



The BRAC Manoshi Approach

to Initiating a Maternal, Neonatal and Child Health Project in Urban Slums with Social Mapping, Census Taking, and Community Engagement

Tapash Roy
Lucy Marcil
Rashed H. Chowdhury
Kaosar Afsana
Henry Perry

The BRAC Manoshi Approach to Initiating a Maternal, Neonatal and Child Health Project in Urban Slums with Social Mapping, Census Taking, and Community Engagement

Tapash Roy, MD, MPH, PhD¹

Lucy Marcil, MPH²

Rashed H. Chowdhury, MBBS, MPH¹

Kaosar Afsana, MD, MPH, PhD¹

Henry Perry, MD, MPH, PhD²

¹Health, Nutrition and Population Programme, BRAC, Dhaka, Bangladesh

²Johns Hopkins University Bloomberg School of Public Health

Copyright © BRAC

All rights are reserved. No part of this publication shall be reproduced or transmitted in any form or by any means without the prior permission of BRAC. Any person who does any unauthorised act in relation to this publication shall be liable to criminal prosecution and civil claims for damages.

Table of Contents

Glossary of Terms and Abbreviationn	1
Acknowledgements	2
Executive Summary	3
Purpose	4
Background	5
The Manoshi Project	6
Manoshi Project Structure	8
Overview of Methods Used to Implement the Manoshi Project	13
Method: Social Mapping	15
Method: Census Taking	19
Method: Community Engagement	23
From Pilot to Scale Up	26
Summary	27
References	28
Appendix 1: Social Mapping	29
Appendix 2: Census Form	33

Glossary of Terms and Abbreviations

CHW	Community Health Worker
Household	Defined as a group of people who eat around the same hearth
MNCH	Maternal, neonatal and child health

Acknowledgments



The preparation of this guide was undertaken at the request of Dr. Kaosar Afsana and Dr. Tapash Roy, who were interested in having the important work of initiating the Manoshi Project documented so that projects and programmes in other areas of the world could learn from this experience and adapt the methods used at Manoshi to other programme settings – especially in urban slums of developing countries. Ms. Lucy Marcil worked with Dr. Afsana and Dr. Roy and their staff to develop this manual. Ms. Marcil's expenses were funded by the Lipitz Public Health Policy Award. We are grateful to the Manoshi field staff for the assistance and in particular we are grateful to Dr. Amhed Ali, Dr. Rashed Choudhury, Dr. Tariqul Khan, Mr. Shaymal Roy, Mr. Solaiman Sarkar, and Dr. Monowarul Aziz.

Executive Summary

Purpose: This guide aims to provide programme leaders with the concrete methods used to initiate an effective maternal, neonatal and child health (MNCH) programme in urban slums and to convince policy makers of the efficacy of these techniques so that they are adopted broadly.

Background: Urban slum health is an increasingly urgent issue as slum conditions and health are often poorer than that of the rest of the population and as these populations are expanding. BRAC, a well-established Bangladeshi NGO with a reputation of excellence, created the Manoshi Project, a community-based MNCH programme for 6.9 million urban slum dwellers in 10 cities of Bangladesh. This project has led to an impressive increase in the percentage of deliveries occurring in facilities and notable declines in maternal and neonatal mortality in Manoshi service areas. As such, it stands to be a model for other slum-based MNCH programmes in developing countries. To effectively replicate the model, though, methods used to initiate the programme must be delineated. We describe in this guide three core methods: Social Mapping, Census Taking, and Community Engagement. The term “social mapping” refers to the process of creating a map of the community in collaboration with the community.

Social Mapping: To undertake Social Mapping, BRAC trained many levels of programme staff, identified key informants, created a household list, mapped houses and other community structures in a systematic manner with a predetermined classification system, consulted with households to verify map accuracy, and created maps at the programme level. These steps familiarised staff with community assets and needs, engaged the community, and facilitated the planning of efficient service delivery, all of which are important for achieving programme impact.

Census Taking: BRAC’s methods to complete a census included selecting surveyors and planning for the survey in collaboration with the MNCH Committee, training surveyors along with programme staff, and carrying out the census with oversight from the Monitoring Unit. These steps allowed BRAC to ensure quality data collection, determine community needs, avoid duplication of services, allocate resources appropriately, establish baseline data for monitoring and evaluation, and engage the community.

Community Engagement: Approaches BRAC utilised to engage the community include forming MNCH Committees and women’s support groups, mass marketing and social mobilization, responding to community feedback, and integrating programme activities with local community structures. These approaches build trust, create culturally acceptable care, and enhance the uptake of services. Conclusion: These methods are accessible to programmes with even limited resources and limited access to technology. Strengthening linkages among service providers and guiding logical resource allocation are two key strategies for improving the health status of communities in low-resource settings. Just as importantly, these strategies engage communities to become partners in improving their own health.

Purpose

This guide is intended for programme planners considering implementing maternal, neonatal and child health programmes for urban slum populations. The goal of this guide is to explain the processes BRAC used in the initial stages of implementing its large-scale programme for maternal, neonatal and child health in the urban slums of Bangladesh – the Manoshi Project – so that other programmes in Bangladesh and beyond can duplicate these methods.

Data collected on the programme shows it to be quite effective. But how and why did it get to that point? What made it effective? Many programmes attempt to provide health services but end up making minimal measurable impact; how is Manoshi different? Many factors exist to explain these differences: BRAC's long history (41 years) of implementing community-based interventions, its well-deserved international reputation for excellence, and Manoshi's large-scale implementation, among others. However, a key underlying factor is the methods BRAC used at the beginning, during the early implementation phase of the programme.

Social mapping (the process of creating a map of the community in collaboration with the community), census taking, and community engagement were fundamental to both gaining community acceptance and structuring services to meet community need. These techniques require time and effort but are ones that any organization can use.

We wrote this guide to give other programmes the information they need to adopt them. We hope knowledge of these methods will give programmes the skills they need to undertake community engagement, social mapping, and census taking in their urban slum projects. We also hope that this guide will encourage health policy makers, government officials, donors, and programme leaders to make these techniques the norm rather than the exception, with the ultimate goal of improving health status in low-income urban settings.

Background

Importance of urban slum health

An urgent global need exists for more effective urban slum health systems. According to UN data, a majority of the world's population is urban for the first time in history; even if broken down by development status, 46% of “less-developed regions” are now urban (United Nations, 2012). This trend will only continue. Unfortunately, urbanization does not equate with an increase in standard of living.

Forty-six percent of urban residents in developing countries live in slums while only 6% of those in developed countries do; the total slum population globally is projected to reach 2 billion over the next three decades if changes are not made (The Challenge of Slums: Global Report on Human Settlements 2003, 2003).

In addition to coping with poor standards of living, slum dwellers have worse health than their other urban counterparts, which the Millennium Development Goal 7 acknowledges.¹ Moreover, despite living in relatively close proximity to health services, the urban poor utilise these services at disproportionately low rates (Prakash, 2013).

Donor funding is limited, as always. We cannot afford to continuously reinvent the wheel. If every programme must start over again from conception up, we will never reach Health for All. But, there is hope. Institutionalizing systems and management knowledge can help make the leap from successful models to scalable and sustainable implementation. Knowledge about the Manoshi Project's methods will enable the concepts and implementation principles of the programme to be replicated elsewhere as they are simultaneously adapted to the local setting since this adaptation is inherent in the methods of community mapping, census taking, and community engagement.

BRAC

BRAC, the largest non-governmental organization in the world, originated as the Bangladesh Rehabilitation Assistance Committee in 1972 as a response to destruction wrought by cyclones and the liberation war in Bangladesh. The organization's focus quickly transitioned from relief to sustainable community development.

In the ensuing 42 years, BRAC has developed expertise in almost every field of development, including microfinance, commercial banking, social enterprise, agriculture, education, gender equality, human rights and legal aids, community empowerment, water, sanitation and hygiene, and health. Although the organization still primarily serves Bangladeshis, it has also expanded to 11 other countries across the globe. BRAC was recently rated the number one NGO worldwide by The Global Journal for its innovation, sustainability and impact (The Top NGOs, 2013).

