, more households had roofs, walls and floors made of cement/concrete in the programme and the comparison areas in the 2009.

Table 2.3.1 Household characteristics

Percent distribution of households by household characteristics in Dhaka Metropolitan slum area, 2007 and 2009

Household Characteristics	Programme area		Comparison area
	2007	2009	2009
Electricity			
Yes	88.9	97.9	92.0
No	11.1	2.1	8.0
Source of drinking water			
Piped inside dwelling	55.7	54.1	64.3
Piped outside dwelling	20.0	23.4	20.8
Tube-well	23.6	22.2	15.0
Pond/tank/canal	0.7	0.4	0.0
Sanitation facility			
Modern toilet	20.2	72.0	64.0
Water sealed/slab latrine	13.3	16.5	21.4
Pit latrine	40.8	9.9	11.4
Open latrine/bush/field	23.8	1.4	2.0
Pond/tank/canal/river	1.9	0.3	1.3
Other	0.0	0.0	0.0
Type of main dwelling			
Jhupri	1.9	1.0	2.1
Other	98.1	99.1	98.0
Main roof material			
Cement/concrete	3.1	14.0	8.9
Tin	95.5	84.4	89.9
Bamboo/wood	0.6	0.9	0.8
Polythene	0.7	0.7	0.5
Other	0.1	0.0	0.0
Main wall material			
Brick/cement	28.6	61.5	55.0
Tin	50.0	31.6	35.9
Bamboo/wood	20.6	6.5	8.0
Polythene	0.7	0.4	1.1
Other	0.1	0.1	0.0
Floor material			
Pacca	58.0	82.3	76.9
Semi-pacca	3.2	2.4	4.9
Earth	26.3	11.0	14.9
Other	12.5	4.1	3.1
Total	**100.0**	**100.0**	**100.0**
Number	**1,295**	**2,209**	**1,074**

In the 2007 and 2009 surveys, jhupri type of dwellings (makeshift dwelling of low height and built with flimsy, temporary materials like polythene, board, etc.) accounted for 1-2 percent of the sampled households.

2.4 HOUSEHOLD POSSESSIONS of DURABLE ASSETS

The Baseline Survey 2007 and the Midline Survey 2009 collected data on household ownerships of selected durable assets. Some of these are used to generate a wealth index. The percent distribution of households that possess various durable goods in the programme area in 2007 and in the programme and the comparison areas in 2009 is shown in Table 2.4.1. Overall, ownerships of durable assets, except for radio, bicycle and rickshaw/van was more frequent in 2009 than in 2007. In 2009, durable assets were more common in the programme area than in the comparison area. More households owned a television and mobile phones in 2009 than in 2007, when more households owned a radio. Almira/wardrobe, table, chair, clock, television and mobile phones were the most commonly owned household assets.

Table 2.4.1 Household possession of durable goods/assets

Percent distribution of households by household assets and area in Dhaka Metropolitan slum area, 2007 and 2009

Household possession of assets	Programme area		Comparison area
	2007	2009	2009
Household assets			
Almira/wardrobe	31.3	42.28	34.08
Table	24.7	37.66	23.09
Chair/bench	26.6	36.71	22.16
Radio	14.3	8.6	5.96
Television	42.9	62.15	46.55
Clock/watch	50.0	52.56	44.13
Bicycle	4.7	2.72	1.86
Motor-cycle	0.5	1.22	0.19
Rickshaw/van	6.1	3.08	5.49
CNG scooter	0.5	0.23	0.28
Sewing machine	3.5	6.29	7.91
Mobile phone	32.7	75.55	65.18
Total	**100.0**	**100.0**	**100.0**
Number	**1,295**	**2,209**	**1,074**

2.5 SOCIOECONOMIC STATUS AND WEALTH INDEX

A composite wealth index is tested in a large number of countries in relation to inequities in household expenditure and income, use of health services, and health outcomes (15). The index is an indicator of the level of wealth that is assumed to be consistent with expenditure and income measures (16). The index of household is constructed from data on household ownership of durable goods (almira, table, chair, radio, television, watch, bicycle, motor-cycle, rickshaw, CNG scooter, sewing machine and mobile phone) and dwelling characteristics (such as source of drinking water, sanitation facilities, and construction materials) as shown in Table 2.3.2. The principal components analysis of the durables retained one factor and assigned a factor score to each household. Each household was then assigned a score for each asset, and the scores were summed for each household. The higher the score the higher was the number of household assets, indicating better long-term economic status of the household. The factor score was used to divide the households into quintiles – from the lowest 20 percent to the highest 20 percent.

Table 2.5.1 Standardized variables in wealth index

Mean, standard deviation and factor loadings of standardized variables used for constructing wealth index in Dhaka Metropolitan slum area, 2007 and 2009

Selected household Possessions	Mean		Std. Deviation		Factor Loading	
	2007	2009	2007	2009	2007	2009
Drinking water						
Piped inside dwelling	0.6053	0.5744	0.48888	0.4945	0.302	0.1862
Piped outside dwelling	0.1615	0.2260	0.36806	0.4183	-0.328	-0.1261
Sanitation facility						
Modern toilet	0.3069	0.6944	0.46129	0.4608	0.370	0.3046
Pit latrine	0.3306	0.1042	0.47054	0.3055	-0.143	-0.2193
Open latrine/bush/field	0.1945	0.0152	0.39591	0.1223	-0.269	-0.2105
Electricity	0.9227	0.9600	0.26716	0.1960	0.410	0.3770
Household assets						
Almira/wardrobe	0.3637	0.3965	0.48115	0.4892	0.546	0.5762
Table	0.2908	0.3286	0.45421	0.4698	0.496	0.5269
Chair/bench	0.2996	0.3193	0.45819	0.4663	0.544	0.5669
Radio	0.1542	0.0778	0.36126	0.2679	0.232	0.2250
Television	0.4889	0.5704	0.49998	0.4951	0.591	0.6292
Clock/watch	0.5763	0.4985	0.49424	0.5001	0.577	0.5553
Bicycle	0.0491	0.0248	0.21619	0.1555	0.170	0.0830
Sewing machine	0.0516	0.0670	0.22116	0.2500	0.272	0.1929
Mobile phone	0.3991	0.7207	0.48981	0.4487	0.577	0.5050
Type of main dwelling						
Jhupri	0.0185	0.0127	0.13487	0.1120	-0.186	-0.2828
Main roof material						
Cement/concrete	0.0616	0.1243	0.24051	0.3300	0.387	0.4285
Tin	0.9295	0.8605	0.25600	0.3465	-0.314	-0.3061
Other	0.0089	0.0152	0.09373	0.1223	-0.136	-0.2888
Main wall material						
Brick/cement	0.4249	0.5939	0.49443	0.4912	0.750	0.7434
Tin	0.4076	0.3298	0.49148	0.4702	-0.401	-0.5448
Katcha	0.1611	0.0697	0.36769	0.2548	-0.443	-0.3590
Other	0.0064	0.0065	0.08003	0.0804	-0.133	-0.2174
Floor material						
Pacca	0.6673	0.8060	0.47126	0.3955	0.724	0.6973
Semi-pacca	0.0278	0.0325	0.16440	0.1775	-0.156	-0.2341
Earth	0.2255	0.1221	0.41802	0.3275	-0.595	-0.5675
Other	0.0793	0.0394	0.27032	0.1945	-0.248	-0.2489

Table 2.5.1 shows descriptive statistics and factor loadings of the household assets (including basic amenities and structural materials of the household). On the basis of factor loadings, only significant variables at 1 percent level of significance were retained in the final principal components analysis (17, 18). The extracted factor (first principal component) explained 18 percent of the total variance.

CHAPTER 3: CHARACTERISTICS OF SURVEY WOMEN IN 2007 AND 2009

This chapter describes the demographic and socioeconomic profile of women interviewed in the ***Midline Survey 2009*** and the ***Baseline Survey 2007***. These surveys collected basic information on women's age, level of education, marital status and religion. Information was also collected on women's exposure to mass media, employment status, occupation, type of employment, income and expenditure, NGO involvement and migration history,

3.1 BACKGROUND CHARACTERISTICS OF WOMEN

Table 3.1.1 shows the percent distribution, by selected background characteristics, of women interviewed in the 2007 and 2009 surveys. The sampled women of 15-29 years old accounted for 76 percent in 2007 and 78 percent in 2009 in the programme area and this figure was slightly higher in the 2009 comparison area, 80 percent. In both the programme and the comparison areas, women were predominantly Muslims (96-99 percent) in either survey. The rate of 'currently married' was similar in the programme and the comparison areas in 2009 and 2007.

The educational attainment of its population is an important indicator of a society's stock of human capital and its level of socioeconomic development. Education also enhances the ability of individuals to achieve desired demographic and health goals. In terms of educational attainment, status of the programme area was markedly better-off than the comparison area in 2009 – the proportion of women who attained primary education (class 5 or higher) in the programme area was 47 percent, compared to 35 percent in the comparison area in 2009. The percentage of women with primary education was 34 percent in 2007. The rate of women with no education was higher in 2007 than in 2009.

Access to information through the media is essential to increasing people's knowledge and awareness of what is taking place around them. The 2007 and 2009 surveys assessed exposure to media by women if they listened to radio, watched television, or read newspapers or magazines at least once a week. Among the sampled women, the percentage of women who read newspapers and watched television was higher in 2009 compared to 2007. Regular exposure to electronic media, i.e. television, was widespread among the women – more than 88 percent of the women in the programme and the comparison areas watched television at least once a week in 2009 whereas it was 77 percent in 2007. In comparison to television, women' exposure to radio was lower in 2009 compared to 2007– only 9 percent women in 2009 and 19 percent women in 2007.

Women were asked about their current employment status in both the surveys. Fewer women (with infant(s) and child(ren) aged 1-4 years old) were currently employed in the programme and the comparison areas in 2009 (17 and 19 percent respectively), than in the programme area in 2007 (25 percent).

Table 3.1.1 Demographic and social characteristics of women

Percent distribution of women by socio-demographic characteristics in Dhaka Metropolitan slum area, 2007 and 2009

Socio-demographic characteristic	Programme area		Comparison area
	2007	2009	2009
Age			
10-14	0.3	0.2	0.0
15-19	16.4	12.9	16.5
20-24	34.6	38.2	39.6
25-29	25.1	26.7	24.0
30-34	14.2	12.9	12.5
35-39	5.9	6.7	5.0
40-44	2.6	1.9	1.8
45-49	0.7	0.5	0.6
50-54	0.2	0.1	0.0
Religion			
Islam	98.5	95.9	98.9
Hinduism	1.4	3.9	1.0
Buddhism	0.0	0.1	0.0
Christianity	0.1	0.1	0.1
Marital status			
Currently married	98.1	98.9	98.6
Divorced, separated, or widowed	1.9	1.1	1.4
Married once or more			
Married once	95.9	98.3	97.3
Married more than once	4.1	1.7	2.7
Highest level of education			
None	49.2	32.4	42.8
Primary incomplete	16.6	20.6	21.9
Primary complete	15.6	32.3	28.9
Secondary incomplete	16.4	14.8	6.5
Secondary complete or higher	2.2	0.0	0.0
Regular exposure to mass media			
Reads newspaper	3.7	8.7	5.0
Listens to radio	18.9	9.2	8.6
Watches television	77.5	87.7	90.9
Currently employed			
Yes	24.9	16.7	19.1
No	75.1	83.3	80.9
Total	**100.0**	**100.0**	**100.0**
Number	**1,256**	**2,172**	**1,054**

3.2 NGO INVOLVEMENT

Table 3.2.1 presents the percent distribution of women by membership of selected non-government organizations (NGOs) working in Dhaka Metropolitan slum area in 2007 and 2009. The percentage of women' involvement with NGOs is lower (10 and 12 percent in the programme and the comparison areas respectively) in 2009 than in the programme area in 2007 (23 percent). Few women (<1 percent) were involved in more than one NGO in 2009 as opposed to 3 percent in 2007. BRAC was the leading NGO in the programme area in 2007 while ASA in the programme and the comparison areas in 2009. Small localized NGOs are predominant in both the areas.

Table 3.2.1 Involvement with NGO activities

Percent distribution of women by NGO involvement and membership in Dhaka Metropolitan slum area, 2007 and 2009

Background Characteristic	Programme area		Comparison area
	2007	2009	2009
Currently involved with NGO			
Yes	22.9	10.2	12.0
No	77.1	89.8	88.1
Number of NGOs involved with			
None	77.1	89.8	88.0
One	18.9	9.4	11.1
Two	2.5	0.8	0.8
Three or more	0.3	0.0	0.1
Has membership of[1]			
Grameen Bank	6.3	16.2	10.3
BRAC	31.3	23.4	13.5
ASA	27.8	48.2	29.4
Proshika	5.2	0.9	0.8
Mother's Club	0.0	0	0
Other	38.5	19.4	54.0
Total	**100.0**	**100.0**	**100.0**
Number	**1,256**	**2,172**	**1,054**

[1]Among the women who are involved with NGO activities

3.3 INCOME/EMPLOYMENT ACTIVITIES

In both the 2007 and 2009 surveys, women (who at the time were employed) were asked a number of questions regarding type and nature of their employment status and the results are presented in Table 3.3.1. A major shift was present in the type of employment, with decrease in percent of domestic work, and an increase in the percentage of skilled labour in 2009. The most common type of employment was the service in the programme and the comparison areas in 2007 and 2009, followed by domestic work in the programme area in 2007 and 2009, and skilled labour in the comparison area in 2009. The other common types of employment were daily labour, followed by trading, and making handicraft.

In the 2007 and 2009 surveys most of the employed women worked round the year in either area. More women reported sole control over the spending of their income in 2009 compared to 2007. As expected, joint-control of husband and wife over the spending of wife's income had decreased perhaps due to shift in the type of employment over the years.