¹ Goal 7D: Achieve, by 2020, a significant improvement in the lives of at least 100 million slum dwellers. <http://www.un.org/millenniumgoals/environ.shtml>



Image 1. Transporting a pregnant woman to a delivery center in Dhaka Mohammadpur Slum

The Manoshi Project at BRAC provides community-based maternal, neonatal and child health services for 6.9 million urban slum dwellers in 10 cities in Bangladesh. At the time of the project's inception in 2007, this population had high maternal and neonatal mortality. A 2008 service population survey revealed a maternal mortality ratio of 294 per 100,000 live births and a neonatal mortality rate of 43 per 1,000 live births in 2008 respectively (Manoshi Performance Report, 2012). A great majority of women (86%) gave birth at home (Table 1), and only a quarter received the recommended antenatal and postnatal care (Moran et al., 2009). This population is difficult to serve since its members are often highly transient, lack formal addresses, and face daunting health-related challenges such as overcrowding, poor hygiene, extreme poverty and hesitancy to seek medical care (Moran, et al., 2009). Even governments that prioritise serving the poor often have difficulty creating policies that can effectively reach this highly mobile, dense, socio-culturally heterogeneous population (Khatun, et al., 2012; More, et al., 2012).

BRAC has overcome many of these challenges. Using two levels of trained Community Health Workers (CHWs) called Shasthya Shebikas and Shasthya Kormis as well as Urban Birth Attendants at Delivery Centers (also called Birth Huts) throughout the slums, the Manoshi Project successfully reaches the most vulnerable women and their children at a low cost and with minimal infrastructure. All activities of these frontline workers are carefully supervised by multiple layers of technically and programmatically skilled staff (Figure 1).

This design is not only low cost and sustainable but is also highly effective. Only 13% of women now give birth at home; the maternal mortality ratio has fallen by 56% to 130 per 100,000 live births in 2013 (Manoshi Performance Report, 2013; Maternal Death Audit Report 2013, unpublished raw data). The neonatal mortality rate has fallen by 60% to 17 per 1,000 live births in 2013 compared to a baseline rate in 2008 of 43 per 1,000 live births (Manoshi Performance Report, 2013; Neonatal Death Audit Report, 2013).

Some evidence also exists that these outcomes are superior to national trends. For example, the 2011 Bangladesh DHS found that 71% of infants nationally were delivered at home (Bangladesh Demographic and Health Survey 2011: Final Report, 2013); and the Bangladesh Maternal Health Services and Maternal Mortality Survey 2010 reported that the national maternal mortality ratio was 194 per 100,000 live births (Bangladesh Maternal Mortality and Health Care Survey, 2011).

Overall, the Manoshi Project is now demonstrating important progress in expanding access to delivery care as well as in reducing maternal and neonatal mortality compared to the country as a whole (Table 1). This fact is especially notable given that slum populations generally have worse health conditions than the country as a whole. Thus, as the poorest populations around the world continue to shift from largely rural villages to urban slums, the concept and principles of the Manoshi Project have significant policy implications for other cities and countries.

Table 1. Maternal and neonatal health indicators in the Manoshi service area compared to Bangladesh overall

	Percentage of deliveries performed at home		Maternal mortality ratio (maternal deaths per 100,000 live births)		Neonatal mortality rate (neonatal deaths per 1,000 live births)	
	Bangladesh	Manoshi Service Area	Bangladesh	Manoshi Service Area	Bangladesh	Manoshi Service Area
Baseline	43 (2008)	37 (2007)	294 (2008)	322 (2001)	84% (2008)	85% (2007)
Current	17 (2013)	32 (2011)	130 (2013)	194 (2011)	13% (2013)	71% (2011)

Sources: Bangladesh Demographic and Health Survey 2007, 2009; Bangladesh Demographic and Health Survey 2011: Final Report, 2013; Bangladesh Maternal Health Services and Maternal Mortality Survey 2001, 2003; Bangladesh Maternal Mortality and Health Care Survey 2010, 2011; Manoshi Performance Report, 2012, 2013; Manoshi Maternal and Neonatal Death Audit Report, 2012, 2013)



Image 2. Women at an antenatal care session

The Manoshi Project is structured around a dual cadre network of CHWs, who conduct home visits as well as interface with slum-based Delivery Centers (Figure 1). The backbone of Manoshi is the Shasthya Shebika, the first level of BRAC's Community Health Worker (CHW) with at least some reading and writing skills. Now, BRAC requires all new Shasthya Shebikas to have at least five years of formal schooling. Approximately 97,000 Shasthya Shebikas are working throughout the country; each Shasthya Shebika serves 150-200 households² and visits each one at least monthly.

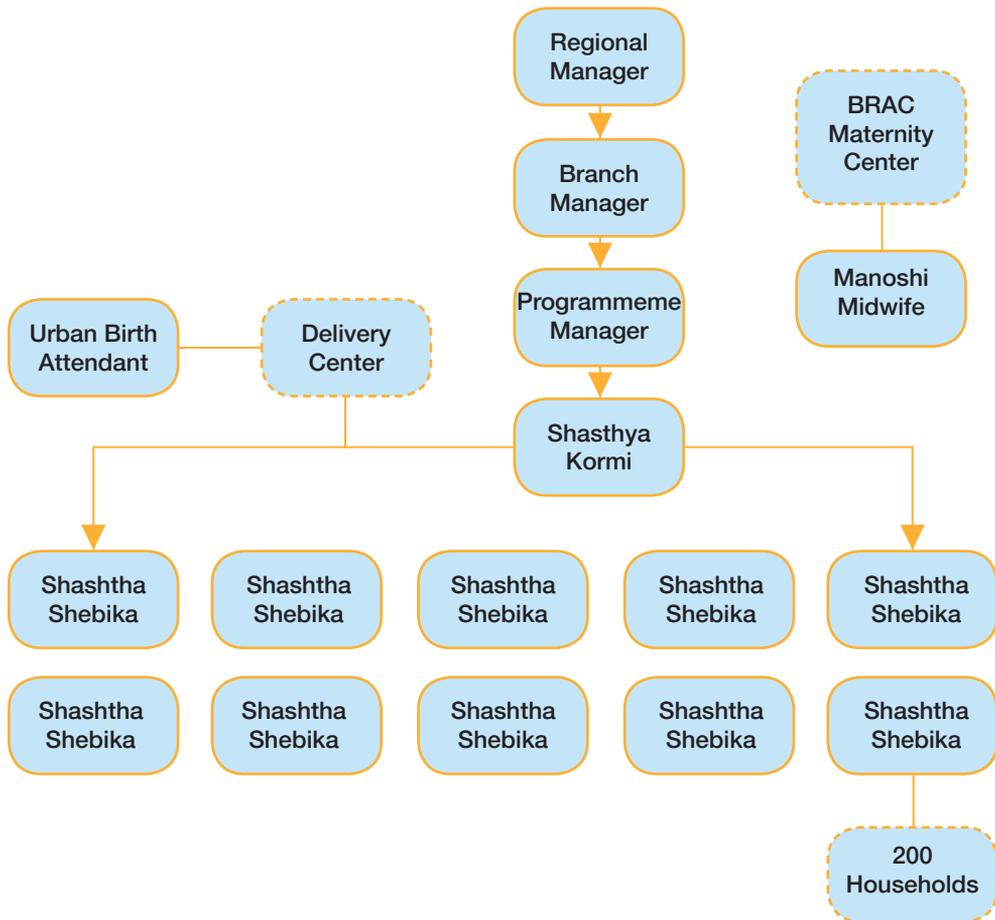
During these visits, they disseminate health messages; collect information on family planning status, immunization status, and vital events (pregnancies, births and deaths); accompany mothers in labor to Delivery Centers; assist Urban Birth Attendants in Delivery Centers for safe and clean delivery, and offer essential newborn care to neonates; support Shasthya Kormis (higher-level CHWs) during antenatal and postnatal care visits; and provide treatment for common ailments with proper referral in case of complications. They receive incentives of 50 taka (0.64 US dollars) per pregnancy identified and 150 taka (1.92 US dollars) per delivery for women they accompany to a delivery center or referral center. Additionally, they sell basic health commodities such as delivery kits, sanitary napkins, iodised salt, oral contraceptives, condoms, and basic medicines (e.g., pain killers, antacids, iron, folic acid and vitamin tablets, and anti-histamine medication). BRAC distributes these items to Shasthya Shebikas at cost, so that they can resell them for a small profit.