Table 3.3.1 Employment and economic activities

Percent distribution of employed women by employment characteristics, Dhaka Metropolitan slum area, 2007 and 2009

Employment Characteristic	Programme area		Comparison area
	2007	2009	2009
Type of employment			
Service	37.3	46.7	26.4
Skilled labour	8.3	12.1	23.9
Construction worker	0.3	0.3	1.5
Handicrafts	5.6	6.9	9.4
Trader	9.2	6.9	7.5
Daily labour	15.2	9.1	15.4
Domestic worker	22.8	14.6	14.9
Other	1.3	1.4	0.0
Nature of employment			
Round the year	80.9	84.6	74.6
Seasonal	3.0	3.9	9.0
Irregular	16.5	11.5	16.4
Control over spending income[1]			
Respondent	29.5	36.8	33.8
Husband	3.6	3.8	6.5
Someone else	1.0	0.0	0.5
Respondent and husband jointly	64.6	57.1	56.2
Respondent and someone else jointly	1.3	2.2	3.0
Total	**100.0**	**100.0**	**100.0**
Number	**303**	**364**	**201**

[1]Applicable for cash incomes only

3.4 MIGRATION HISTORY

In the 2007 and 2009 surveys the women were asked a number of questions about the reasons for migration, duration of living in the current slum, and previous place of living and the results are presented in the Table 3.4.1. Sampled women from the 2007 survey were more migratory than their counterparts in 2009. One in every five (22 percent and 18 percent in the programme and the comparison areas respectively) women is a permanent resident in their current dwelling slums in 2009, than one in every fourteen women in 2007. In the programme area only 12 percent in 2009 as opposed to 31 percent in 2007 have been living for less than one year in the current slums. Majority (63 percent and 60 percent in programme and comparison areas respectively in 2009 and 74 percent in the programme area in 2007) of the women migrated to the current slums from villages in Dhaka division, followed by Barisal division (15 percent and 26 percent in the programme and comparison areas respectively in 2009 and 10 percent in the programme area in 2007). Distribution of reasons for migration shows a change in the pattern over the years; income/employment was the most common reason in 2009, whereas familial was the most common reason in 2007.

Table 3.4.1 Migration history

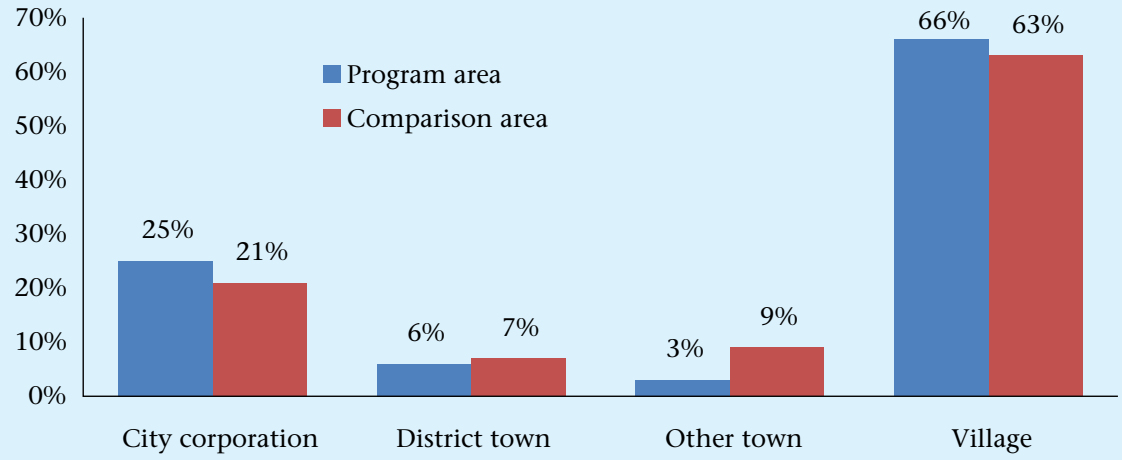
Percent distribution of women by living characteristics, Dhaka Metropolitan slum area, 2007 and 2009

Living Characteristic	Programme area		Comparison area
	2007	2009	2009
Duration of living in the current slum			
<1 year	31.1	11.9	19.1
1-2 years	21.4	19.8	20.5
3-5 years	16.5	16.9	15.8
6+ years	23.6	29.1	26.5
Always	7.3	22.3	18.2
Previous place of living (division)			
Barisal	9.9	15.0	25.9
Chittagong	4.0	10.6	6.6
Dhaka	73.6	63.4	60.0
Khulna	1.4	2.9	2.8
Rajshahi	3.3	6.8	4.2
Sylhet	0.2	1.2	0.4
Same as current	7.3	0.1	0.2
Reasons for migrating into current location[a]			
Income/employment	34.5	59.8	67.4
Familial	46.6	52.9	41.9
Eviction from previous place	11.3	1.8	2.8
Security reasons	24.4	5.9	4.1
Others[1]	2.3	1.4	1.6
Total	**100.0**	**100.0**	**100.0**
Number	**1,256**	**2,172**	**1,054**

[a]Multiple responses were allowed, [1]Includes the reasons of river erosion, education, etc.

Figure 3.1 shows that one quarter of the women are born in the city corporation area, while the majority (66 percent in the programme area and 63 percent in the comparison area) are born in villages.

Figure 3.1 : Place of birth of women by area, midline survey 2009



3.5 REPRODUCTION

In the 2007 baseline and the 2009 midline surveys, women were asked about the number of children ever born, currently living, died and pregnancy terminations, and the results are presented in Tables 3.5.1 and 3.5.2. The mean number of children ever born to the women was higher in 2007 than in 2009; 2.7 in the programme area in 2007 and 2.2 and 2.3 respectively in the programme and the comparison areas in 2009 (Table 3.5.1). The mean number of children currently living with women was also lower in 2009 than in 2007 (2.0 and 2.1 respectively in the programme and the comparison areas in 2009 and 2.4 in the programme area in 2007).

Table 3.5.1 Children ever born and living

Percent distribution of women by number of children ever born and died in Dhaka Metropolitan slum area, 2007 and 2009

Number	Programme area		Comparison area
	2007	2009	2009
Number of children ever born			
1	30.4	39.5	36.3
2	25.8	30.9	29.4
3	18.2	15.7	16.4
4	12.3	7.2	9.0
5	6.4	3.6	4.5
6	2.9	1.4	2.4
7	2.7	1.2	1.2
8	0.6	0.5	0.6
9	0.6	0.1	0.2
10+	0.3	0.0	0.0
Mean number of children ever born	2.7	2.2	2.3
Number of children currently living			
1	33.3	44.5	42.2
2	27.2	31.8	31.1
3	18.2	14.2	15.2
4	12.1	5.9	6.4
5	4.5	2.4	3.5
6	2.8	0.5	1.1
7	1.2	0.5	0.2
8	0.5	0.1	0.1
9	0.2	0.1	0.1
10+	0.0	0.0	0.0
Mean number of children currently living	2.4	2.0	2.1
Total	**100.0**	**100.0**	**100.0**
Number	**1,256**	**2,172**	**1,054**

Table 3.5.2 presents the percent distribution of women by pregnancy terminations in last five years in Dhaka Metropolitan slum area in 2007 and 2009. Here the phrase 'pregnancy termination' refers to abortion (spontaneous and induced), menstrual regulation (MR), and stillbirth. Overall, pregnancy termination was lower, 3 percent in the 2009 programme area, compared to 5 percent in the 2009 comparison area in 2009, or 10 percent in the 2007 programme area. The percentage of induced abortion was higher (32 percent and 38 percent in the programme and the comparison areas respectively) in 2009, than in 2007 (23 percent in the programme area), whereas the percentage of MR was lower in 2009 than in 2007. The

percentage of spontaneous and induced abortion was higher in the comparison area, than in the programme area in 2009. The distribution of the pregnancy terminations by area shows some differences between areas and years of the surveys.

Table 3.5.2 Pregnancy terminations

Percent distribution of women by pregnancy terminations, Dhaka Metropolitan slum area, 2007 and 2009

Pregnancy terminations and place of care	Programme area		Comparison area
	2007	2009	2009
Type of pregnancy termination			
Stillbirth	12.9	10.3	9.6
Spontaneous abortion	32.3	30.9	34.6
Induced abortion	22.6	32.4	38.5
Menstrual regulation (MR)	32.3	26.5	17.3
Duration of pregnancy on termination			
First month	12.1	0.0	1.9
Second month	29.8	44.1	36.5
Third month	26.6	23.5	36.5
Second trimester	18.5	22.1	15.4
Last trimester	12.9	10.3	9.6
Place of treatment for pregnancy termination[1]			
Home	20.2	27.9	23.1
BRAC delivery hut	0.8	0.0	0.0
Pharmacy	8.1	8.8	7.7
Government Hospital	14.5	16.2	25.0
Private Clinic	12.9	25.0	17.3
Chamber	17.7	7.4	21.2
NGO Health Facility	21.8	17.6	13.5
Other	0.0	0.0	0.0
Total	**100.0**	**100.0**	**100.0**
Number	**124**	**68**	**52**

[1]Multiple responses allowed

CHAPTER 4: KNOWLEDGE OF MATERNAL COMPLICATIONS AND NEWBORN CARE IN 2007 AND 2009

Before describing the patterns of use of reproductive health services in the slums of Dhaka Metropolitan areas, it was useful to review women's knowledge about these services, as it is a major determinant of utilization. This chapter presents findings of the ***Baseline Survey 2007*** and the ***Midline Survey 2009*** related to women's knowledge about pregnancy complications or illness during pregnancy and after delivery, services required during pregnancy and after delivery, newborn and child health care and feeding, life-threatening health problems of the newborn during the first week after birth and child morbidity in 2007 and 2009.

4.1 KNOWLEDGE ON MATERNITY CARE

Table 4.1.1 presents the percent distribution of women by knowledge about requirements of ANC visits, Tetanus Toxoid (TT) vaccination and Iron supplementation during pregnancy in Dhaka Metropolitan slum area in 2007 and 2009.

Table 4.1.1 Knowledge about services required during pregnancy

Percent distribution of women by knowledge about services required during pregnancy in Dhaka Metropolitan slum area, 2007 and 2009

Knowledge on…	Programme area		Comparison area
	2007	2009	2009
Requirement of ANC visit during pregnancy			
Required	97.2	98.8	97.3
Not required	2.1	1.0	1.8
Don't know	0.6	0.2	1.0
Number of ANC visits required			
None	2.8	1.0	1.8
1	1.4	1.2	1.1
2	8.4	12.6	10.2
3	36.2	33.1	32.0
4 or more	44.7	47.1	42.5
Don't know	6.4	5.1	12.3
Requirement of TT[1] vaccination			
Required	99.3	99.3	98.8
Not required	0.1	0.3	0.7
Don't know	0.6	0.4	0.6
Requirement of Iron supplementation[2]			
Required	90.7	96.7	90.5
Not required	5.1	1.7	4.9
Don't know	4.2	1.6	4.6
Total	**100.0**	**100.0**	**100.0**
Number	**1,256**	**2,172**	**1,054**

[1]Tetanus Toxoid
[2]In form of tablet or syrup

Women's knowledge about requirements of antenatal care (ANC) visits and TT vaccination were universal (more than 97 percent) and it was near universal (more than 90 percent) for iron supplementation in both 2007 and 2009. However, less than half (42-47 percent) of the women knew that the required number of ANC visits was four or more, and it was a little higher (47 percent) in the programme area in 2009 than in 2007 (45 percent). Knowledge about requirement

of iron supplement during pregnancy was higher (97 percent and 91 percent respectively) in the programme area in 2009, than in 2007; and, it was 90 percent in the comparison area in 2009.

Table 4.1.2 presents the percent distribution of women by knowledge about requirements of PNC visits, Vitamin-A and Iron supplementations after delivery in Dhaka Metropolitan slum area in 2007 and 2009. Women's knowledge about requirement of PNC was found lower in 2009, (84 percent in the programme area and 83 percent in the comparison area), in 2007 (94 percent in the programme area).

Knowledge about the requirements of Vitamin-A and Iron supplementation after delivery was higher (76 percent and 73 percent respectively) in the programme area in 2009 than in 2007 (72 percent and 67 percent respectively) and the comparison area in 2009 (72 percent and 69 percent respectively).

Table 4.1.2 Knowledge about services required after delivery

Percent distribution of women by knowledge about services required after delivery in Dhaka Metropolitan slum area, 2007 and 2009

Knowledge on…	Programme area		Comparison area
	2007	2009	2009
Requirement of PNC visit			
Required	93.7	84.3	83.0
Not required	4.7	13.5	12.9
Don't know	1.6	2.2	4.1
Number of PNC visits required			
None	6.3	15.7	17.0
1	8.5	18.3	12.0
2	32.8	30.8	24.5
3	32.0	15.1	15.7
4 or more	20.4	8.9	9.4
Don't know	0.0	11.2	21.5
Requirement of Iron supplementation			
Required	72.1	76.0	71.7
Not required	17.3	17.2	18.0
Don't know	10.6	6.8	10.3
Requirement of vitamin A supplementation			
Required	66.6	72.6	69.1
Not required	11.7	14.5	15.1
Don't know	21.7	12.9	15.8
Total	**100.0**	**100.0**	**100.0**
Number	**1,256**	**2,172**	**1,054**

Figure 4.1 presents the percent distribution of women by source of information on pregnancy care in Dhaka Metropolitan slum area in 2009. The most common source of knowledge of ANC and other safe motherhood practices during pregnancy was 'own' (52 percent in the programme area and 57 percent in the comparison area), followed by 'BRAC ***Shasthya Shebika/Kormi'*** (45 percent in the programme area and 32 percent in the comparison area), 'friends' (24 percent each in the programme and the comparison areas), and 'family members' (19 percent in the programme area and 23 percent in the comparison area). BRAC ***Shasthya Shebika/Kormi*** was mentioned more often in the programme area, than in the comparison area.