Shasthya Kormis supervise Shasthya Shebikas. Shasthya Kormis have secondary education or more. Each oversees 10 Shasthya Shebikas and thus serves approximately 2,000 households. Duties include systematically visiting each household every 3 months, updating household registers, organizing monthly antenatal care sessions, providing antenatal care services, attending births, providing postnatal care, and preparing monthly performance reports.

Shasthya Kormis keep detailed registers that list all households and clients. Through these registers, they track each beneficiary and record when they obtain antenatal care, tetanus immunizations, and iron supplementation; where they deliver and whether the delivery was complicated; and other basic information. They also follow all children who are younger than five years of age with regular visits, with a particular focus on nutrition, immunizations, and acute illnesses. Further, they add new households to their register whenever they come across one. This process ensures that all births, deaths, and in- or out-migrations are updated.

² 'Household' is used throughout this document to refer to a family, also defined by BRAC as a 'group of people who eat around the same hearth.'

Figure 1. Schematic of the Manoshi Project's organizational structure



*The Regional Office houses Regional Managers, Senior Medical Officers, Programme Organisers and the Branch Office houses Branch Managers, Programme Organisers, Manoshi Midwives, Shasthya Kormis and Referral Programme Organisers (based as tertiary hospitals to facilitate the referral process). The Technical Managers, Programme Managers, Programme Coordinators/Programme Heads, Directors are based at Head Quarter level.

** The Manoshi Midwives also supervise the technical activities of the Urban Birth Attendants, the Shasthya Kormis, and the Shashtha Shebikas, provide technical support to the Delivery Centers and to the field and provide direct MNCH services at BRAC Maternity Centers.



Manoshi Project Structure (continued)

Image 3. Shasthya Shebikas at a basic training session

A continuous process like this is essential for transitory populations such as slum dwellers. It is insufficient to do a census at the beginning of the project only, with the expectation that the needs and distribution of needs of the community will remain static. Unlike Shasthya Shebikas, Shasthya Kormis are salaried. In addition, they also receive 150 taka (1.92 US dollars) each time they refer a patient or attend a delivery. Each Delivery Center serves approximately 10,000 people; the project has 390 of these across the 10 city corporations in Bangladesh (May, Subramanian & Choudhury, 2011). These Delivery Centers have three rooms usually – one for patient education, one for birthing, and one for storage. They are staffed by Urban Birth Attendants, who have no formal education requirement. Most are former traditional birth attendants. Normal delivery services are offered 24 hours a day, seven days a week with technical supervision and support from Manoshi Midwives and Medical Officers. As a part of assisting normal births, Urban Birth Attendants also give oral misoprostol tablets after birth, but they give no injections, such as saline or oxytocin. Urban Birth Attendants are salaried. When they refer a patient to a higher-level facility, they receive an incentive of 150 taka (1.92 US dollars) for accompanying her to the referral center.

As a part of the referral system, both Urban Birth Attendants and Shasthya Kormis have phone numbers to call to obtain local transport (motorised rickshaws, ambulances) when transfer to a higher-level facility is needed. BRAC is now piloting an mHealth (mobile phone-based platform) initiative in the Manoshi Project to assist with record keeping, reporting and monitoring. Mobile phones used by project staff are now linked with a central support center (located at the BRAC Head Office) for referral management within Dhaka city to see if this system can further strengthen communication – and thereby decrease delays in care – amongst Shasthya Kormis, transport drivers, and hospitals.

Recently, BRAC has begun to open some higher-level facilities called BRAC Maternity Centers to provide more advanced care closer to patients' home within the slums while decreasing the number of referrals needed. As of the end of 2012, 14 of these Centers had been established, with a total of 80 planned by the end of 2014. They are staffed by Manoshi Midwives, who have 3-4 years of paramedic training with a specialty in midwifery and who receive a salary. Unlike the basic Delivery Center, where care is free, women must pay to utilize these facilities. For example, an antenatal care visit costs 30 taka (0.38 US dollars). Aside from receiving care from more highly trained health care workers, women also benefit from some advanced care if complications arise, such as managing simple obstructed labor or repairing perineal tears. Thus far,



Image 4. CHW collecting data using mobile phone in mHealth intervention area

BRAC has found that slum dwellers are happy to pay for this increase in services since they are getting quality care close to their home at an affordable cost.

The Manoshi Project has a formal system of maternal and child death auditing, including a verbal medical and social autopsy. When a death of a pregnant woman or under-5 child occurs, it is immediately reported up the chain of command: Shasthya Shebika to Shasthya Kormi to Programme Officer to Branch Manager to Regional Manager and so on, up to the Director. It is essential that all involved know there was a death and thus are engaged in understanding why so that future deaths can be prevented. A Programme Officer visits and interviews someone in the household to find out who the woman or child was, what problems that patient had, what treatments had been provided, and what involvement the Manoshi Project had. The Medical Officer also conducts an official verbal autopsy to determine the cause of death. Further, the Manoshi Project convenes a community meeting, including the Maternal, Neonatal and Child Health (MNCH) Committee, to discuss why the death happened. Through this discussion, the programme tries to determine weaknesses at different levels (household, community, and programmatic) that contributed to the death, so that similar deaths can be averted in the future.

Further information on the Manoshi Project is available on the BRAC website:

Health, Nutrition and Population: Maternal, Neonatal and Child Health Programme:

<http://www.brac.net/content/health-nutrition-and-population-maternal-neonatal-and-child-health-programmeme#.UVL8uBcyySo>

Manoshi Change in Action: Evolution of a Health Worker:

<http://www.brac.net/node/1330#.UVL86BcyySo>

Project Update: BRAC's Manoshi Project

<http://www.brac.net/node/1187#.UVL8-xcyySo>

Information is also available about specific aspects of the Manoshi Project via Working Papers on the icddr,b website:

Manoshi Working Papers:

http://www.icddrb.org/what-we-do/publications/cat_view/52-publications/10043-icddrb-documents/10058-icddrb-reports-and-working-papers/10069-manoshi-working-papers

Overview of methods used to implement the Manoshi Project

Three of the main methods BRAC used to initiate the Manoshi Project were social mapping, census taking, and community engagement. These three methods, when used together, made it possible to establish a knowledge base of both the community and its needs. This knowledge, combined with the community relationship created through the process, led to a strong foundation for an effective programme.

Table 2 below summarises what steps were used under each method, at what point in the process the step occurred, and what the benefits of each step were. Subsequent sections describe each method and their respective strengths as well as shortfalls in more detail.

Table 2. *Methods of community engagement, social mapping and census taking used by BRAC*

Category	Steps	Timeline	Benefit
Social mapping	Train surveyors, Programme Officers, Branch Managers	At outset	Provides standardised outcomes if trained in specific activities
	Identify key informants	Beginning of mapping	Provide an overview of slum layout and characteristics
	Decide on level of detail and household representation on map	Beginning of mapping	Maximises visual utility of map Standardises data collection
	Map houses and other facilities in a systematic manner	After above steps are complete	Ensures no households are missing from the map Support planning for more accessible services Allows resource allocation during service planning
	Consult with households to verify map accuracy	After draft of map is complete	Engages the community Assures accuracy of data
	Compile maps at programme level	After verification is complete	Verifies accuracy through comparison to household listings Creates a master map for future reference Helps to allocate resource

Category	Steps	Timeline	Benefit
Census taking	Select surveyors with assistance of local community	At outset	Provides standardised outcomes if trained in specific activities
	Train surveyors, Programme Officers, Branch Managers	Beginning of mapping	Provide an overview of slum layout and characteristics
	Surveyors conduct census	Beginning of mapping	Maximises visual utility of map Standardises data collection
	Map houses and other facilities in a systematic manner	After above steps are complete	Ensures no households are missing from the map Support planning for more accessible services Allows resource allocation during service planning
	Monitor data collection by Monitoring Officers	During census taking	Ensures quality of data
Community engagement	Initiate services early on	As soon as possible during mapping	Builds trust with the community when services begin without too much delay or assessment
	Establish Maternal, Neonatal and Child Health (MNCH) Committees early on	Ongoing; bimonthly meetings	Provides a forum for community feedback Promotes buy-in by local leaders Opens communication Builds legitimacy
	Market the project (using posters, radio and TV)	Several months prior to and during the first several months of programme implementation	Prepares clients for programme initiation Encourages prime clients to be receptive to programme services
	Create a map of the programme area and take a census of the inhabitants	First month of programme but before starting actual activities	Familiarises clients with programme workers Builds trust with the community
	Respond to feedback provided by the community	Ongoing	Builds trust with the community Enables services to evolve to meet community needs
	Make use of local social structures	At outset	Enables culturally acceptable care to be provided



Method: Social Mapping

Image 5. Pathway through a Dhaka slum

How to Conduct Social Mapping

BRAC's mapping team consisted of several levels of staff including surveyors (who were carefully selected community members, as described further in the Census Taking section), Programme Officers and Branch Managers. These staff members all went through the training as described in the Census Taking section. Monitoring and Evaluation staff members oversaw the entire process.

Mapping of the slum community includes mapping both homes and other community structures such as health facilities, pharmacies, schools, mosques, roads, markets, and ponds. All of these are important features that can impact community functioning. Special symbols can be used to represent these facilities and landmarks in a clear manner on the map. For an example of a completed slum map, see Appendix 1.

For the first step of creating the social map, programme staff members (Programme Officers, Branch Managers) went to the slum to find key informants. These informants gave a basic idea of the layout of the slum, special landmarks, roads, and boundaries. However, because the Bangladeshi slums are so large and so populous, even the most informed key informants did not know every household.

As a result, before actually making the map, staff members first created a household list by going briefly from house to house and writing down the household number, the name of the head of household, and the number of individuals in the household. This list was important so that an accurate account of who exactly lived in the community was available for map creation and because it gave the field staff member a sense of the layout of the slum.

This process helped staff members to choose a reasonable unit through which to represent households on the map. Whatever this unit is, it is important to have a repeatable, standard way to define a household, so that all surveyors measure it the same way. For example, BRAC defined a household as all the people who eat around the same hearth.

Staff members also had to decide if they would draw every single household on the map. BRAC did this initially. However, because of the crowded nature of slums, multiple households existed within one physical

house. As a result, the map was cluttered and less visually useful. Further, the addition of new households was difficult to accommodate in terms of assigning household numbers. If a new household arrived, for example, between households 10 and 11, it would be too difficult to number the new household 11 and then renumber all subsequent households.

In subsequent maps, BRAC opted to instead map houses only. Households were still listed in the household listing and were given a letter designation within the house (e.g., 10/a, 10/b, 10/c, and so forth). This latter system allowed for more flexibility as the number of households within a house may fluctuate, especially as the structure of slums is constantly changing. Either method is acceptable, but consistency is important.

The mapping normally began at the northwest corner of the slum. This starting location is protocol for social mapping and allows the map to be made in a systematic manner that does not miss any houses. With the consent of residents, staff marked the houses with permanent marker to make their numbers permanent. Some numbers were later lost because of environmental wear (from rain or wind) or material change (such as adding a new door), but this process still helped Shasthya Shebikas, Shasthya Kormis, and residents learn their house numbers. Over time, CHWs memorised the house numbers, but BRAC felt it was important to keep this institutional knowledge as transparent as possible because over time, change in staff composition is inevitable. Visibly marking doors/houses also made monitoring and evaluation efforts easier.

The surveyor who was conducting the census of a given household was the one responsible for drawing that section of the map. At the same time that the survey was conducted, the surveyor used a pencil to draw the map, including house or household numbers, clearly on a piece of paper. BRAC emphasised in trainings that these drawings had to occur as the surveyor went house to house. Otherwise, important details would be forgotten if surveyors tried to draw the map later from memory.

Each surveyor and team carried a copy of the map symbols with them (Appendix 1) so that they could draw roads, other facilities and community structures as they mapped the houses. After drawing each section of map, surveyors consulted with households available to make sure there were no households missed. As slums are often large, each team of surveyors mapped their own section. All maps were then compiled by the Programme Officers and Branch Managers, with the input of the surveyors, to make the final map. Staff compared the household listing to the social map to make sure they matched. If not, staff returned to the area to resolve the discrepancy.

Although Shasthya Kormis continuously updated the census (see Census Taking section) as the maternal, neonatal, and child health programme progressed, they did not physically update the map. Re-drawing a hand written map would have become very laborious. And if the staff kept updating the same map instead, it would have become very crowded and less visually useful.



Image 6. Water transportation in a Dhaka slum

Benefits of Social Mapping

Making services more accessible: Knowing the distribution of people in the slum allowed BRAC to select the place of Delivery Centers and Maternity Centers at central locations to minimise the distance women must walk. This decision was important because births occur at all times of day and night. Furthermore, in Bangladesh, women are most comfortable staying close to home during pregnancy, which also makes location important.

Geographical obstacles in an area can also impact accessibility of services. Bangladesh, for example, has many ponds and rivers; as a result, some slums have bamboo bridges. Women have commented that they are afraid to cross these during labor. Although they do not specify why, it is possible that these fears stem from the practical realities of poor construction as well as from cultural beliefs. Knowing the location of the bridges helped programme staff to place Delivery Centers in areas that minimise bridge crossing.

Decreasing delays in emergencies: Knowing the distribution of health facilities can assist in emergency referrals during delivery. After mapping, staff knew which referral facilities were the closest, which ones were open, and which ones had a doctor available at what time. Shasthya Kormis could then call the most appropriate facility based on this knowledge, which minimises the second delay (getting to care) in the Three-Delay Model (Thaddeus & Maine, 1994).³

Advocating for the local population: Collecting precise data on the layout of the households and other structures (e.g., health clinics and schools) in the slum empowered BRAC to advocate for the population with the government and donors. If the numbers served or resource allocation were to be challenged, the maps (along with data obtained during the census-taking process) provided hard data to support these challenges. These visual data also gave a written history of the slum as its shape and components changed over time.

Efficiency in providing services: Both the process of making the map and actually having the map as a reference guide has helped Shasthya Shebikas, Shasthya Kormis and BRAC programme staff to serve their population. Mapping is an essential step for planning service delivery and maintaining contact with all mothers and children.

³ The Three-Delay Model explains three obstacles to obtaining emergency obstetric care during labor and delivery. The first delay occurs in recognizing that a problem exists and deciding to seek care. The second delay occurs in getting to a delivery center equipped to handle the emergency. The third delay occurs in receiving care once at the center (Thaddeus & Maine, 1994).

Community engagement: The main factor that distinguishes social mapping from other kinds of mapping is that it involves the community, and this ultimately strengthens programmes. BRAC consulted community members during the process to confirm that the map the staff drew was correct. Community members could also provide support. For example, if a house was locked, they sometimes knew the best time to come back. Through this process of discussion and engagement, trust started to develop in the community.

Potential Obstacles to Social Mapping

Frequent relocation of families: Urban slums are inherently less stable environments because of both eviction and migration. Migration occurs in four dimensions: moving into the slum, within the slum, to other slums, or back to rural areas (returning to the home of origin or elsewhere). Manoshi staff estimate that up to 40% of slum dwellers they work with move in a given year: 20% within their current slum and 20% to some location outside of their slum. BRAC has found that this constant movement makes mapping both more difficult and more necessary. Without the social mapping process, it would be incredibly difficult for programme staff to adequately assess who is present and where. But both migration and the constant remodeling of slums – demolition and expansion – mean that a map created one day will not necessarily be accurate the next. Staff members have dealt with this shifting as best as possible. Some systems already described can help, such as numbering physical houses (e.g., 10) and denoting households within them by a letter (e.g., 10/a), as households likely change more often than houses.

Aspects of Social Mapping Unique to Urban Slums

In rural communities in Bangladesh, BRAC staff members are first able to draw maps in the dirt with community members. Later, they transfer this dirt map to paper with the help of literate community members. This process engages the community more fully than the process described above in the urban setting because of greater permanence and ownership in community, more physical space for mapping, and smaller, more cohesive communities.