Figure 4.1: Source of information on pregnancy care in 2009, by area

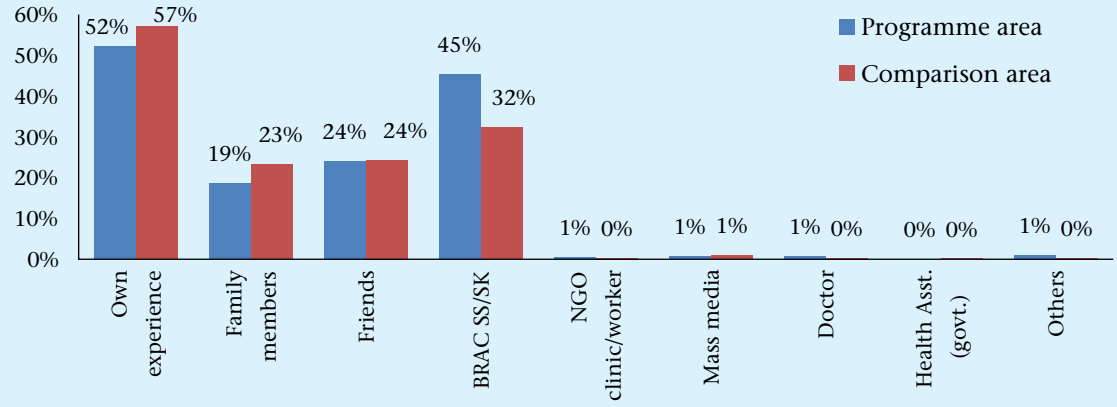


Table 4.1.3 presents the percent distribution of women by knowledge of pregnancy complication/ illness that required immediate medical treatment in Dhaka Metropolitan slum area in 2007 and 2009. Knowledge of life-threatening pregnancy complications (except for lower abdominal pain and reduced foetal movement) was more widely prevalent in the programme area in 2009 than in 2007 and the comparison area in 2009.

Table 4.1.3 Knowledge about pregnancy complications

Percent distribution of women by pregnancy complications knowledge in Dhaka Metropolitan slum area, 2007 and 2009

Knowledge on…	Programme area		Comparison area
	2007	2009	2009
Complications that require medical treatment[1]			
Severe headache	41.2	53.3	50.7
High fever	16.0	25.7	21.2
Blurry vision	20.9	24.1	25.4
Reduced/absent foetal movement	27.1	23.1	21.3
High blood pressure	0.9	5.8	5.3
Oedema of hands/feet	23.1	23.6	27.3
Oedema of face	1.4	7.5	9.6
Convulsions	21.2	29.9	24.9
Vaginal bleeding	17.5	18.2	11.2
Abortion/miscarriage	3.4	3.1	2.4
Lower abdominal pain	49.7	37.9	40.6
Others	0.3	0.1	0.0
Place of treatment for pregnancy complications[1]			
Home	0.5	0.5	1.5
BRAC Delivery Hut	2.3	13.1	1.6
Pharmacy	2.5	4.9	3.3
Government hospital	58.8	61.4	70.6
Private clinic	19.2	42.3	30.7
Chamber	11.5	16.8	17.4
NGO health centre	44.3	32.4	32.0
Other	0.1	0.0	0.0
Total	**100.0**	**100.0**	**100.0**
Number	**1,256**	**2,172**	**1,054**

[1]Multiple responses

Although knowledge about life-threatening maternal complications during pregnancy was not very common, knowledge about place of treatment in case of such conditions was higher (except for NGO health centre) in the programme area in 2009 than in 2007, or the comparison area in 2009. More women mentioned the government hospital (61 percent in the programme area and 71 percent in comparison area in 2009), followed by private clinic and NGO health centre. BRAC delivery centre was mentioned by 13 percent of the women in the programme area in 2009, compared to 2 percent in 2007; and, it was mentioned by 2 percent in the comparison area in 2009.

Table 4.1.4 presents the percent distribution of women by knowledge of pregnancy complication/ illness during as well as within 42 days of delivery that required medical treatment in Dhaka Metropolitan slum area in 2007 and 2009. Knowledge about life-threatening pregnancy complications, the overall knowledge of women about major fatal maternal complications was low. Distribution of the reported fatal post-delivery complications in 2007 and 2009 shows some changes; their knowledge related to excessive vaginal bleeding, convulsions and high fever was higher in the programme area in 2009 than in 2007, when knowledge about prolonged labour and severe abdominal pain was higher.

Table 4.1.4 Knowledge about illness/complications after delivery

Percent distribution of women by knowledge about complications after delivery, Dhaka Metropolitan slum area, 2007 and 2009

Knowledge on…	Programme area		Comparison area
	2007	2009	2009
Complications that require medical treatment			
Excessive vaginal bleeding	36.7	52.9	41.7
Prolonged labour	58.7	44.7	42.1
Hand/feet prolapsed	28.5	31.8	26.4
Foul-smelling discharge	1.6	2.0	3.2
High fever	5.7	10.5	11.9
Inverted nipples	0.2	0.7	0.5
Retained placenta	17.0	18.8	18.6
Severe abdominal pain	33.8	23.2	29.9
Convulsion	28.8	41.6	39.3
Engorged breasts	1.0	1.4	1.2
Tetanus	6.8	7.4	10.2
Other	0.1	0.1	0.3
Place of treatment for after delivery complications			
Home	0.7	0.5	1.5
Health and family welfare centre	4.8	6.6	6.1
Government hospital	67.4	65.0	73.2
Private clinic	20.5	45.2	31.6
NGO health centre	34.2	35.3	32.8
Chamber	9.3	14.9	15.5
Maternity centre	2.3	1.2	0.4
Other	0.1	0.0	0.0
Total[1]	**100.0**	**100.0**	**100.0**
Number	**1,256**	**2,172**	**1,054**

[1]Both contains multiple responses

For managing life-threatening maternal condition during or after 42 days of delivery, government hospitals followed by private clinics and NGO health centres were more known to the women

in both 2007 and 2009. It is worth mentioning that less than 1 percent of the women reported that home was suitable for managing potentially fatal post-delivery complications in 2007 and 2009.

4.2 KNOWLEDGE ON NEWBORN AND CHILD HEALTH

Both the baseline and the midline surveys collected data on maternal knowledge about serious health problems during the first week after birth that could endanger the life of a newborn in Dhaka Metropolitan slum area and presented the results in the Table 4.2.1. Mothers' knowledge about newborn's life-threatening health problems was quite high for difficult and fast breathing and asphyxia followed by jaundice and convulsion in the programme and the comparison areas in 2007 and 2009. There were some improvements in prevalence of knowledge about jaundice, infection in umbilical cord, swelling of head scalp and excessive vomiting and swelling in belly in 2009 compared to 2007. On the other hand, knowledge about reduction in food intake, poor suckling of breast milk and skin rash/pustle was less prevalent in 2009 compared to 2007.

Table 4.2.1 Knowledge about newborn's serious health problems that can occur during first 7 days after birth

Percent distribution of women' knowledge about life-threatening health problems of newborn during the first week after birth in Dhaka Metropolitan slum area, 2007 and 2009

Knowledge on…	Programme area		Comparison area
	2007	2009	2009
Newborn's serious health problem			
Difficult or fast breathing	69.8	55.6	59.2
Asphyxia	64.8	60.1	57.3
Reduction in food intake	14.7	9.4	7.9
Poor sucking of breast milk	14.3	9.5	11.1
Jaundice	25.6	40.0	36.1
Skin rash/pustule	10.4	6.3	7.7
Infection in umbilical cord	4.9	8.5	7.6
Discharge from eyes	0.5	0.6	0.8
Low-birth weight	1.6	4.1	3.2
Swelling of head scalp	3.2	1.3	1.5
Convulsion	27.7	32.4	33.1
Lethargy	8.9	6.3	9.0
Excessive vomiting and swelling in belly	7.8	11.9	12.0
Other	0.6	0.4	0.4
Place of treatment for newborn's health problems			
Home	0.6	0.8	2.2
Health and family welfare centre	2.6	5.9	6.7
Government hospital	74.8	67.2	76.5
Private clinic	17.2	42.0	30.5
Chamber	13.8	15.7	14.5
NGO health centre	23.2	26.6	24.7
Other	1.0	0.0	0.0
Total[1]	**100.0**	**100.0**	**100.0**
Number	**1,256**	**2,172**	**1,054**

[1]Both contains multiple responses

In both surveys, mothers were asked about place of treatment for newborn's health problems. As top preference for treatment more often and in both surveys, they reported, government hospitals, followed by private clinics, and then NGO health centres. In the programme area private clinics were mentioned more often in 2009 compared to 2007.

Table 4.2.2 presents the percent distribution of women's knowledge related to newborn and child health care in slums under Dhaka Metropolitan area in 2007 and 2009. Level of knowledge related to drying newborn thoroughly followed by wrapping with warm clothes and feeding colostrum was higher in the programme area in 2009 than in 2007, or the comparison area in 2009. Mothers' knowledge related to the requirement of vaccination right after birth, and requirement of vitamin A for under-five children, was universal.

Table 4.2.2 Knowledge about newborn and child health care

Percent distribution of women by essential newborn and child health care practices known to them in Dhaka Metropolitan slum area, 2007 and 2009

Knowledge on essential newborn and child health care	Programme area		Comparison area
	2007	2009	2009
Essential newborn care immediately after birth[1]			
Drying thoroughly	64.4	90.2	87.1
Wrapping with warm clothes	59.4	74.6	69.4
Feeding colostrums	25.4	41.4	31.0
Cord care	46.5	22.0	22.7
Eye care	0.9	0.5	0.6
Others	0.4	0.0	0.0
Don't know	0.0	0.1	0.3
Requirement of vaccination right after birth			
Yes	99.6	99.8	99.7
No	0.1	0.1	0.2
Don't know	0.3	0.1	0.1
Requirement of vitamin A for under-5 children			
Yes	95.9	95.6	91.8
No	1.7	2.0	3.5
Don't know	2.5	2.4	4.7
Total	**100.0**	**100.0**	**100.0**
Number	**1,256**	**2,172**	**1,054**

[1]Multiple responses

Table 4.2.3 presents the percent distribution of women by knowledge about newborn and child feeding practices in slums under Dhaka Metropolitan area in 2007 and 2009. A substantial improvement was found in women's knowledge about newborn's first feeding. In the programme area, 73 percent mentioned colostrums as the first feed in 2009 as oppose to 39 percent in 2007 and it was 51 percent in the comparison area in 2009. On the other hand, half (49 percent) of the women in the programme area had mentioned honey as the first feed in 2007 compared to 21 percent in 2009. Fewer women mentioned sugar water (4 percent) and mustard oil (1 percent) in 2009 than in 2007 (8 percent and 2 percent) in the programme area.

Women's knowledge about time of initiation of breastfeeding was very high; 44 percent mentioned just after birth and 50 percent less than 24 hours in the programme area in 2009 and it was similar in the comparison area. The respective figures in the programme area were 54 percent and 38 percent in the 2007. Knowledge about duration of exclusive breastfeeding was quite high; it was higher (79 percent) in the programme area in 2009 than in 2007 (73 percent) and the comparison area (69%). Suji (wheat particles) , any milk other than breast milk, pulse and biscuit were the most commonly known supplementary foods for children after exclusive breastfeeding in both the programme and comparison areas in 2009 and 2007. A few women mention ***khichuri*** (rice, pulses and vegetables cooked with edible oil) as supplementary food.

Table 4.2.3 Knowledge about newborn and child feeding

Percent distribution of women by knowledge about newborn and child feeding practices in Dhaka Metropolitan slum area, 2007 and 2009

Knowledge about newborn and child feeding	Programme area		Comparison area
	2007	2009	2009
Newborn's first feeding[1]			
Colostrum	38.9	72.8	50.9
Plain water	1.1	1.0	1.1
Misri/sugar-water	7.7	4.2	6.1
Honey	48.6	21.0	39.3
Mustard oil	2.5	0.6	2.5
Any milk except breast milk	1.0	0.3	0.1
Other liquid	0.1	0.1	0.1
Initiation of breastfeeding			
Just after birth	53.7	44.2	44.3
<24 hours of birth	38.0	50.4	46.9
Second day	2.6	2.7	4.6
Third day	5.0	1.9	2.9
Later	0.2	0.1	0.5
Don't know	0.4	0.7	0.9
Duration of exclusive breastfeeding			
None[2]	0.6	0.2	0.5
<1 month	0.5	0.2	0.9
1-5 months	22.4	17.8	26.2
6 months	72.8	79.3	69.2
More than 6 months	3.7	2.5	3.3
Supplementary foods for child after exclusive breastfeeding			
Any milk except breast milk	67.7	56.4	60.2
Suji	62.9	61.0	58.3
Ground rice	14.3	9.6	8.1
Egg	13.9	9.7	11.3
Pulses	24.8	40.6	36.7
Khichuri	10.0	6.4	7.9
Other liquid food	4.8	8.6	7.7
Fruits	0.5	0.6	0.9
Rice/chapatti	1.5	4.2	3.2
Fish/meat	3.1	1.3	1.5
Biscuit	26.9	32.9	33.7
Leaves/vegetables	8.6	6.4	9.2
Others	0.6	0.4	0.4
Total	**100.0**	**100.0**	**100.0**
Number	**1,256**	**2,172**	**1,054**

[1]Food/liquid that should put first in baby's mouth
[2]Includes "Don't know"

In the baseline and the midline surveys women were asked about signs and symptoms of pneumonia in under-five children and place of treatment, and the results are presented in the Table 4.2.4. Less than half (43 percent in the programme area and 44 percent in the comparison area) of the women had knowledge on the signs and symptoms of acute respiratory infection (ARI refers to cough with either rapid or difficult breathing or chest in-drawing) in 2009, and 41 percent in the programme area in 2007. This suggests for a little improvement in knowledge of ARI over the years.