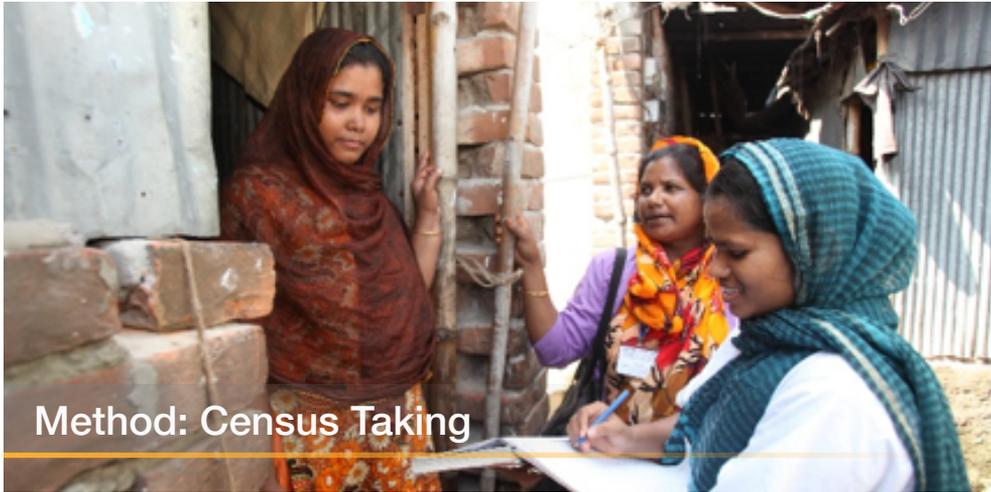


Image 7. CHWs collecting household information

How to Take a Census

BRAC's census training occurred after the social mapping training, but involved essentially the same staff: surveyors, Programme Officers and Branch Managers. Programme Officers directly supervised the surveyors, and Branch Managers supervised the Programme Officers.

The surveyors were the most numerous as they actually went house to house to conduct the census. The MNCH Committee that was formed during the initial period of community engagement helped select surveyors (see Community Engagement section). In areas where BRAC had pre-existing CHWs who were literate and capable of filling out surveys, they were recruited as surveyors. This approach was beneficial since these CHWs were also slum dwellers and familiar with the community and the community, with them. In addition to the existing CHWs, or in areas where no CHWs existed, BRAC recruited additional temporary surveyors, with the support of the MNCH Committee.

Surveyors had to be literate and be able to correctly fill out the forms. A sub-set of surveyors who did a particularly good job were offered the job of Shasthya Kormi, if they were interested, after the census was finished. The incentive for surveying was 5 taka (0.06 US dollars) per household survey, with a maximum of 25 households a day. BRAC conducted a two-day training for surveyors. First, though, BRAC conducted a one-day training for the Programme Officers, Branch Managers and senior management (Regional Managers). After this training, Programme Officers then conducted the trainings for surveyors. Monitoring and Evaluation staff oversaw the entire process.

During the training, Programme Officers first explained the nature of and reason for the census to the surveyors. Next, they made sure the surveyors could both record the information and compile data correctly. Afterwards, surveyors practiced these skills with a few households in the field and then met together to discuss their experience and learn from their errors. After the training, surveyors were assigned to a certain area and given a schedule with a target of households to be surveyed. The Branch Manager and Programme Officers from the Manoshi Project and the Programme Officer from the Monitoring Unit of BRAC Health, Nutrition and Population Programme (HNPP) supervised the overall activities with regards to the census. The Programme Officers then compiled the data to create the final census.

3 The Three-Delay Model explains three obstacles to obtaining emergency obstetric care during labor and delivery. The first delay occurs in recognizing that a problem exists and deciding to seek care. The second delay occurs in getting to a delivery center equipped to handle the emergency. The third delay occurs in receiving care once at the center (Thaddeus & Maine, 1994).

The information collected in the household survey focused mostly on demographic and economic information. Questions included the number of births and deaths in the last year, numbers of target populations in the household (e.g., children younger than 5 years of age, pregnant women, lactating women, married couples, newly married couples, women of reproductive age), and social status of the household. The 'ultra poor' are defined as those households earning less than 5,000 taka (or 64 US dollars) per month, 'poor' as earning 5,000-10,000 taka (or 64-128 US dollars) per month, and 'not poor' as more than 10,000 taka (or 128 US dollars) per month). Appendix 2 contains a complete translation of the census survey forms used for BRAC's Manoshi programme.

BRAC monitored the data collected during the census process on a regular basis. The Programme Officers from the Monitoring Unit re-surveyed 5% of households randomly selected from the complete list of household surveys conducted by data collectors as well as at least 3 households from every surveyor. Additionally, the Branch Manager monitored 5% of the 5% of households that the Programme Officer monitors and if necessary they also directly monitor a random selection of households from the list completed by any of the data collectors. If they found any inconsistency or problem with the collected information, they discussed these discrepancies with the surveyors as well as with the supervisors and took necessary actions to solve the problems to get accurate information.

Maintaining confidentiality during census taking was essential to the success of the process. Whatever confidential information was being collected, it was important to assure households that the information would be kept confidential. The most sensitive information collected concerned pregnancy status and household income.

Benefits of Census Taking

Resource allocation: Accurate census information allowed BRAC staff to plan financial and human resources for the programme. For example, the Manoshi Project collects information on patients' finances and then classifies them in the three groups as defined above: the 'ultra-poor,' the 'poor,' and the 'not-poor.' This information is relevant to financial planning because BRAC provides financial support to cover hospital expenses (e.g. surgery and medicine costs) for emergency referral cases – e.g. 100% for the ultra-poor, 50% for the poor, 0% for the not-poor (though exceptions are sometimes made). Further, Manoshi can calculate how many Shasthya Shebikas, Shasthya Kormis, and Urban Birth Attendants it will need based on the population data.

Community engagement: Census taking can contribute to community engagement, as it is an opportunity to visit a family at home and to speak to important gatekeepers such as the head of household and the older women at home. For example, older women in the household have power over decision-making, but in their experience deliveries have always occurred at home, so many do not understand why younger women should go to a birthing facility with skilled providers. BRAC has found that having the opportunity for older women to meet with Manoshi staff when they come by for the census can be the first step to understanding and warming up to the programme.

Duplication of services: BRAC has used accurate census information to avoid duplication of services and thus to conserve resources. If there are other NGOs providing similar services in the area, this information can clearly delineate who is serving which part of the population in what areas. For BRAC, this is not a major issue, as the other NGOs in the area are mostly running small pilot programmes. BRAC has found that maintaining good relationships with other NGOs is a greater priority than dividing up service areas. For instance, if BRAC were to declare one service area its own and state that it was off limits to other NGOs, this could lead to tension between organizations. Even if the goal is efficiency, it might be better to have some duplication of services than to comprise working relationships among organizations. Jeopardizing these

relationships could ultimately undermine project goals, as collaboration among organizations often leads to improved outcomes for communities.

Monitoring and evaluation: The census allowed Manoshi to locate BRAC Delivery Centers and Maternity Centers in central areas and then to assign groups of 200 and 2,000 households to Shasthya Shebikas and Shasthya Kormis, respectively. Since this clear definition of each person's service area exists, the supervisors can look at data by whichever clusters they choose – those for the Delivery Center, for the Shasthya Kormi, or for the Shasthya Shebika – and compare to other clusters. If the monitoring and evaluation indicators suggest that one cluster of households is doing worse than another, then the programme staff can analyze the reasons of poor performance of that cluster and take necessary actions to improve performance.

Potential Obstacles to Census Taking

Identification numbers: Although Bangladeshis are supposed to be assigned a national identification number, many slum dwellers do not have one. This makes it more difficult to track individuals over the long term. BRAC has considered assigning programme-specific numbers as an alternative, but individuals may have difficulty remembering them, and these could not be linked to other services outside of the programme.

Reaching all slum dwellers: As slums expand, they sometimes end up in more difficult-to-reach areas. Some of the slums in Bangladesh are now nearing rivers as landowners destroy slums located in more central areas to build high-rise complexes. These mass evictions are leading slum dwellers to building dwellings that hang over the water, which is a more challenging environment in which to live and work.

Confidentiality: Confidentiality is an important issue. But for BRAC, it has not been an insurmountable problem. Nevertheless, BRAC found it important to include information on maintaining confidentiality in surveyor training. Surveyors learned to respect the families' privacy and to not share information with outsiders. In Bangladesh, citizens trust BRAC to maintain the confidentiality of personal information, mainly because they know BRAC well and know that the organization is trustworthy. For a less well-known organization, it might be necessary to have a more formal process to reassure citizens.

Resources: Census taking requires extensive human and financial resources. Even when both are adequate, training people properly to conduct the surveys can be a challenge. Five years into the programme, Manoshi still requires support from the Monitoring Unit. For example, when new Shasthya Kormis enter the programme, they need training on surveillance. Other times, Branch Managers and Programme Officers may forget specifics of conducting the census and need a refresher from the independent Monitoring Department. BRAC is large enough that it has its own independent Research and Evaluation Division which conducts independent monitoring, but many smaller organizations may have to contract or collaborate with outside organizations to receive monitoring support.

Vision: BRAC has found it useful to provide staff with a vision of why census taking is needed. As staff emphasised repeatedly, it is essential to count people and problems. Through quantification, the Manoshi Project can both understand community needs and track progress in meeting those needs. Without this vision, staff might go through the motions of collecting the data, but then not utilise it.

Aspects of Census Taking Unique to Urban Slums

Classifications of economic status: In the urban slums, Manoshi classifies households by monthly income. In rural areas, BRAC classifies households by other criteria (amount of land owned, whether the house is owned, gender of head of household, employment status, and presence of a disability). These differences emphasise that there is more than one valid way to assess economic status. The important point is simply to

pick a standardised method and use it consistently when surveying the population.

Further, it may make more sense to measure income in urban slum areas (as contrasted with indicators of net wealth used in rural areas such as physical assets and ability to work) since urban slum dwellers are more likely to work for a wage while rural dwellers may be more likely to work for food or other transactions. Urban slum dwellers may also be less likely to own houses or land than rural people.



Method: Community Engagement

Image 8. Social mobilization as a process of community engagement

How to Engage Communities

Community engagement, the first step of Manoshi intervention, is used to build rapport and get involved with the members of the community while initiating programme. Although community engagement sometimes begins through a formal needs assessment, both qualitative and quantitative, BRAC, as a long-standing NGO in Bangladesh, was already intimately familiar with the major health problems in the country. Further, despite clear evidence that urgent maternal, neonatal and child health problems exist, programme officials found that citizens would not cite health as their most pressing need if asked because basic necessities of life (water, shelter, food, income, safety) were higher priorities, given the extreme poverty. Thus, BRAC found that needs assessments were not the best use of time.

Instead, they chose to first strive to address some of these known health needs while earning the trust of the slum communities. BRAC staff started the Manoshi Project with the knowledge that they could revise and refine services offered as they learned more about specific maternal, neonatal and child health needs through working in the community.

Since one of the goals of community engagement is trust, BRAC used the approach of simply starting to provide services first and then readjusting the programme focus later as needed. BRAC staff found that the slum communities were accustomed to pilot programmes or studies coming in to try new services or techniques, but then leaving or never scaling up. This pattern had created a suspicion of new efforts among the community. Thus, to engage communities fully, BRAC found it important to first prove to them that the programme was serious and would provide a benefit. Once the slum communities experienced this, they began to trust the programme and became more willing to engage with it.

Another approach that BRAC took to community engagement, at the onset of the project or once programme services had been initiated, was creating Maternal, Neonatal, and Child Health (MNCH) Committees. These committees consist of nine to eleven members, all of whom are local leaders, such as local government officials, political or religious leaders, teachers, and business owners, among others. These committees provide indispensable guidance as well as bring legitimacy to the project in the eyes of the community. For example, BRAC staff asked the MNCH Committees to help them select Community Health Workers. The

3 The Three-Delay Model explains three obstacles to obtaining emergency obstetric care during labor and delivery. The first delay occurs in recognizing that a problem exists and deciding to seek care. The second delay occurs in getting to a delivery center equipped to handle the emergency. The third delay occurs in receiving care once at the center (Thaddeus & Maine, 1994).

MNCH Committees were especially qualified for this task because they knew which individuals might be acceptable to the community and which might be controversial. Further, since their formation, BRAC has held meetings with each MNCH Committee in every two months. During these meetings, BRAC updates the community about its activities and progress and the Committee gives feedback about changes or problems. Widespread programme recognition and knowledge, through mass communication and marketing, is also an important part of community engagement and acceptance. To achieve this level of communication, understanding local communication patterns is essential. BRAC used this understanding to select a type of advertising to which slum dwellers would be most receptive. In Bangladesh, most shops in the markets have small TVs that are popular to watch. Thus, BRAC paid a nominal fee to a private cable television company (more affordable than other TV channels) to run a BRAC advertisement on the Manoshi Project. In this way, people became familiar with both the BRAC brand and message. As a result, people were more receptive to the programme when the Manoshi Project arrived.

To fully engage the community, BRAC incorporated traditional structures into Manoshi's services. For instance, traditional birth attendants are an accepted part of the birth process in Bangladesh⁴. So, BRAC has incorporated them into their maternal, neonatal and child health programmes instead of trying to remove them, as programme staff realised that there could be community resistance to this latter option.

However, there are multiple ways to incorporate local structures: traditional birth attendants can be trained to become Urban Birth Attendants, as they are for the Manoshi Project. Conversely, BRAC's rural maternal, neonatal, and child health project trained traditional birth attendants to be Newborn Health Workers. This job focuses on neonatal care at delivery, so traditional birth attendants are still involved with the birthing process but do not need delivery skills since in their new role they are providing care only to the newborn. BRAC found that retraining traditional birth attendants to be involved with newborn care, without their involvement in the delivery itself, is useful when a cadre of higher-level of health care workers is available who can more safely manage labor and delivery. This is the case only in BRAC's MNCH intervention areas; women are still using traditional birth attendants outside BRAC intervention areas. Essentially, BRAC utilises the most highly skilled level of worker that is available and affordable given the specific community context. In either situation, BRAC has found that women are more comfortable utilizing its services when traditional birth attendants with whom they are already familiar are involved in providing care.

Both social mapping and census taking, described in their respective sections above, are means of community engagement themselves, in addition to generating useful programme information. Through these processes, the communities became familiar with Manoshi and saw that BRAC was serious about getting to know each community and understanding its needs. BRAC found that, when possible, bringing key community leaders (who may become a member of the MNCH Committee later) along with the surveyors further increased acceptance of the social mapping and census taking activities.

Finally, despite all these efforts, BRAC found that uptake of services was still low at the beginning of the programme. Instead of being discouraged, programme staff took this as a signal to continue speaking with the community and getting to know the families. These actions allowed community members to observe that the programme was committed to responding to community feedback and providing quality services. BRAC found that through this continued dialogue – as well as through genuine responsiveness to community feedback – service uptake increased substantially over time. As shown in Table 1, the percentage of births taking place in facilities increased dramatically between 2008 and 2013 from 16% to 87%.

⁴ Traditional birth attendants are usually women who lack formal training and schooling, but have learned to assist in deliveries through experience. Their practices usually incorporate a range of modern medical knowledge and traditional beliefs.

Benefits of Community Engagement

Retention of Shasthya Shebikas: Through community dialogue, BRAC came to better understand the needs of Shasthya Shebikas, such as their financial requirements. For example, originally Shasthya Shebikas were paid a 10 taka (0.13 US dollars) incentive to identify and report each pregnancy and 30 taka (0.38 US dollars) to accompany the pregnant women to a Delivery Center for the birth. Shasthya Shebika attrition was high; through feedback sessions, BRAC realised that this low level of incentives was a key reason for it (Standing & Chowdhury, 2008). As a result, BRAC raised the amount of the incentive to 30 taka (0.38 US dollars) per pregnancy identification and 150 taka (1.92 US dollar) per accompaniment to a delivery center. Retention has improved since these changes were implemented (Alam, Tasneem, & Oliveras, 2011).

Through this feedback loop, everyone benefits: Shasthya Shebikas make a more livable wage, and they become more experience the empowered as a result of being listened to; the community receives more health care; and BRAC retains its Shasthya Shebikas for a more stable programme. Without community engagement and regular feedback sessions, BRAC would not have been able to improve this aspect of the Manoshi Project.