Table 4.2.4 Knowledge related to child morbidity and management

Percent distribution of women by knowledge about child morbidity and management practices in Dhaka Metropolitan slum area, 2007 and 2009

Knowledge about child morbidity and place of treatment	Programme area		Comparison area
	2007	2009	2009
Signs of pneumonia among under-five children			
Fever	42.7	55.2	60.8
Cough	49.5	60.2	65.2
Fast breathing	39.9	26.7	35.3
Difficulty on breathing	68.2	51.0	43.5
Chest in-drawing	33.8	29.7	21.6
Other	0.3	0.0	0.0
Don't know	5.4	2.8	1.9
ARI	41.4	43.2	44.3
Type of food should be given to under-5 children with diarrhoea			
Packet saline	95.3	97.4	95.0
Home-made saline	15.0	27.2	28.6
Plain water	5.7	3.6	2.8
Usual diet	13.4	8.6	6.4
Other liquid food	61.9	66.5	54.6
Other	0.2	0.0	0.0
Amount of food should be given to under-5 children with diarrhoea			
Usual diet	6.2	13.2	20.4
Less food that usual	17.1	26.9	36.1
More food than usual	76.7	59.9	43.5
Person to seek advice to manage pneumonia/diarrhoea			
BRAC Shasthya Shebika	0.3	3.1	0.9
SACMO/MA	22.4	10.5	21.2
Nurse/midwife/FWV (Government)	29.9	10.8	13.4
Nurse/midwife/FWV (NGO)	8.4	13.4	14.3
MBBS doctor	60.7	78.9	69.9
Pharmacist	0.7	11.4	11.8
Spiritual healers	0.1	0.6	1.6
Homeopathic	1.1	2.3	3.0
Kabiraj/Hekim	0.1	0.5	0.8
Others	0.0	0.0	0.0
Total[1]	**100.0**	**100.0**	**100.0**
Number	**1,256**	**2,172**	**1,054**

[1]All of the above are multiple responses

Women's knowledge about giving packet oral saline to children suffering from diarrhoea was universal in either survey. Women's knowledge related to amount of food that should be given to under-five children with diarrhoea was not very high in either survey. To manage diarrhoea and pneumonia among under-five children, the MBBS doctor was the most preferred health care provider (61 percent (2007) and 79 percent (2009) in the programme area, and 70 percent in the comparison area (2009)), followed by government nurse/midwife/family welfare visitor (30 percent (2007) and 11 percent (2009) in the programme area, and 13 percent in the comparison area (2009)) and government medical assistants (22 percent (2007) and 10 percent (2009) in the programme area, and 21 percent in the comparison area(2009)). Very few women (3 percent) mentioned BRAC Shasthya Shebika in the programme area in 2009.

4.3 PREGNANCY PLANNING

Table 4.3.1 presents percent distribution of women living in slums under Dhaka Metropolitan Area by the knowledge on pregnancy planning prior to pregnancy in 2007 and 2009. The great majority of women (96 percent in 2007 and 80 percent in 2009 in the programme area, and 68 percent in 2009 in the comparison area) reported that they made plans regarding place of delivery beforehand. Home was the most planned place for delivery (85 percent in 2007 and 50 percent in 2009 in the programme area, and 52 percent in the comparison area), followed by government hospital and NGO health centres.

Table 4.3.1 Pregnancy planning

Percent distribution of women by pregnancy planning prior to pregnancy /child birth in Dhaka Metropolitan slum area, 2007 and 2009

Pregnancy planning	Programme area		Comparison area
	2007	2009	2009
Made plans regarding place of delivery			
Yes	95.5	79.6	68.1
No	4.5	20.4	31.9
Place of delivery planned			
Did not have any plan	4.5	20.4	31.9
Home	84.7	50.4	52.1
BRAC delivery hut	1.1	11.6	2.2
Government hospital	4.5	0.0	0.0
Private clinic	1.6	8.6	2.1
Chamber	0.0	2.9	3.5
NGO health centre	3.6	6.1	8.3
Other	0.1	0.0	0.0
Made plans regarding assistance during delivery			
Yes	88.3	71.6	71.8
No	11.7	28.4	28.2
Assistance during delivery planned			
Did not have any plan	11.7	28.4	28.2
None	0.1	0.0	0.1
Relative/neighbour	1.0	2.0	2.3
Untrained TBA	54.8	24.0	34.3
Trained TBA	24.0	23.4	22.2
BRAC midwife	0.4	8.3	1.4
SACMO/MA	0.3	0.9	0.7
Nurse/Midwife/FWV (Government)	0.8	1.3	3.3
Nurse/Midwife/FWV (NGO)	2.2	1.6	1.7
MBBS Doctor	4.6	10.1	5.8
Pharmacist	0.0	0.0	0.0
Other	0.0	0.0	0.0
Money saved to bear expenses related to childbirth			
Yes	72.1	69.2	61.5
No	27.9	30.8	38.5
Total	**100.0**	**100.0**	**100.0**
Number	**1,256**	**2,172**	**1,054**

More women chose BRAC delivery hut and private clinic/chamber for delivery in the programme area in 2009 than their counterparts in the programme area in 2007 and in the comparison area in 2009. Though choice of trained TBAs did not show any difference across the surveys and areas, untrained TBAs were the choice of more women in the programme area in 2007 and in the comparison area in 2009 than in the programme area in 2009 (55 percent and 34 percent compared 24 percent). Money saved to bear expenses related to childbirth was the common practice. It was higher in the programme area in 2007 and 2009 compared to the comparison area in 2009.

CHAPTER 5: PRACTICES ON MATERNAL AND NEWBORN HEALTH IN 2007 AND 2009

This chapter presents findings from the Baseline Survey 2007 and the Midline Survey 2009 on the practices related to antenatal care (ANC), place of delivery, delivery assistance and postnatal care (PNC) for mothers and children living in Dhaka Metropolitan slum area in 2007 and 2009.

5.1 MATERNITY CARE AND SERVICES RECEIVED

Antenatal care from a medically trained provider reduces health risks for both mother and child during pregnancy and delivery. The Bangladesh maternal health strategy recommends at least four antenatal care visits during pregnancy: the first, when the woman realizes she is pregnant; the second, between the fourth and fifth months of pregnancy; the third, between the sixth and seventh months; and the fourth, at the ninth month. Additional visits are recommended if any problems or dangerous symptoms arise. Before the maternal health strategy was released, only three visits were recommended. Even then, very few women completed that number, and the proportion that made no visits was disturbingly high. The past decade has seen substantial progress, nationally, in increasing the proportion of pregnant women making at least one visit and in raising the total number of visits.

Table 5.1.1 presents the distribution of women who had a live birth in last one year by ANC visit, timing of first visits, and place of last ANC visit for the most recent birth in Dhaka slum area in 2007 and 2009. The overall utilization of ANC visits for the most recent birth was higher (81 percent (2009 programme area), compared to 75 percent (2007 programme area) and 71 percent (2009 comparison area), respectively). The government recommended four or more ANC visits were made by 42 percent of the women in programme area in 2009, compared to 35 percent in the comparison area in 2009, or the 27 percent in the programme area in 2007. The median number of ANC visits was higher, 3 in 2009, than 2 in 2007 in the programme area and 2 in the comparison area in 2009.

Women started making ANC visits during the latter stages of pregnancy, than in the recommended fourth and fifth months. The median months of the first visit was 4 in the 2009 and 5 in 2007. BRAC delivery hut (22 percent) followed by NGO health centres and private clinic (20 percent each) were the predominant places for receiving last ANC in the programme area in 2009, which was not the case in 2007. In the comparison area in 2009, NGO health centres (26 percent) followed by government hospitals (17 percent) were the most common for the first ANC.

Table 5.1.1 Number, timing and place of antenatal care (ANC) visits

Percent distribution of women who had a live birth in last one year by ANC visits for the most recent birth in Dhaka Metropolitan slum area, 2007 and 2009

Number and timing of ANC visits And median number of visits	Programme area		Comparison area
	2007	2009	2009
Received any ANC during the last pregnancy			
Yes	75.4	81.2	70.7
No	24.6	18.8	29.3
Number of ANC visits			
None	24.6	18.8	29.3
1	12.4	7.1	9.0
2	18.0	13.1	12.1
3	18.3	19.0	14.6
4+	26.7	41.7	34.5
Don't know	0.0	0.4	0.6
Median number of visits	2	3	2
Number of months pregnant at the time of first ANC visit			
No ANC visit	24.6	18.8	29.3
<4 Months	28.0	31.9	31.2
4-5 months	28.9	31.5	24.4
6-7 months	13.7	13.9	10.4
8+ months	4.3	3.8	4.5
Don't know	0.6	0.1	0.2
Median months pregnant at first visit	5	4	4
Place of last ANC visit			
No ANC visit	24.6	18.8	29.3
Home	2.4	4.7	9.9
Pharmacy	0.4	0.0	0.0
BRAC delivery hut	5.5	21.6	2.8
Government hospital	15.0	13.6	16.6
Private clinic	6.4	19.8	12.3
Chamber	2.5	0.8	2.4
NGO health centre	40.3	20.1	26.3
Maternity centre	2.8	0.5	0.4
Other	0.0	0.0	0.0
Total	**100.0**	**100.0**	**100.0**
Number	**672**	**1,013**	**536**

Table 5.1.2 presents the percent distribution of women by services and messages received during ANC visits for the most recent births in slums of Dhaka Metropolitan area in 2007 and 2009. The percentages of women who received different kinds of ANC services were much higher in the programme and the comparison areas in 2009 than in the programme area in 2007. Examination of the abdomen and measurement of weight and blood pressure were the most common services women received during ANC visits in 2009 than in 2007. More invasive and technically complicated components, such as blood and urine tests, and ultrasounds were received more often in 2009 (20 percent, 22 percent and 29 percent respectively in the programme area, and 14 percent, 19 percent and 25 percent respectively in the comparison area) than in 2007 (6 percent, 10 percent and 8 percent respectively).

Table 5.1.2 Services and messages received during ANC visits

Percent distribution of women who had a live birth in last one year by services and messages received during ANC visits for the most recent birth in Dhaka Metropolitan slum area, 2007 and 2009

Services and messages received during ANC visit	Programme area		Comparison area
	2007	2009	2009
Services received during ANC visits			
No ANC visit	24.6	18.8	29.3
Height measured	0.7	17.2	15.7
Weight measured	22.7	54.6	46.8
Blood-pressure measured	14.6	45.4	29.3
Blood tested	6.1	20.0	14.4
Urine tested	9.6	22.1	19.4
Abdomen examined	32.6	49.0	36.0
Internal examination	0.4	4.0	2.2
Ultrasonic test	7.8	29.3	24.8
Iron supplementation	6.2	4.8	8.2
Others	5.0	1.9	4.5
Messages received during ANC visits			
No ANC visit	24.6	18.8	29.3
Delivery plan	2.0	7.6	9.5
Breast care	0.1	1.0	0.6
Danger signs of pregnancy	1.0	13.7	4.9
Facility delivery	1.4	9.8	8.8
Danger signs of newborns'	0.4	2.7	1.7
Essential newborn care	0.6	2.1	2.8
Use of clean delivery kit	0.2	0.3	0.2
Iron supplementation	9.2	11.8	15.7
Vitamin A intake	8.8	7.8	9.5
Advice on proper diet	33.3	51.8	39.0
Advice to take rest	23.2	50.0	45.5
Advice on not to lift heavy items	23.0	44.2	40.9
Advice on regular checkups	7.1	17.6	11.4
Referral	0.0	0.1	0.0
Others	3.1	5.2	6.2
Total	**100.0**	**100.0**	**100.0**
Number	**672**	**1,013**	**536**

Multiple responses were possible

During ANC visits, more women received advice in 2009 than in 2007. Most often they were about proper diets, taking more rest, and to not lift heavy items. Advices were almost similar between the programme and the comparison areas in 2009.

Table 5.1.3 presents the percent distribution of women by place of delivery, assistance during delivery and procedure of delivery in Dhaka Metropolitan slum area in 2007 and 2009. Institutional delivery accounted for half of the deliveries in the programme area in 2009 compared to 24 percent in the comparison area in 2009 and 15 percent in the programme area in 2007. For delivering baby, 19 percent women used BRAC delivery hut in the programme area in 2009 compared to 1 percent in 2007and 3 percent in the comparison area in 2009. Use of in government hospitals and private clinics were also higher in the programme area in 2009 compared to 2007. Some in improvements in facility delivery were also found in comparison area in 2009.

Table 5.1.3 Delivery care

Percent distribution of women who had a live birth in last one year by place, assistance and procedure of delivery for the most recent birth in Dhaka Metropolitan slum area, 2007 and 2009

Delivery characteristics	Programme area		Comparison area
	2007	2009	2009
Place of delivery			
Home	85.1	49.9	75.6
BRAC delivery hut	1.2	19.2	3.0
Government hospital	5.8	11.7	11.2
Private clinic	2.4	15.1	6.7
Chamber	0.1	0.0	0.0
NGO health centre	4.6	3.7	3.5
Other	0.7	0.4	0.0
Location of place of delivery			
Same slum	59.1	49.2	53.9
Other slum	5.5	1.0	4.1
Non-slum in the same city	12.2	34.9	22.4
Other city	8.2	5.3	7.8
Village	15.0	9.6	11.8
Assistance during delivery[1]			
None	0.9	0.1	0.2
Relative/neighbour	6.3	2.4	2.4
Untrained TBA	58.0	29.6	43.1
Trained TBA	20.1	18.1	28.5
BRAC Shasthya Shebika	0.3	3.8	1.3
BRAC Midwife	0.9	14.3	2.2
SACMO/MA	1.0	0.2	0.6
Nurse/Midwife/FWV	4.8	9.8	7.6
MBBS Doctor	7.6	21.7	14.0
Pharmacist	0.1	0.0	0.0
Mode of delivery			
Normal delivery	92.3	78.6	84.3
Assisted delivery[2]	1.6	3.4	3.5
Caesarian section	6.1	18.1	12.1
Procedures used in delivery[3]			
Injection	28.9	34.8	32.8
Saline	27.2	39.0	33.0
Drip	15.2	15.5	16.4
Episiotomy	3.0	4.1	4.3
Change foetal position	1.8	1.1	1.7
Total	**100.0**	**100.0**	**100.0**
Number	**672**	**1,013**	**536**

[1]The person who actually caught the baby
[2]Using vacuum, forceps, etc.
[3]Multiple responses

Particularly for delivering of the first baby, more often, women move to their parents' house. When women were asked for the location of place of delivery, half of them reported 'own slums' in either area in 2007 and 2009, and the other half reported 'moved to slums in the Dhaka', 'other urban areas' and 'villages'. Use of untrained TBAs was low, 30 percent in the programme area in 2009 compared to 58 percent in 2007 and 43 percent in the comparison area in 2009. Deliveries

assisted by trained TBAs in the programme area were similar in 2007 and 2009 (20 percent and 18 percent respectively). More frequent were deliveries assisted by MBBS doctors (22 percent), BRAC midwife/Shasthya Shebika (18 percent) and Nurse/midwife/FWV (10 percent) in the programme area in 2009 than in 2007 (8 percent, 1 percent and 5 percent respectively) and in the comparison area in 2009 (14 percent, 4 percent and 8 percent respectively).

Delivery care of women who had live birth in the last year and had delivery in Dhaka city was estimated separately and the results are presented in Table 5.1.3a. In the programme area in 2009, institutional delivery accounted for 55 percent and 26 percent were delivered in BRAC delivery hut.

Table 5.1.3a Delivery care

Percent distribution of women who delivered last live birth in Dhaka city by place, assistance and procedure of delivery, Midline Survey 2009

Deliver care	Programme area 2009
Place of delivery	
Home	45.0
BRAC delivery hut	22.6
Government hospital	12.3
Private clinic	15.5
Chamber	0.0
NGO health centre	4.1
Other	0.5
Assistance during delivery[1]	
None	0.1
Relative/neighbour	2.1
Untrained TBA	26.0
Trained TBA	17.4
BRAC Shasthya Shebika	4.5
BRAC Midwife	16.8
SACMO/MA	0.2
Nurse/Midwife/FWV	10.0
MBBS Doctor	22.9
Pharmacist	0.0
Total	100.0
Number	862

Excluded were women who had very outside Dhaka city

The mode of deliveries has undergone some changes between areas, over the years. In the programme area, normal deliveries were less frequent (79 percent versus 93 percent) in 2009 than in 2007 and it was 84 percent in the 2009 comparison area. The caesarian delivery method was markedly higher (18 percent versus 6 percent respectively) in the programme area in 2009, than in 2007. The procedure used in delivery (injection, saline, drip, and episiotomy) has also undergone some changes over time; use of injection and saline was a little higher in the programme area in 2009, compared to that in 2007, or that in the comparison area in 2009.

Postnatal care (PNC) is important for early detection and treatment of complications arising from delivery, especially for births that occur at home. Postnatal checkups also offer an opportunity to counsel mothers on how to care for themselves and their newborns. In the past, in Bangladesh, use of PNC has not been as emphasized as antenatal care. As a result, use rates of PNC have always been well below use rates of ANC. The PNC rates have been rising slowly since the introduction of the maternal health strategy, which encourages use of PNC. It may be mentioned that there are cultural restrictions among Hindus on mothers and their new babies to remain in the house for the first forty days after delivery. If enforced, this is obviously a barrier to early use of PNC, as well as other services such as ***expanded programme on immunization*** EPI

(for BCG in particular). In order to assess the extent of PNC use, every woman who had a birth in the last one year preceding the survey was asked whether she or her child received any check up after delivery, place of PNC care, and within how many days of delivery the check up took place and the results are presented in table 5.1.4.

Like ANC, the proportion receiving PNC among the sampled women was higher – 55 percent in the programme area in 2009, compared to 28 percent in 2007 programme area and 32 percent in the comparison area in 2009. A few women received recommended four or more PNCs after delivery - only 6 percent in 2007 and 7 percent each in the programme and the comparison areas in 2009. On enquiry about number of days after delivery for PNC visits, more women, 34 percent received PNC on the same day (the day of the birth is also the day of receiving PNC) in the programme area in 2009 compared to 10 percent in 2007 and 16 percent in the comparisons area in 2009.

Percent distribution of the place of first PNC visit shows some changes across areas over years. More often used were BRAC delivery huts and private clinics (18 percent and 16 percent respectively) in the programme area in 2009 than in 2007 programme area (2 percent and 3 percent respectively) and in the comparison area (3 percent and 8 percent respectively). Use of government hospitals was similar in the programme and the comparison area in 2009 and it was higher in 2009 than in the programme area in 2007.

Table 5.1.4 Number, timing and place of postnatal care (PNC)

Percent distribution of women who had a live birth in last one year by PNC visits for the most recent birth in Dhaka Metropolitan slum area, 2007 and 2009

Number and timing of PNC visits	Programme area		Comparison area
	2007	2009	2009
Received any PNC during the last pregnancy			
Yes	28.1	55.0	32.3
No	71.9	45.0	67.7
Number of PNC visits			
None	71.9	45.0	67.7
1	12.0	30.6	15.9
2	6.0	9.9	7.1
3	4.2	7.0	2.0
4+	5.8	7.0	7.1
Don't know	0.1	0.5	0.2
Number of days after delivery for PNC visit			
No PNC visit	71.9	45.0	67.7
Same day	10.1	34.2	15.9
1-2 days	4.0	6.2	4.1
3-7 days	5.4	7.5	4.9
8 days – 1 month	4.8	5.0	4.3
1 month+	3.1	2.0	3.2
Don't know	0.7	0.1	0.0
Place of first PNC visits			
No PNC visit	71.9	45.0	67.7
Home	0.9	2.1	1.1
BRAC delivery hut	1.9	18.5	2.8
Pharmacy	1.3	0.1	0.2
Government hospital	7.1	12.6	12.1
Private clinic	3.0	16.1	7.6
Chamber	2.8	0.3	1.5
NGO health centre	10.7	5.3	6.9
Other	0.3	0.0	0.0
Total	**100.0**	**100.0**	**100.0**
Number	**672**	**1,013**	**536**

5.2 PREGNANCY COMPLICATION AND MANAGEMENT

Pregnancy and childbirth-related complications are among the leading causes of maternal mortality in Bangladesh. Though the knowledge and technology to cure/prevent most of these complications are available, proper knowledge and awareness of women and family members regarding the symptoms are crucial for use.

Table 5.2.1 presents the percent distribution of women by complications and its management during pregnancy for the most recent live birth in last one year in Dhaka Metropolitan slum area in 2007 and 2009. Pregnancy complications were lower, 19 percent in 2009 compared to 26 percent in 2007 in the programme area and the sufferings were 28 percent in the comparison area. Lower abdominal pain was reported to be most prevalent among women (14 percent in 2007 and 12 percent in 2009 in the programme area, and 17 percent in the comparison area), followed by severe headache/blurry vision and oedema of hands/feet in both 2007 and 2009 in both programme and comparison area.

Seeking no treatment amongst women having complications was lower, 4 percent in the programme area in 2009 compared to 9 percent each in 2007 and in the comparison area in 2009. For treatment of pregnancy complications, NGO health centres were visited most frequently by women (5 percent) in 2007 whereas in 2009 it was private clinics (6 percent) in the programme area, and in the comparison area it was government hospital (7 percent). BRAC delivery hut was used seldom for treatment for delivery complication; 1 percent in 2007 and 3 percent in 2009 in the programme area. On the other hand, use of NGO health centre decreased to 3 percent in 2009 from 6 percent in 2007.

Type of treatment received did not show much difference across areas and years. The predominant treatment type was medicine shop (8 percent in 2007 and 9 percent in 2009, in the programme area; and, 11 percent in 2009, in the comparison area), followed by doctor or nurse (7 percent in 2007 and 4 percent in 2009 in the programme area; and, 6 percent in 2009, in the comparison area). Very few women (less than 1 percent) were referred to facilities for treatment in case of complications. They were mostly referred to government hospitals in the programme area and private clinics in the comparison area, followed by NGO health facilities in the programme area and government hospitals in the comparison area.

Table 5.2.1 Pregnancy complications and management

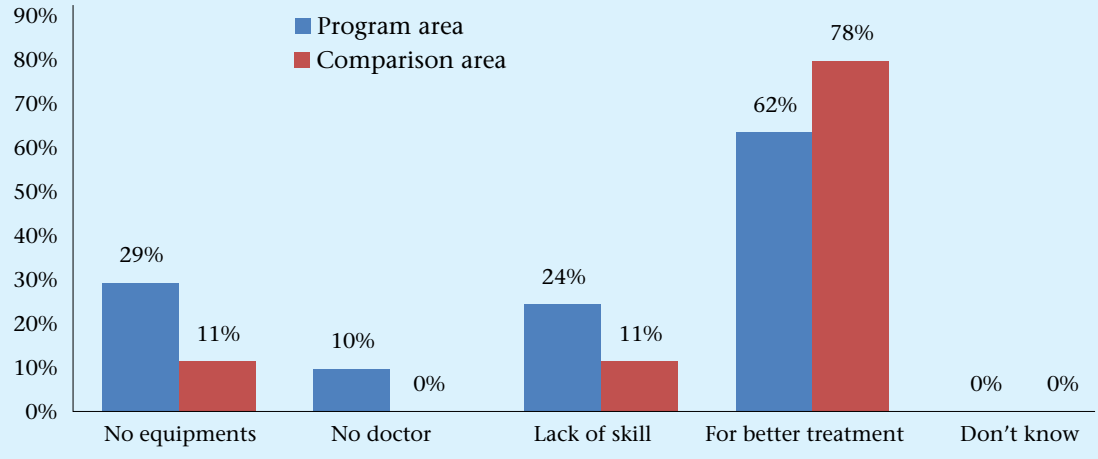
Percent distribution of women who had a live birth in last one year by complications and its management during pregnancy for the most recent birth in Dhaka Metropolitan slum area, 2007 and 2009

Pregnancy complications during pregnancy and its management	Programme area		Comparison area
	2007	2009	2009
Complications during pregnancy[1]			
No complications	74.4	80.8	71.6
Severe headache/blurry vision	5.2	2.4	9.1
High fever	3.0	2.3	3.5
Smelly vaginal discharge	0.6	0.3	0.7
Convulsions	0.7	0.2	1.9
Excessive vaginal bleeding	1.3	0.9	1.9
Reduced/absent foetal movement	1.3	3.1	2.1
High blood pressure	0.6	0.6	0.6
Oedema of hands/feet	4.0	3.2	6.3
Oedema of face	0.1	1.3	1.7
Lower abdominal pain	13.7	11.8	16.6
Untimely water break	0.9	1.1	2.8
Others	0.3	0.6	0.2
Place for treatment of pregnancy complications[2]			
No complications	74.4	80.8	71.6
Did not seek any treatment	8.9	4.2	8.6
Home	0.6	0.0	0.4
BRAC delivery hut	0.6	2.4	0.4
Pharmacy	1.2	0.4	0.9
Government hospital	4.5	2.7	6.7
Private clinic	2.1	5.8	5.2
Chamber	1.9	1.1	3.0
NGO health centre	5.4	2.6	3.2
Other	0.3	0.0	0.0
Type of treatment received[3]			
No complications	74.4	80.8	71.6
No treatment sought	8.9	4.2	8.6
Medicine from pharmacy	7.7	9.4	11.2
Advice from FHW[4]	2.1	2.2	1.5
Referral from FHW	1.2	0.8	0.4
Spiritual water/substance	0.4	0.0	0.6
Amulets	0.1	0.0	0.0
Homeopathic medicine	0.0	0.1	0.2
Injection/saline	0.3	1.3	2.1
Medicine from doctor/nurse	7.4	3.8	6.3
Medicine from Kabiraj/Hakim	0.6	0.0	0.2
Others	0.0	0.1	0.2
Total	**100.0**	**100.0**	**100.0**
Number	**672**	**1,013**	**536**

[1]Multiple responses
[2]Place where the respondent sought care/treatment first
[3]Multiple responses
[4]Female Health Worker

The major reasons for referral were to get better treatment (62 percent in the programme area and 78 percent in the comparison area), followed by unavailability of equipments in the facility (29 percent in the programme area and 11 percent in the comparison area) and lack of required skills to treat (24 percent in the programme area and 11 percent in the comparison area). Among women who were referred to other medical facilities for pregnancy complications, 40 percent of women in the programme area and 33 percent women in the comparison area did not go to the referred place for treatment for lack of money, followed by respondents did not think it was necessary (data not shown).

5.1: Reasons for referral to manage pregnancy complications by area



5.3 IMMEDIATE NEWBORN CARE

Newborn babies are, exposed to many infectious disease threats soon after birth. Persistently high rate of low birth weight remains a very important health problem in Bangladesh. They are particularly vulnerable to nutritional impairment as a consequence of complex interactions between feeding practices, infections, and care practices.

The ***Baseline Survey 2007*** and the ***Midline Survey 2009*** collected information on immediate newborn care and morbidity management for the neonates in slums of Dhaka Metropolitan area and the percentage distribution of women was presented in Table 5.2.2. In accordance with women's knowledge on immediate newborn care (see Chapter 4), colostrum as pre-lacteal feeding after birth was higher, 71 percent in 2009 compared to 36 percent in 2007 in the programme area and 46 percent in the comparison area. On the other hand, use of honey and sugar/glucose water as initial feeding was lower in the programme area in 2009 by more than 50 percent of the use in 2007 and by more than 40 percent in the comparison area.

Amongst all feeding practices, breastfeeding is one of the most critical. Inappropriate and inadequate breastfeeding have adverse consequences on the health and nutritional status, as well as the mental and physical development of children. WHO recommends that infants should be exclusively breastfed for the first six months of life (with no other liquid or solid food or even plain water) and that the infants be initiated on solid (semisolid) complementary food in addition to breast milk after the sixth month of life. Exclusive breastfeeding in the early months of life has been associated with improved child growth and increased child survival and reduced risk of illness. Early breastfeeding improves the probability of successful exclusive breastfeeding and lengthens the duration of breastfeeding. The standard indicator of exclusive breastfeeding is the percentage of children less than six months of age who are exclusively breastfed. The standard indicator of complementary feeding is the percentage of children age 6-9 months who are receiving both breast milk and complementary foods. It is recommended that breastfeeding continue through the second year of life.

In the 2007 baseline and the 2009 midline surveys, half (50 percent in 2007 and 52 percent in 2009) of the women in the programme area started breastfeeding within an hour of birth. The WHO recommends that children be fed colostrum (the first breast milk) immediately after birth, and 85 percent of the women in 2007 and 92 percent in 2009 in the programme area reported that they provided colostrum within one day to their newborn and it was 87 percent in comparison area.