Service improvement: Through community dialogue, BRAC improved services to better meet community needs. Based on feedback, BRAC found that many community members appreciated the Delivery Centers but wanted them to have a higher-level medical professional, such as a doctor or midwife, on staff. They also were dissatisfied with the high rate of referrals. These were necessary because Urban Birth Attendants were not equipped to handle many types of simple complications.

In response to these criticisms, BRAC has since piloted Maternity Centers, which are staffed by Manoshi Midwives who are able to handle slightly more complicated cases (e.g., initial management of obstructed labor by augmentation of labor with oxytocin, performance of an episiotomy, and repair of perineal tears). Unlike the regular Delivery Centers, there are fees for the services provided here (e.g., 30 taka or 0.38 US dollars for an antenatal care visit, and 500 taka or 6.4 US dollars for a normal vaginal delivery). Although still in the early stages of development, these Maternity Centers are quite popular thus far, indicating that responding to community feedback is essential to success.

Increased acceptability: The more the community participates in the process of programme development, the more acceptable the programme will be. For instance, BRAC used the MNCH Committees to select Community Health Workers. Receiving this input from the community helped ensure that these individuals were competent, acceptable to the community, and non-controversial.

Potential Obstacles to Community Engagement

Community ownership: The highly transient nature of slum populations, combined with residents' heterogeneous racial and regional backgrounds, makes it difficult to develop a sense of community ownership among this group. Moreover, the population is highly mobile, with migration within the slum, to other slums, and back to home villages being the norm. BRAC staff members have found that, within a year, 20-40% of a given slum's population changes. Further, the large size of slum populations also means that within one slum, many different communities may actually exist. Thus, BRAC has found that community engagement, to the extent that it occurs in rural settings, is difficult to achieve in urban settings. Despite these difficulties, BRAC continues its efforts as they clearly have a positive impact, as delineated above.

Linkage: No programme will be able to provide all the services that a community might need or desire. Thus, linkage to other programmes and services is a necessary component of meeting community needs and expectations. However, establishing these linkages can be challenging as organizations are diverse and each has its own agenda. BRAC works hard to build and maintain positive relationships with other organizations including the government, other NGOs, and private providers through signing memorandums of understanding (MoUs) with them. Through these relationships, some collaboration is possible.

From Pilot to Scale Up

Selection of a site for piloting a maternal, neonatal and child health programme, and developing the methods of social mapping, census taking and community engagement described above require careful thought. BRAC has taken two different approaches to pilots, both of which have been successful. First, a pilot site can be selected because of high need in the target population in that area. This approach makes sense both from an ethical perspective as well as from a results-oriented perspective. It is easier to show rapid progress in an area with high need. BRAC chose Nilphamari, a rural district in the north of Bangladesh, as the initial pilot site for its maternal, neonatal and child health project because of its high need. Even though this site was not urban, which was the ultimate target of Manoshi, BRAC was still able to pilot the basic structure and principles of the programme. After seeing success in this region, programme officials were then able to apply for funding to create a large-scale system in urban centers in Bangladesh.

Another legitimate method for choosing a pilot site is convenience. Picking a pilot site near the programme office is practical in that Programme Officers will be able to interact with the site often. Usually, but not always, a nearby location also means that the programme staff also have more knowledge about the site. Familiarity and rapport with the community being served can provide a huge benefit in terms of initial pilot testing. BRAC has utilised the Korail slum, located next to the BRAC head office in Dhaka, as well as other Dhaka slums for both the initial Manoshi sites after the programme was formally funded and for innovation experiments as the programme has progressed. Based on the experience in urban slums in the Dhaka City Corporation, BRAC then gradually scaled up the Manoshi intervention to other city corporations.

Summary

Utilizing the methods of social mapping, census taking, and community engagement at the outset of a maternal, neonatal, and child health programme for urban slums is a smart programmematic decision that lays the groundwork for success. These methods are practical, and they strengthen linkages among service providers and health facilities, maximise resource utilization, and empower communities. When executed faithfully, they can lead to well-organised programmes in which populations and their needs are clearly identified, services are logically distributed and communities are true partners in improving their health.

One of the biggest advantages of following these methods is that they are quite accessible. These straightforward methods are ones that any organization can utilise, especially as they do not require any sophisticated resources. Using newer popular technologies such as Global Positioning Systems (GPS) or cell phones may add some value to the process, but as BRAC has shown, the only materials truly needed for these methods are paper, pencils, human knowledge, dedication, and a willingness to listen. This simplicity is a huge benefit as few programmes have the resources to apply advanced technological methods.

Furthermore, using these methods can strengthen linkages among existing services in the community at all levels, making available resources more effective. The social mapping procedures create an excellent database of information on health facilities in the area that are appropriate for referral when obstetric emergencies arise and when children become seriously ill. If a programme utilises this information, they can minimise delays by facilitating communication among transportation providers, facilities, and medical officers during an emergency. Up until now, the Manoshi Project has utilised this data by equipping Community Health Workers (Shasthya Shebika, Shasthya Kormis and Urban Birth Attendants) with phone numbers for both transport and facilities. However, in an effort to continue strengthening these linkages, BRAC now has a hotline support center in the pilot stage. These types of innovations can minimise delays, which is an essential goal of all maternal, neonatal and child health programmes.

As emphasised throughout the guide, these methods can also enhance resource utilization on two levels. Maternal, neonatal and child health programmes in urban slums can identify which areas will most benefit from services, and organizations can use the information gathered to maximise collaboration. For instance, although BRAC is the largest provider working in maternal, neonatal, and child health in the urban slums of Bangladesh, other programmes may find that more than one service provider is in the same area. In this case, mapping can assist programmes by making an explicit plan to avoid overlap in service areas and thus eliminate unnecessary duplication of efforts.

Finally, these methods empower communities. By focusing on community engagement as an important method in programme implementation, programmes acknowledge that communities are not simply in existence to receive services. Their voices matter, and they have valuable knowledge that can contribute to their own health and programme effectiveness. Social mapping and census taking further engage and empower communities. These methods recognise that individuals know their own communities and can provide logistical information and support necessary to start and continue a programme effectively.

As BRAC has found, an organization that uses the methods of social mapping, census taking and community engagement as the foundation of its programme is likely to be successful. Hopefully, the skills BRAC has learned as it has implemented these methods will benefit other programmes that seek to serve the ever expand urban slum populations of the world. These populations need and deserve effective maternal, neonatal and child health services. BRAC's approach to applying these methods provide an excellent starting point.

References

Alam, K., Tasneem, S., & Oliveras, E. (2011). *Retention of female volunteer community health workers in Dhaka urban slums: a case-control study. Health Policy and Planning* .

(2009). *Bangladesh Demographic and Health Survey 2007. Dhaka, Bangladesh and Calverton, Maryland: National Institution of Population and Research Training and Macro International.*

(2013). *Bangladesh Demographic and Health Survey 2011: Final Report. Dhaka, Bangladesh and Calverton, Maryland: National Institute of Population Research and Training, Mitra Associates and ICF International.*

(2003). *Bangladesh Maternal Health Services and Maternal Mortality Survey 2001. Calverton, MD and Dhaka, Bangladesh: ORC Macro and ICDDR, B.*

(2011). *Bangladesh Maternal Mortality and Health Care Survey 2010. Dhaka, Bangladesh: ICDDR,B and Measure Evaluation.*

Khatun, F., Rasheed, S., AC, M., Alam, A., Shomik, M., Sultana, M., et al. (2012). *Causes of neonatal and maternal deaths in Dhaka. BMC Public Health* , 12 (84).

Moran, A., Choudhury, N., Khan, N., Kara, Z., Wahed, T., Rashid, S., et al. (2009). *Newborn care practices among slum dwellers in Dhaka, Bangladesh: a quantitative and qualitative exploratory study. BMC Pregnancy & Childbirth* , 9 (54).

More, N., Bapat, U., Das, S., Alcock, G., Patil, S., Porel, M., et al. (2012). *Community Mobilization in Mumbai Slums to Improve Perinatal Care and Outcomes: A Cluster Randomised Controlled Trial. PLoS Medicine* , 9 (7).