Table 5.2.2 Immediate newborn care

Percent distribution of women who had a live birth in last one year by initial feeding and other care for the most recent birth in Dhaka Metropolitan slum area, 2007 and 2009

Initial feeding and immediate newborn care practices	Programme area		Comparison area
	2007	2009	2009
Pre-lacteal feed after birth[1]			
Colostrum	36.2	70.6	45.5
Plain water	0.9	1.5	0.7
Misri/sugar/glucose water	15.6	7.8	13.4
Honey	39.6	16.2	36.2
Mustard oil	4.5	0.8	3.2
Any milk other than breast milk	3.1	2.8	0.6
Other liquid	0.1	0.4	0.4
Don't know	0.0	0.0	0.0
Initiation of breastfeeding			
Breastfed within one hour of birth	50.1	52.0	47.4
Breastfed within one day of birth	35.1	39.8	42.0
Breastfed after first day of birth	14.4	7.8	10.4
Never breastfed	0.1	0.1	0.0
Don't know	0.1	0.3	0.2
Received colostrum			
Yes	83.2	90.8	77.6
No	16.8	9.2	22.4
Timing of bathing the baby			
Just after birth	54.6	18.0	29.1
Within 24 hours of birth	17.4	17.8	23.1
On second day after birth	14.1	17.7	21.1
Within third day to one week after birth	12.5	41.5	24.4
Later	0.7	4.8	2.1
Don't know	0.6	0.3	0.2
Timing of shaving the baby's head			
Just after birth	0.6	0.3	0.6
Within 24 hours of birth	0.3	0.3	1.7
On second day after birth	0.7	1.1	0.9
Within third day to one week after birth	91.4	83.3	87.5
Later	6.3	11.7	8.2
Never shaved hair	0.7	3.3	1.1
Taken special cord care of the baby			
Yes	98.5	95.4	92.9
No	1.5	4.6	7.1
Wrapping the baby with warm clothes			
Yes	97.2	95.2	94.8
No	2.8	4.8	5.2
Taken 'Kangaroo mother care' of the baby			
Yes	6.0	12.4	23.1
No	94.0	87.6	76.9
Total	**100.0**	**100.0**	**100.0**
Number	**672**	**1,013**	**536**

[1]First thing put into mouth

The practice of bathing just after birth is considered risky; it was markedly lower, 18 percent in 2009, compared to 55 percent in 2007 in the programme area; and, 29 percent in the 2009 comparison area. Bath within third day to one week after birth was higher; 41 percent in 2009 compared to 12 percent in 2007 in the programme area; and, 24 percent in the 2009 comparison area. The majority of the women (93 percent in 2007 and 83 percent in 2009 in programme area; and, 88 percent in the 2009 comparison area) reported that their child's head was shaven within one week of birth. Almost all the women took 'special' cord-care of the baby (98 percent in 2007 and 95 percent in 2009 in programme area; and, 93 percent in the 2009 comparison area), which was also not recommended except for keeping it dry. The proportion of women taking 'Kangaroo-mother care' (skin-to-skin contact between mother and child) was low (6 percent) in 2007 but slightly higher in 2009 (12 percent) in programme area, and 23 percent in the comparison area. Neonatal check up within first two days of life was more frequent (65 percent vs. 46 percent) in the programme area than in the comparison area (Figure 5.2).

Figure 5.2: Timing of neonatal check-up of the baby

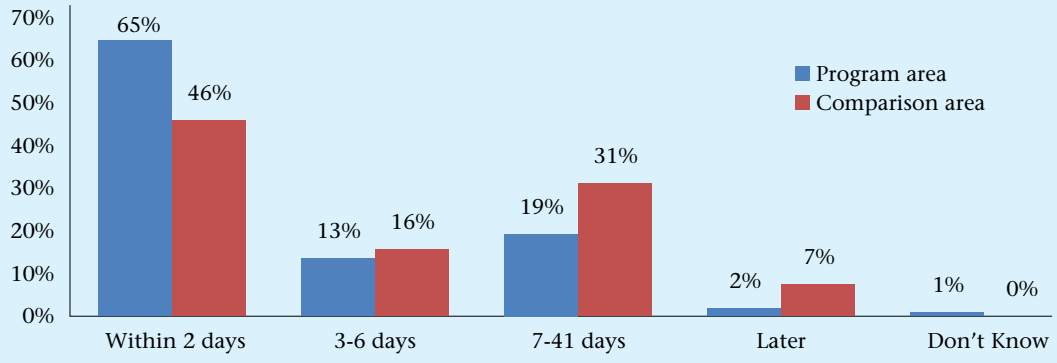


Table 5.2.3 presents the percent distribution of women who had a live birth in last one year by neonatal health check up, complications and management in slums of Dhaka Metropolitan area in 2007 and 2009. Health check-up was more frequent in the programme area (57 percent) in 2009, than in 2007 (40 percent) and the 2009 comparison area (37 percent)

Reported complications/illnesses among the neonates were lower, 20 percent in the programme area in 2009 than 40 percent in 2007 and 32 percent in the comparison area. Illness in order of prevalence was fever followed by cough, difficult breathing jaundice and skin rash/pustule in all areas. These illnesses were lower in the programme area in 2009 than in 2007 and the comparison area in 2009. Fewer mothers did not seek any treatment for illness (2 percent as opposed to 7 percent) in 2009 than in 2007. Private clinic/doctor's chamber was the most visited place of treatment in both the programme and comparison areas followed by government hospital, pharmacy.

Although allopathic medicine was used for great majority of the cases, use of homeopathic and herbal medicines were also used to an extent. They were use more often in the programme area in 2009 than in 2007 and the comparison area. Use of spiritual water, substance or amulets was very low (1 percent).

Table 5.2.3 Neonatal complications and their management

Percent distribution of women who had a live birth in last one year by neonatal complication and its management for the most recent birth in Dhaka Metropolitan slum area, 2007 and 2009

Neonatal health care and complications	Programme area		Comparison area
	2007	2009	2009
Health check-up of the neonate[1]			
Yes	39.6	57.4	37.3
No	60.4	42.6	62.7
Neonatal complications[2]			
No complications	64.3	79.9	67.9
Fever	20.4	8.1	17.9
Cough	14.0	7.4	15.7
Difficulties in breathing	7.0	2.4	5.2
Rapid breathing	2.8	0.7	1.7
Jaundice	3.7	3.4	5.6
Diarrhoea	1.9	1.1	0.9
Umbilical infection	1.3	1.8	0.9
Skin rash/pustule	4.2	2.3	3.9
Convulsion	0.6	0.3	0.6
Inability to suck breast milk	1.0	0.8	0.9
Lethargy/weakness	0.7	0.8	0.9
Body become cold	3.0	1.1	0.9
Others	0.4	0.4	0.4
Place of treatment for neonatal complications[3]			
No complications	64.3	79.9	67.9
Did not seek any treatment	7.1	2.4	2.4
Home	1.3	0.7	0.7
BRAC delivery hut	0.4	0.7	0.2
Pharmacy	5.4	1.8	4.1
Government hospital	5.2	3.9	7.5
Private clinic/chamber	9.9	9.1	15.6
NGO health centre	3.3	1.3	1.3
Other	2.8	0.1	0.2
Type of treatment received[1]			
No complications	64.3	79.9	67.9
No treatment sought	7.1	2.4	2.4
Medicine from pharmacy	12.8	12.4	21.1
Referral from FHW	0.7	0.0	0.0
Advice from FHW	1.6	0.4	0.7
Spiritual water/substance	0.6	0.3	0.4
Amulets	0.6	0.4	0.4
Homeopathic medicine	3.9	2.0	4.3
Injection/saline	0.4	0.8	2.1
Medicine from doctor/nurse	9.7	3.5	6.2
Medicine from Kabiraj/Hakim	2.4	0.7	1.1
Others	0.0	0.1	0.2
Total	**100.0**	**100**	**100.0**
Number	**672**	**1,013**	**536**

[1]Conducted by a doctor or health worker
[2]Multiple responses
[3]Place where the child was taken first

CHAPTER 6: CHILD HEALTH IMMUNIZATION, MORBIDITY AND MANAGEMENT IN 2007 AND 2009

6.1 IMMUNIZATION

This chapter presents findings on several areas of importance to child health, including the vaccination status of children and the prevalence and treatment of important childhood illnesses. Knowing how vaccination coverage varies between different subgroups of the population can help with planning public programmes and interventions. Information on vaccination coverage is also important for the monitoring and evaluation of the government's ***Expanded Programme on Immunization*** (EPI).

Examining treatment practices and contact with health services for children with the three most important childhood illnesses: diarrhoea, acute respiratory infection (ARI) and fever - can help assess national programmes aimed at reducing mortality from these illnesses. Information is provided on the prevalence of fever, ARI and diarrhoea and the extent to which treatment is sought from medically trained providers, pharmacies, and traditional (unqualified) doctors.

Universal immunization of children less than one year of age against the six major vaccine-preventable diseases (tuberculosis, diphtheria, pertussis, tetanus, poliomyelitis, and measles) is one of the most cost-effective programmes to reduce infant and child morbidity and mortality. The EPI is a priority programme of the Bangladesh government, which follows WHO recommended international guidelines. According to the guidelines, children are considered fully immunized when they have received one dose of the vaccine against tuberculosis (BCG), three doses each of the vaccine against diphtheria, pertussis (whooping cough) and tetanus (DPT), three doses of polio vaccine (excluding polio vaccine given at birth), and one dose of measles vaccine before their first birthday. Therefore, vaccination of children aged 1-4 years is presented to allow the comparison of results across the area over the year.

The 2007 baseline and the 2009 midline surveys collected data on childhood vaccinations for all surviving children born during these year period. Table 6.1.1 shows the percent distribution of coverage of different vaccines among children aged 1-4 years in Dhaka Metropolitan slum area in 2007 and 2009. Vaccine coverage among the children of sampled women was near universal both in surveys; 98 percent of the 1-4 years old children received at least one vaccine in the programme area and 96 percent in the comparison area, in 2009. The percentage of receiving three or more polio vaccines was 85 percent in the programme area and 79 percent in the comparison area, in 2009. These were lower than 90 percent in programme area in 2007. On the other hand, the percentage of receiving three or more DPT vaccines was much higher in the programme and comparison areas (82 percent and 77 percent, respectively) in 2009, and it was 47 percent in programme area in 2007.

Vaccinations are most effective when given at the proper age. Therefore, it is recommended that children complete the schedule of immunizations during their first year of life (by 12 months of age). Complete vaccination coverage (measured with receiving all the recommended vaccinations) was higher in 2009 than in 2007. It was 74 and 70 percent in the programme and comparison areas in 2009, and 41 percent in the programme area in 2007. Complete immunization (BCG, three doses of DPT and Polio and measles) was much higher in 2009, than in 2007.

Table 6.1.1 Vaccination coverage among 1-4 years old children

Percent distribution of children aged 1-4 years by vaccines received at any time before the survey, Slums in Dhaka Metropolitan area, 2007 and 2009

Vaccinations received at any time before the survey	Programme area		Comparison area
	2007	2009	2009
Child ever received any vaccination			
Yes	97.1	97.6	96.1
No	2.9	2.4	3.9
Type of vaccinations received			
None	2.9	2.4	3.9
BCG	94.1	97.0	94.9
Polio	96.9	97.3	95.5
DPT	91.8	97.1	95.5
Measles	80.7	88.1	83.4
Vitamin A	91.1	89.1	84.9
Number of vaccinations received – Polio			
None	3.1	0.3	0.6
1	0.6	1.7	1.9
2	5.8	8.2	9.4
3 or more	89.8	84.6	78.7
Don't know	0.6	2.9	5.4
Number of vaccinations received – DPT			
None	8.3	0.6	0.6
1	5.1	1.7	2.7
2	39.5	13.7	15.4
3 or more	47.1	81.7	77.4
Don't know	0.0	0.0	0.0
Complete vaccination by months	40.64	74.0	70.2
Total	**100.0**	**100.0**	**100.0**
Number	**807**	**1,392**	**667**

6.2 CHILD MORBIDITY AND MANAGEMENT

This section discusses three illnesses that are major contributors to childhood morbidity and mortality in Bangladesh: diarrhoea, acute respiratory infection (ARI), and fever. Estimates of the prevalence of these illnesses as well as data concerning types of treatment and feeding practices during diarrhoea are presented.

Table 6.2.1 shows considerable differences in the prevalence of morbidity among 1-4 years old children of the sampled women in slums of Dhaka Metropolitan area between 2007 and 2009. Childhood diseases are highly seasonal and some of the differences could be due to difference in the timing of the surveys; July-August (monsoon season) 2007 and November-December (post-monsoon) 2009. Though diarrhoea remains a leading cause of childhood morbidity and mortality in developing countries, among 1-4 years old children of sample women, prevalence of diarrhoea was much lower in the programme and the comparison area in 2009 (5 percent each) than in the programme area in 2007 (19 percent). Fever is a major manifestation of acute infections including malaria in children. It contributes to high levels of malnutrition and mortality. While it can occur year-round, malaria is more prevalent after the end of the rainy season. The percentage of children aged 1-4 years who had fever during the two weeks preceding the survey was lower (28 percent in the programme area and 33 percent in the comparison area) in 2009, and (45 percent in the programme area) in 2007.

Table 6.2.1 Childhood illness and treatment

Percent distribution of women who had a child aged 1-4 years by prevalence of common childhood illnesses in last two weeks, Slums in Dhaka Metropolitan area, 2007 and 2009

Morbidity and health-care seeking behaviour for 1-4 years old children	Programme area		Comparison area
	2007	2009	2009
Child had suffered from…[1]			
Fever	44.7	27.9	33.2
Cough	33.1	22.6	30.9
Fast breathing	6.1	1.9	3.9
Difficulty in breathing	10.2	4.9	7.8
Chest in drawing	3.8	1.0	1.8
Diarrhoea	19.1	4.8	5.0
ARI	11.4	5.6	9.6
Place of treatment for ARI[2,3]			
Did not seek any treatment	26.1	9.0	9.2
Home	0.0	1.3	4.6
BRAC delivery hut	0.0	0.0	0.0
Pharmacy	38.0	26.9	16.9
Government hospital	13.0	23.1	20.0
Private clinic	1.1	9.0	6.2
Chamber	19.6	32.1	38.5
NGO health centre	5.4	7.7	10.8
Other	0.0	0.0	0.0
Place of treatment for diarrhoea			
Did not seek any treatment	29.2	23.9	18.2
Home	3.2	3.0	3.0
BRAC delivery hut	0.0	0.0	0.0
Pharmacy	35.7	29.9	45.5
Government hospital	9.1	11.9	9.1
Private clinic	0.6	10.4	3.0
Chamber	18.2	23.9	27.3
NGO health centre	7.8	1.5	3.0
Other	0.0	0.0	0.0
Total	**100.0**	**100.0**	**100.0**
Number	**807**	**1,392**	**666**

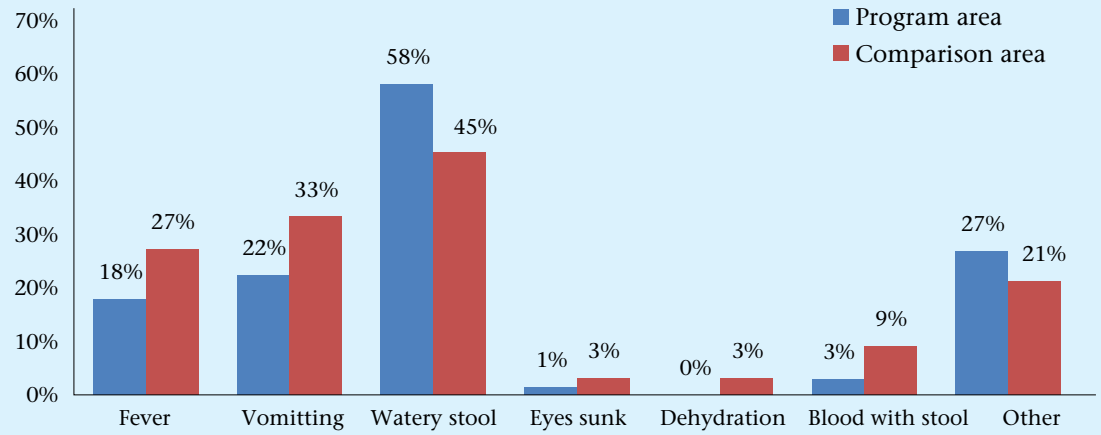
[1]Multiple responses
[2]Refers to cough with either rapid or difficult breathing, or chest in drawing;
[3]Multiple responses for the children who suffered from ARI in last two weeks

Acute respiratory infection (ARI), primarily pneumonia, is a leading cause of childhood morbidity and mortality throughout the world. Early diagnosis and treatment with antibiotics can reduce the number of deaths caused by ARI, particularly deaths resulting from pneumonia. In the 2007 and 2009 surveys, mothers were asked whether their children of 1-4 years old had been ill in the two weeks preceding the surveys with a cough accompanied by short, rapid breathing or difficulty breathing which the mother considered to be chest-related. These symptoms are considered to be a proxy for pneumonia. Table 6.2.1 shows that the prevalence of ARI was lower in the programme and the comparison areas in 2009 than in the programme area in 2007.

For management of acute respiratory infection (ARI) among 1-4 years old children, treatment was sought mostly in the pharmacies (38 percent in 2007; and, 27 percent, in 2009, in the programme area, 17 percent, in the comparison area), followed by private clinic/chamber (21 percent, in 2007; and, in 2009, 41 percent in the programme area, 45 percent in the comparison area) and government hospitals (13 percent in 2007; and, in 2009, 23 percent in the programme area, 20 percent in comparison area). For treatment of diarrhoea, a similar pattern was seen in both 2007 and 2009 surveys.

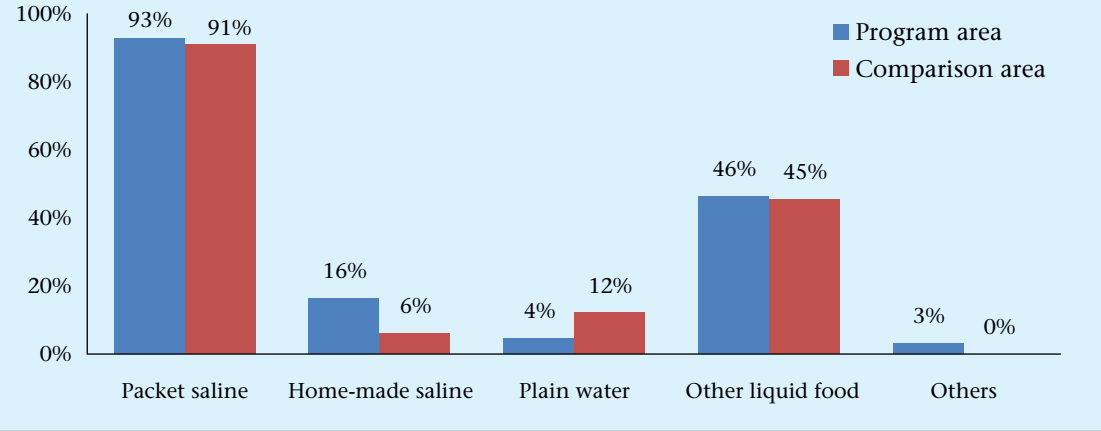
Figure 6.1 shows the percentage distribution of children aged 1-4 years by symptoms of diarrhoea in slums of Dhaka Metropolitan area in 2009. Watery stool was the most common symptom (58 percent in the programme area and 45 percent in the comparison area) followed by vomiting (22 percent in the programme area and 33 percent in the comparison area) and fever (18 percent in the programme area and 27 percent in the comparison area). Blood in stool was present in 3 percent and 9 percent of diarrhoea cases in the programme and the comparison areas, respectively.

Figure 6.1 : Illness associated with diarrhoea in 2009



Mothers are encouraged to continue feeding children with diarrhoea normally and to increase the amount of fluids they offer. In the 2009 survey, mothers (who had a child aged 1-4 years with a recent episode of diarrhoea) were asked about what they gave the child to drink during the diarrhoeal episode compared with usual practice. Figure 6.2 shows that in 2009, 93 percent of children with diarrhoea in the programme area and 91 percent in the comparison area were given packet saline, while it was 88 percent in the programme area in 2007, followed by other liquids (such as coconut water) 46 percent in the programme area and 45 percent in the comparison area. Use of home-made saline was more frequent in the programme area than in the comparison area.

Figure 6.2 :Type of liquid given during diarrhoea in 2009



CHAPTER 7: PERCEPTION ON DELIVERY FACILITIES AND BRAC BIRTHING HUT

7.1 OPINION ON LOCAL HEALTHCARE FACILITIES

In both surveys, questions were asked to the women on their perception of local healthcare and delivery facilities and data were analyzed to understand the perception of the women and presented in the Table 7.1.1.

Table 7.1.1 Women' opinion on local healthcare and delivery facilities

Percent distribution of women by their opinion on services in local healthcare and delivery facilities, slums of Dhaka Metropolitan area, 2007 and 2009

Opinion on services in local healthcare and delivery facilities	Programme area		Comparison area
	2007	2009	2009
Healthcare and delivery facilities available in the slum area			
Yes	52.6	85.1	49.2
No	47.4	14.9	50.8
Type of health facilities available[1]			
No	47.4	14.9	50.8
BRAC delivery hut	20.7	60.2	4.6
Private clinic	3.8	18.0	17.5
NGO health centre	38.2	41.3	37.4
Chamber	4.9	6.3	5.1
Other	0.0	0.1	0.2
Aspects of healthcare and facilities that satisfy women[1]			
Good behaviour of the staff	50.5	69.9	68.7
Availability of drugs/supplies	39.4	56.1	58.2
Do not have to wait	11.5	28.9	26.9
Treatment effective/cured	77.8	38.0	31.1
Willing to answer questions	17.0	14.7	12.8
Affordable	16.5	29.4	39.1
Clean	1.4	6.4	5.6
Amiable and easy to communicate	4.2	7.5	6.6
Other	0.0	0.0	0.0
Aspects of healthcare and facilities that would dissatisfy women[1]			
Bad behaviour of the staff	53.8	71.1	70.3
Non-availability of drugs/supplies	32.2	49.9	48.9
Have to wait to get treatment	35.4	36.6	36.3
Costly/unaffordable	20.6	38.4	44.4
Not willing to answer questions	18.9	19.7	16.4
Dirty/lack of cleanliness	2.0	8.0	6.6
Not friendly and hard to communicate	7.0	7.8	9.1
Treatment not effective/not cured	56.8	13.6	12.4
Other	0.0	0.0	0.1
Total	**100.0**	**100.0**	**100.0**
Number	**1,256**	**2,172**	**1,054**

[1]Multiple responses

Availability of healthcare and delivery facilities was higher in the programme area in 2009 than in 2007 and it was mainly due to BRAC delivery huts, and to an extent, private clinic. For example, in the programme area, 85 percent of the women in 2009 and 43 percent in 2007 reported availability of healthcare and delivery facilities in their localities and it was 49 percent in the comparison area. The most frequently mentioned were BRAC delivery huts, followed by NGO operated health centres and private clinics.

Women were asked again about the "liking of different aspects of the quality of care" in both the surveys. Results show a change in the order (in terms of percentage). In 2007 in the programme area, the order of the liking was efficacy of treatment (78 percent), good behaviour of the staff (50 percent) and availability of drugs and supplies (32 percent). In 2009 in the programme area, the order was good behaviour (70 percent), availability of drugs and supplies (56 percent) and efficacy of treatment (38 percent).

They were also asked about aspects of healthcare and facilities they did not like. There was change in the order of disliking of the aspects. The order of disliking was non-effective treatment (57 percent), bad behaviour (54 percent), long waiting time to get treatment (35 percent) and non-availability of drugs/supplies (32 percent) in the programme area in 2007. In 2009, in the programme area, the order was bad behaviour of the staff (71 percent), non-availability of drugs and supplies (50 percent), cost/unaffordable (38 percent) and long waiting time (37 percent). These were also similar in the 2009 comparison area.

7.2 AWARENESS OF BRAC BIRTHING HUT

In the 2007 and 2009 surveys, women who had children in last five years were asked about the knowledge and usage of BRAC's birthing huts in slums of Dhaka Metropolitan area and the results are presented in Table 7.2.1. In the programme area, one in every four women in 2007 and one in every five women in 2009 were aware of the existence of BRAC's birthing huts in their locality. More women were aware of type of services BRAC birthing huts were providing in 2009 than in 2007. Common services were antenatal care followed by skilled delivery assistance and delivery care, newborn care and post-partum care, frequency being higher in 2009 than in 2007 in the programme area. Sources of knowledge of services were BRAC's Shasthya Shebika/ midwife followed by friends/neighbours and own experience, proportion being higher in 2009 than in 2007. A few women who were aware of BRAC's birthing hut had registered to birthing huts either year. It was 6 percent in 2009 and 7 percent in 2007. They registered for antenatal check-up, delivery care and skilled delivery assistance.

Table 7.2.1 Information on BRAC's Birthing Hut

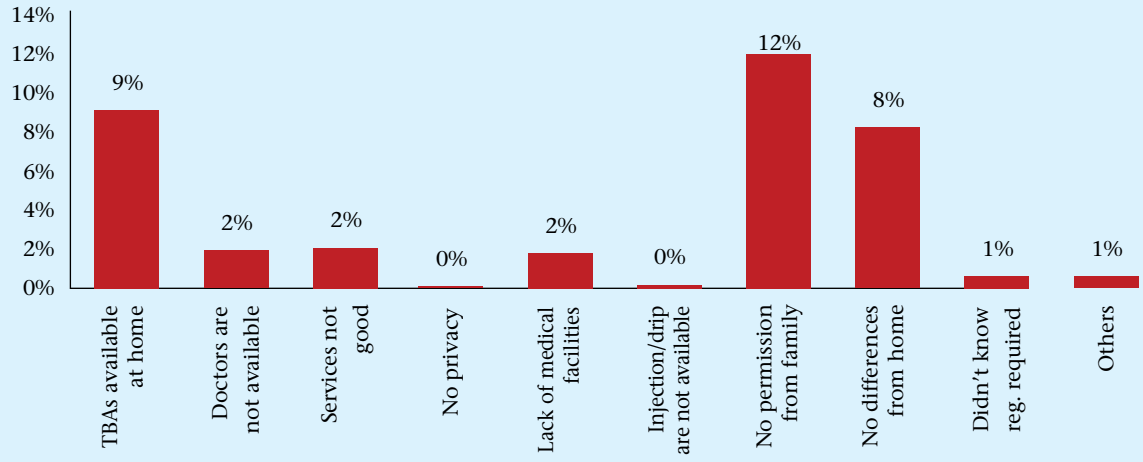
Percent distribution of women who had a child in last five years by knowledge and usage of BRAC's birthing hut, BRAC MANOSHI programme area in Dhaka City Corporation slums, 2007 and 2009

Knowledge and usage of services from BRAC's Birthing Hut	Programme area	
	2007	2009
BRAC's Birthing Hut exists in the locality		
Yes	24.9	68.1
No	75.1	31.9
Services provided by BRAC's Birthing Hut[1]		
Antenatal check-up	14.7	61.3
Skilled delivery assistance	6.5	39.5
Delivery care	7.2	27.1
Newborn care	2.9	8.5
Post-partum care	2.9	8.5
Child health care	5.3	5.8
Others	0.0	0.0
Don't know	6.9	1.9
Source of information on BRAC birthing hut[1]		
From own experience	1.8	12.9
From family members	1.3	8.2
From neighbour/friends	7.1	24.2
From BRAC Shasthya Shebika/staff/midwife	11.0	48.0
From posters/leaflet/advertisement	0.2	1.3
From BRAC's other programme	0.7	1.2
Other	0.0	0.0
Registered to BRAC's Birthing Hut		
Yes	7.3	37.8
No	17.6	30.3
Services for which registered to Birthing Hut		
Did not register	17.6	30.3
Antenatal check-up	5.7	34.2
Skilled delivery assistance	2.4	22.5
Delivery care	3.5	15.8
Newborn care	2.1	5.1
Post-partum care	1.5	5.7
Child health care	2.2	3.7
Others	0.0	0.0
Total	**100.0**	**100.0**
Number	**1,256**	**2,172**