Prakash, R. K. (2013). *Urban poverty and utilization of maternal and child health care services in India. J Biosoc Sci* , 5, 1-17.

Standing, H., & Chowdhury, M. (2008). *Producing effective knowledge agents in a pluralistic environment: What future for community health workers? Social Science & Medicine* , 66 (10), 2096-107.

Thaddeus, S., & Maine, D. (1994). *Too far to walk: maternal mortality in context. Soc Sci Med* , 38 (8), 1091-110.

(2003). *The Challenge of Slums: Global Report on Human Settlements 2003. London: Earthscan Publications, Ltd.*

May, M.A.; Subramanian, V.; Choudhury, R. (2011). *The Manoshi Project: Creating safe spaces for birth in urban slums. Cambridge, MA: South Asia Institute.*

The Top NGOs 2013. (n.d.). *Retrieved from The Global Journal: <http://theglobaljournal.net/group/top-100-ngos-2013/photo/1459/>*

United Nations, D. o. (2012, October). *World Urbanization Prospectus: The 2011 Revision* . Retrieved from <http://esa.un.org/unup/CD-ROM/Urban-Rural-Population.htm>

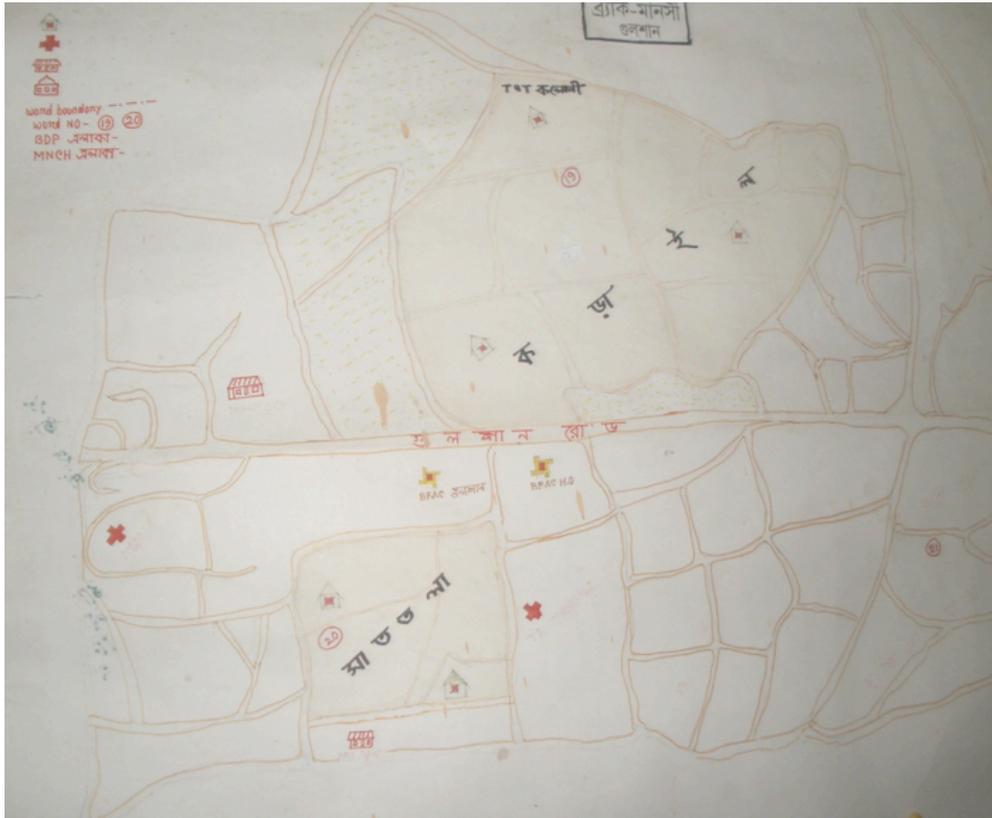
Appendix 1: Social Mapping

Figure 1. Map of Korail Slum in Dhaka, Bangladesh



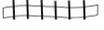
Appendix 1: Social Mapping

Figure 2. Social Map of a Slum
(Depicting the location of important community resources)



Appendix 1: Social Mapping

Figure 3. Symbols for a social assets map

1. House 
2. Road or lane 
3. School, college, madrasa 
4. Mosque 
5. Temple (Mondir) 
6. Church 
7. Thana 
8. Post Office 
9. Hospital, Clinic, Large Pharmacy 
10. River, Channel Pond 
11. Bridge, Culvert 
12. NGO Office 
13. Government office 
14. Rail line 
15. Market 
16. Park, playground, Eidgah, graveyard, vacant field 
17. Large mill, factory 
18. Commissioner's office 

Appendix 1: Social Mapping

Figure 4. Summary of data collected during mapping in one area

BRAC - BHP - MANOSHI Gulshan at a glance

Sl. No	Particulars	Number
1	Total slum	9
2	Total household	21,232
3	Total population	68,580
4	Male	34,975
5	Female	33,605
6	Total delivery centers	5
7	Total PO	3
8	Total MNW	2
9	Total SK	8
10	Total S.S	73
11	Total UBA	10
12	BRAC BDP Office	1
13	BRAC VO	80
14	BRAC VO Member	3576
15	BRAC School	11
16	BRAC Keshori Kendra	1
17	Govt. Primary School	1
18	NGO	7
19	NGO School	18
20	NGO Clinic	4

Appendix 2: Census Form

BRAC HEALTH, NUTRITION AND POPULATION ProgrammeME MATERNAL, NEONATAL AND CHILD HEALTH PROJECT HOUSEHOLD SURVEY

1. Household No: 2. Area: _____ 3. Village: _____ 4. Ward:
5. Union: _____ 6. Upazilla: _____ 7. District: _____
8. HH Head's Income: 9. Any HH member providing physical labour for 100 days YES NO
10. Member of Organization: BRAC Other NGO STUP No NGO's Member
11. Land Quantity: House land decimal; Agricultural decimal; Non-agricultural decimal; Total decimal
12. Permanent Income Source: YES NO 13. Family Condition: Landless Homeless Day labour
- 14.1. Household's Overall Condition (Surveyor): Ultra Poor Poor Middle Class High Class
- 14.2. Household's Overall Condition (PO): Ultra Poor Poor Middle Class High Class
15. Household Member / Members' Information:

SL.	Household Permanent Members' Name	Male – 1 Female – 2	Relationship with the Household Head	Age			Marital Status	Family Planning	Education	Key Profession	Pregnant=1 Lactating Mother=2
				Year	Month	Day					
01.			Household Head								
02.											
03.											
04.											
05.											

16. Birth Information (Last 01 year)

Total Birth Live Birth Dead Birth Birth Registration

17. Death Information (Last 01 year)

SL.	Name of Dead Person	Male – 1 Female – 2	Age			Death Date			Tentative Reason
			Year	Month	Day	Year	Month	Day	
01.									
02.									

Data Collector's Name _____ Date: ___/___/2013

Marital Status: Unmarried=1; Married=2; Divorced=3; Separated=4; Abandoned=5; Widow=6
Family Planning: No use of contraceptives=1; Pills=2; Condom=2; Injectable method=3; Norplant=4; Copper-T/IEUD=5; Female reproductive disorder=6; Male reproductive disorder=6; Not applicable=7
Education: Uneducated=0; Play group=33; Class-1=1; Class-2=2; Class-3=3; Class-4=4; Class-5=5; Class-6=6; Class-7=7; Class-8=8; Class-9=9; SSC=10; HSC=12; Bachelors=13; Masters=14; Doctor/engineer=15; Other=99 _____ (specify)
Key occupations: Agricultural worker=1; Fisherman=2; Homemaker=3; Poultry producer=4; Skilled laborer=5; Driver=6; Rickshaw puller/van puller/boatman=7; Day laborer=8; Service worker=9; Worker in a large business=10; Worker in a small business/shop/stall=12; Professional=13; Looking for work, unemployed=14; Housewife=15; Student=16; Disabled and unable to work=33; Other=99 _____ (specify)

BRAC
BRAC Centre
75 Mohakhali
Dhaka 1212
Bangladesh

T : +880 2 9881265-72
F : +880 2 8823542, 8823614
E : GJ&D_BRAC@brac.net
W: www.brac.net