[1]Multiple responses, applicable only for women who were aware of Birthing Hut in the locality

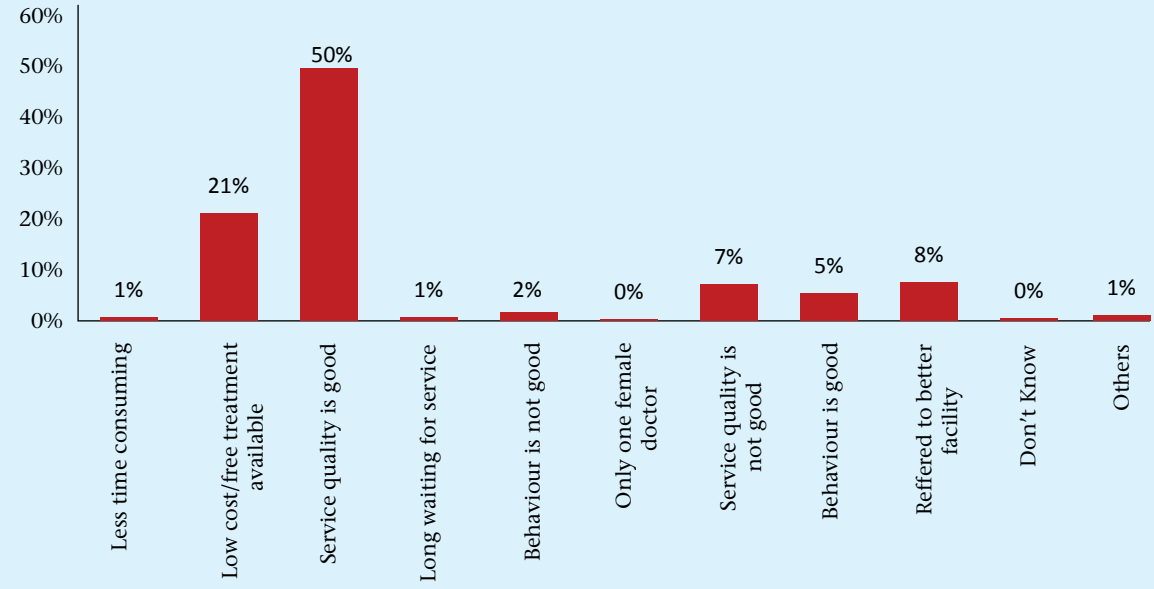
The baseline and the midline surveys asked women about the reasons for not registering with BRAC birthing huts and the findings are presented in the Figure 7.1. In 2007, one of the main reasons for not registering with BRAC birthing huts was the lack of knowledge about the requirement of registering to receive its service (31 percent), whereas in 2009 the main reason was family objection (12 percent), followed by services not different from home. The availability of the TBAs at home was another reason.

Figure 7.1: Reasons for not registering to BRAC's Birthing Hut, 2009



The MANOSHI baseline and midline surveys also sought general opinions on BRAC birthing huts and the findings are presented through Figure 7.2. Clearly, quality of service and provision of low cost or referral to better facility provided by the BRAC birthing hut had already been noted by the women.

Figure 7.2 Opinion regarding BRAC's Birthing hut in 2009



Maternity and newborn care in the programme area in 2009 was disaggregated by duration of exposure to the MANOSHI Programme (Tables 7.2.2a and 7.2.2b). Neither maternity care nor newborn care showed significant improvement with increased exposure to the programme.

Table 7.2.2a Exposure to MANOSHI programme and maternity care

Percent distribution of women who had a child in last year by maternity and newborn care in MANOSHI programme area in Dhaka City Corporation slums, 2009

Maternity and newborn care	Duration of exposure	
	<18 mo	18+mo
ANC visit made		
None	20.5	18.0
1	8.2	6.7
2	12.3	13.7
3	19.5	18.7
4 or more	39.4	42.6
Don't know	0.0	0.6
PNC visit made		
None	71.9	73.9
1	13.4	11.4
2	6.2	6.9
3	3.8	4.0
4 or more	4.1	4.2
Don't know	0.7	0.4
Pre-lacteal feed after birth		
Colostrum	67.8	71.7
Plain water	2.1	1.2
Misri/sugar/glucose water	5.5	8.7
Honey	17.8	15.5
Mustard oil	0.7	0.8
Any milk other than breast milk	5.1	1.8
Other liquid	1.0	0.1
Don't know	0.0	0.0
Total	**100.0**	**100.0**
Number	**292**	**721**

Table 7.2.2b Exposure to MANOSHI programme and maternity care

Percent distribution of women who had a child in last year by maternity and newborn care in MANOSHI programme area in Dhaka City Corporation slums, 2009

Maternity and newborn care	Duration of exposure	
	<18 mo	18+mo
Initiation of breastfeeding		
Breastfed within one hour	20.5	18.0
Breastfed within one day of birth	8.2	6.7
Breastfed after first day of birth	12.3	13.7
Never breastfed	19.5	18.7
Received colostrum		
Yes	94.5	89.3
No	5.5	10.7
Timing of Bathing the baby		
Just after birth	17.5	18.2
Within 24 hours of birth	17.5	17.9
On second day after birth	17.8	17.6
Within third day to one week after birth	43.2	40.8
Later	3.8	5.3
Don't know	0.3	0.3
Timing of shaving the baby's head		
Just after birth	0.7	0.1
Within 24 hours of birth	0.3	0.3
On second day after birth	1.0	1.1
Within third day to one week after birth	80.8	84.3
Later	14.4	10.7
Never shaved hair	2.7	3.5
Total	**100.0**	**100.0**
Number	**292**	**721**

CHAPTER 8: POLICY IMPLICATIONS & CONCLUSION OF 2009 MANOSHI MIDLINE SURVEY

8.1 STATUS OF MATERNAL AND CHILD HEALTH IN URBAN SLUMS

The 2006 Bangladesh Urban Health Survey reported that maternal and newborn and child health conditions were worse in slum areas than in urban non-slum areas in Dhaka city (20). Levels of ANC visits to medically trained providers, delivery in health facilities and skilled delivery assistance were lower among women in slums than in urban non-slums. The Bangladesh Demographic and Health Survey (BDHS) 2007 also showed that maternal and child health indicators in the slum population were very close to the rural population in Bangladesh (19). Findings from the MANOSHI ***Baseline Survey 2007*** and the ***Midline Survey 2009*** reiterate these findings with some indications of improvements in knowledge and practices related to maternal and newborn health. The improvements were more frequent and larger in the programme area in 2009 compared to the levels in the 2007 programme area, or the comparison area in 2009.

8.2 POLICY IMPLICATIONS OF MANOSHI MIDLINE SURVEY 2009

The MANOSHI ***Baseline Survey 2007*** (14) provided some benchmark statistics on knowledge, perception and practices related to maternity and newborn care of mothers residing in urban slums in Dhaka. Women have high levels of knowledge about requirements for ANC visits, iron supplementation during pregnancy, delivery assistance by medically trained persons and PNC visits after delivery, but a small percent practiced these. Translating knowledge into practice appeared to be a big challenge towards improving maternal and newborn health.

BRAC implemented the MANOSHI programme to improve maternal and newborn health, addressing some of the barriers that stand in between knowledge and practice. The midline survey conducted in 2009 reveals some improvements in knowledge and practices in the programme area between 2007 and 2009 and between the programme and the comparison areas in 2009. For example, more women were aware of life-threatening pregnancy complications, fatal post-delivery complications (such as excessive vaginal bleeding, convulsions and high fever), and newborn's life-threatening health problems (such as difficult or fast breathing, asphyxia, jaundice and convulsion) in the programme area in 2009 compared to programme area in 2007 and the comparison area in 2009. However, no improvement happened in knowledge about time of initiation of breastfeeding, duration of exclusive breastfeeding, symptoms of ARI and use of packet saline to children with diarrhoeal in the programme in 2009 over that in 2007 and the comparison areas in 2009.

There was a considerable improvement in knowledge of immediate newborn care. For example, drying newborn thoroughly just after birth, wrapping with warm clothes, feeding colostrum as first feed and delaying first bath were more frequent in the programme area in 2009 compared to 2007 and the comparison area in 2009. When asked about sources of knowledge a sizable percent of women named BRAC ***Shasthya Shebika/Kormi*** as one of the major sources. Improvements in some of the indicators in the programme area in 2009 over that in 2007 and the comparison area in 2009 might be due to the MANOSHI programme activities.

Some improvements in practices were observed as well. ANC visits numbering four or more, deliveries in health facilities, skilled delivery assistance and PNC visits (one or more) were much higher in the programme area in 2009 compared to 2007 and the comparison area in 2009. In the list of place and provider of maternity services, BRAC delivery hut and BRAC ***Shasthya Shebika/Kormi*** were dominant in the programme area in 2009 compared to the other area and year. These improvements may have links with the activities of the MANOSHI programme.

8.3 CONCLUSION

The MANOSHI programme has been implemented to improve the health of the mother, newborn and child in urban slums through community-based solutions with aims to contribute to the achievement of MDGs 4 and 5. While monitoring progress in achieving these MDGs, the Baseline and the Midline Surveys in 2007 and 2009 respectively provide evidences of positive changes in women's knowledge, perceptions, and practices related to maternity and newborn care. Positive changes were more frequent and higher in the programme slums in 2009, than in 2007 or in the comparison slums in 2009. The findings of improvements in maternity and newborn care, especially in antenatal care, delivery care and postnatal care will help the programme personnel to customize the intervention activities to be more effective. In conclusion, it can be said that the programme is on the right track to improve the knowledge and practice related to maternal, neonatal and child health, which will contribute to the reduction of morbidity and mortality.

REFERENCES

1. ESCAP 1993: State of Urbanization in Asia and the Pacific 1993. United Nations: Bangkok. http://www.khmerstudies.org/events/Water/Storey%20Nov%202005.pdf. December2005. Accessed on 2 May 2010
2. United Nations (2007) World Urbanization Prospects: The 2007 Revision, New York: UN.
3. Centre for Urban Studies, National Institute of Population Research and Training and Measure Evaluation (2006) Slums in Urban Bangladesh: Mapping and Census, 2005. Dhaka: CUS.
4. Government of Bangladesh, Bangladesh Bureau of Statistics (2007): Population Census-2001: National Series, Volume-1, Analytical Report. Bangladesh Bureau of Statistics, Planning Division, Ministry of Planning, Dhaka, Bangladesh.
5. Lein, Haakno (2003). ***Hazards and forced migration in Bangladesh.*** Department of Geography. NTNU Norwegian University of Science and Technology.
6. Khan Shahidur Rahman. Achieving food security and becoming food surplus, June 14, 2008. Available with http://www.thedailystar.net/story.php?nid=41001. Access on July 10, 2010
7. Afsar, Rita (2000). ***Internal migration and the development nexus: the case of Bangladesh.*** Bangladesh Institute of Development Studies, Dhaka, Bangladesh. University Press Limited.
8. Buckner Bates. Ch 4: Migration and Migrant Characteristics, p139-198, In: 2006 Bangladesh Urban Health Survey. Dhaka, Bangladesh and Chapel Hill, North Carolina, USA: National Institute of Population Research and Training (NIPORT), MEASURE Evaluation, ICDDR,B and ACPR; December 2008.
9. Dhaka City Corporation: ***Project***: ***Urban Primary Health care***. Available with www.dhakacity.org/.../Project/.../Urban_Primary_Health_care, Accessed on July 10, 2010.
10. NGO services Delivery Program Final Report. December 2007. USAID, Pathfinder International. Available with: http://pdf.usaid.gov/pdf_docs/PDACL345.pdf. Accessed on July 10, 2010
11. Partnership Agreement on Poverty Reduction between Governments of the People's Republic of Bangladesh and. Asian Development Bank. 3 April 2000 Available with www.adb.org/documents/poverty/pa_ban.pdf. Accessed on July 10, 2010
12. Second ***Urban Primary Health Care Project***.(UPHCP-II). Local Government Division, Ministry of LGRD & Cooperatives. Government of the Peoples' Republic of ***Bangladesh***. Available with www.uphcp.org/ Access on July 10, 2010.
13. ***Ministry of Health*** and ***Family Welfare***: ***Health Nutrition***, ***Population Sector*** Programme (***HNPSP***2003-2010). Available with: www.hnpinfobangladesh.com/.../di_204_Main%20Report%20Final%2011.05.2009.pdf -
14. Ahsan KS, Streatfield PK, Ahmed SM. Baseline Survey in Dhaka Urban Slums 2007. Scientific Report No. 104, October 2008. ICDDR,B, BRAC. Bangladesh.
15. Gwatkin DR, Rustein S, Johnson K, Pande RP, and Wagstaff A (2000) Socioeconomic Differences in Health, Nutrition, and Population in Bangladesh, HNP/Poverty Thematic Group Working Paper, Washington DC: The World Bank.
16. Rutstein S (1999) Wealth versus Expenditure: Comparison between the DHS Wealth Index and Household Expenditures in Four Departments of Guatemala. ***Unpublished***.
17. Norman GR, Streiner DL (1994) Biostatistics: The Bare Essentials, St. Louis: Mosby Yearbook Inc.
18. Stevens J (1986) Applied multivariate statistics for the social sciences. Hillsdale: Lawrence Erlbaum Associates.
19. National Institute of Population Research and Training (2007) Bangladesh Demographic and Health Survey 2007: Preliminary Report. Dhaka: Institute of Population Research and Training (NIPORT).
20. The 2006 Bangladesh Urban Health Survey. Dhaka, Bangladesh and Chapel Hill, North Carolina, USA: National Institute of Population Research and Training (NIPORT), MEASURE Evaluation, ICDDR,B and ACPR; December 2008